University of New Mexico
UNM Digital Repository

UNM Annual Reports | Campus Publications

6-30-1995

Annual Report of the University, 1994-1995, Volumes 1-4

University of New Mexico

Follow this and additional works at: https://digitalrepository.unm.edu/unm_annual_reports

Recommended Citation
University of New Mexico. "Annual Report of the University, 1994-1995, Volumes 1-4." (1995). https://digitalrepository.unm.edu/unm_annual_reports/43

This Annual Report is brought to you for free and open access by the Campus Publications at UNM Digital Repository. It has been accepted for inclusion in UNM Annual Reports by an authorized administrator of UNM Digital Repository. For more information, please contact disc@unm.edu.

ANNUAL REPORTS
1994-1995

VOLUME I

PAGE

PRESIDENT 1
ATHLETICS 2
COMMUNITY RELATIONS (NOT SUBMITTED)
ALUMNI RELATIONS 96
DEVELOPMENT OFFICE 112

PROVOST/VICE PRESIDENT FOR ACADEMIC AFFAIRS
ANDERSON SCHOOLS OF MANAGEMENT 128
SCHOOL OF ARCHITECTURE AND PLANNING (NOT SUBMITTED
COLLEGE OF ARTS AND SCIENCES 185
AMERICAN STUDIES 225
ANTHROPOLOGY 229
CONTRACT ARCHEOLOGY 238
MAXWELL MUSEUM 256
BIOLOGY 262
CHEMISTRY 553
COMMUNICATION AND JOURNALISM 581
COMMUNICATIVE DISORDERS 610
EARTH AND PLANETARY SCIENCES 635
INSTITUTE OF METEORITICS 770
ECONOMICS 826
ENGLISH 834
FOREIGN LANGUAGES AND LITERATURES 844
GEOGRAPHY 856
HISTORY 866
LINGUISTICS 890
MATHEMATICS AND STATISTICS 920
PHILOSOPHY 949
PHYSICS AND ASTRONOMY 954
POLITICAL SCIENCE 973
PSYCHOLOGY 985
SOCIOLOGY 1059
SPANISH AND PORTUGUESE 1088
WOMEN STUDIES 1113

COLLEGE OF EDUCATION (NOT SUBMITTED)

CONTINUED ON VOLUME II

The University of New Mexico

ANNUAL REPORT

1994-95

REGENTS

Arthur D. Melendres, Esq.—*President**
Term expires: 12/1996

Penny Taylor Rembe—*Vice President*
Term expires: 12/1998

Barbara G. Brazil—*Secretary/Treasurer**
Term expires: 12/1998

J.E. (Gene) Gallegos, Esq.
Term expires: 12/1996

Mary A. Tang, Ph.D.
Term expires: 1/2001

Eric A. Thomas *(student)*
Term expires: 1/1997

Larry D. Willard
Term expires: 1/1999

*officers as of spring 1995

DEMONSTRATING THE STRENGTH OF DIVERSITY

A walk around the UNM campus as students change classes demonstrates UNM's commitment to diversity. Students and professors from a variety of ethnic backgrounds crowd the sidewalks and fill classrooms. Over the past year UNM moved forward with existing and new programs to interest more minority students, faculty and staff in the University and to aid in their success while here. *Hispanic Outlook in Higher Education* recently recognized the University's endeavors, ranking UNM as one of the best colleges in the nation at graduating Hispanic students.

Provost Mary Sue Coleman says diversity contributes to a stimulating environment where faculty and students have different points of view and experiences. "The campus becomes a more intellectually alive place," she says. The efforts to build a diverse campus go hand in hand with the University's goals of achieving academic excellence and attracting the "best and brightest."

MINORITY ENROLLMENT

In the fall of 1994 a total of 32 percent of the student body came from underrepresented groups. The UNM School of Law had the largest number of Native Americans enrolled in any law school in the country.

REACHING OUT TO PUEBLOS, COMMUNITIES

Last year Anne Thomas, Director of Equal Opportunity Programs, and her staff took a serious look at ways her office could help minority populations better understand the UNM job application process. They decided to target Indian Pueblos in the state and community centers in low-income Albuquerque areas. "We recognized that our employment procedures may be hard to understand. It's difficult to get a job if you don't know the UNM system" she said.

Her office conducted off-campus training sessions for personnel directors from all the Pueblos, as well as workshops at Laguna, Santa Domingo, Cochiti, San Felipe and Zia Pueblos for prospective UNM employees. Sessions were also held at Mesa Verde Community Center, Wells Park Community Center, East San Jose Community Center and Dennis Chavez Community Center, all high minority areas in Albuquerque.

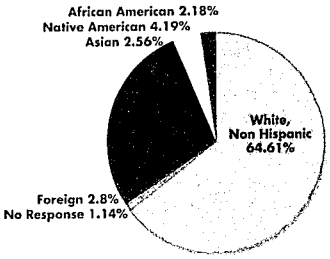
FACULTY

Approximately 8.4 percent of the new-hire junior faculty were Hispanic and 48.8 percent women. That compares to a 2.2 percent and 31.8 national rate.

LEGISLATIVE INITIATIVES

The state increased its investment in supporting minority intervention, recruitment and retention initiatives at UNM. The State Legislature appropriated and the Governor approved $148,900 for Hispanic Student Services; $260,700 for the Native American Studies Center; $85,300 for the Southwest Indian Law Clinic; $154,200 for the Youth Education Recreation Program; and $99,000 for Youth Leadership Development.

STUDENT ETHNICITY - FALL 1994



GENDER

NATIVE AMERICAN RECRUITMENT

The American Indian Council, comprised of faculty, staff, students and tribal leaders, was formed to assist and advise UNM in its recruitment and retention of American Indian students. UNM also signed memoranda of understanding with several American Indian tribes to agree on tasks to supplement the work of the council.

RECRUITMENT AND RETENTION PROGRAMS

Minority recruitment and retention programs included three minority engineering programs in which the enrollment was 60 Native Americans, 380 Hispanics, 20 African Americans and 320 women. These three programs provided about 350 scholarship and fellowship awards amounting to approximately $450,000.

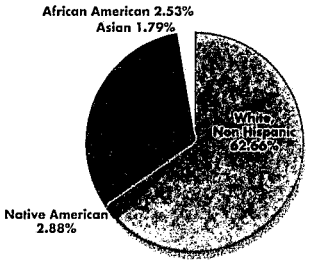
COLLEGE OF PHARMACY

Of the 54 graduates from the College of Pharmacy in 1995, 35 percent were Hispanic and 4 percent were Native American. The College supported the training of Native American pharmacists through the Native American Center of Excellence.

DISABILITY AFFIRMATIVE ACTION PROGRAM

The Human Resources Department and the Equal Opportunity Programs Office initiated a new apprentice program in the Physical Plant Department. The program enables persons with disabilities to get the training they need to compete for positions at UNM.

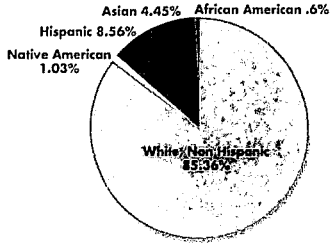
STAFF ETHNICITY - FALL 1994



GENDER

FACULTY* ETHNICITY- FALL 1994

*Tenured and Tenure-Track

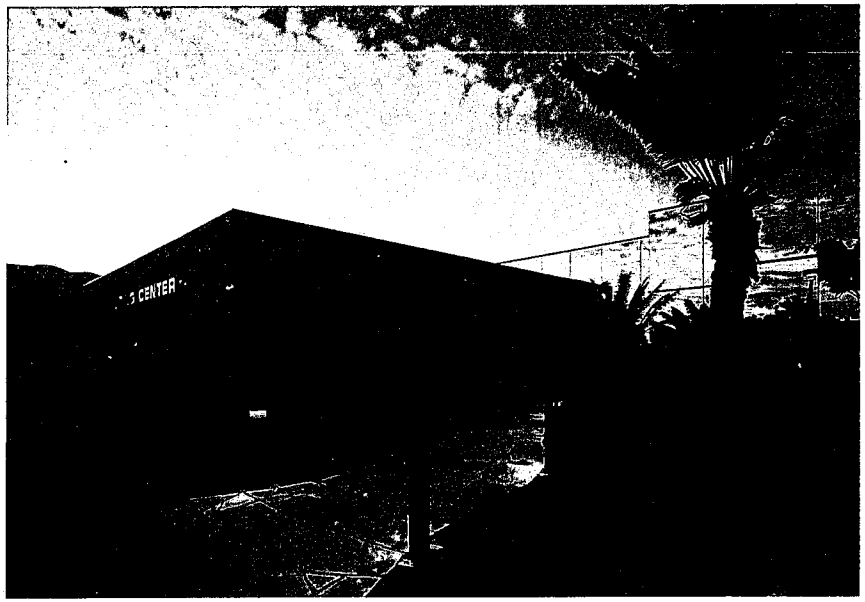


GENDER

DIVERSITY DAYS

The third annual "UNM: A Celebration of Differences" featured multicultural presentations and 32 workshops attended by 500 people. The program heightens awareness about and appreciation for differences among people.

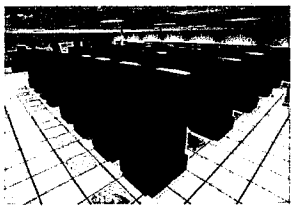
"The environment was positively charged and was visible evidence of UNM's commitment to diversity," said Laura Valdez, event co-chair. Sponsored by the Campus Diversity Council and the Student Union Building, the three-day event was significantly larger and better attended than the previous two celebrations.



ENGAGING IN WORLD-CLASS RESEARCH

UNM's students, faculty and staff engage in outstanding research and creative activity. "The knowledge that will be taught tomorrow comes from the research that is done today," says Ellen Goldberg, Associate Provost for Research. Researchers at UNM are engaged in a rich variety of intellectual pursuits, ranging from high-powered microwaves to forms of treatment for alcoholism and from the environmental impact of reintroducing the Mexican Wolf into the wild to developing new medical devices.

During 1994-95, sponsored research, instruction and public service awards at UNM totaled $183 million, up 10 percent from the previous year.



Above and top: Facilities of the Maui High Performance Computing Center

OPTOELECTRONICS RESEARCH

A controlled optoelectronics explosion broke ground for a new $14 million Optoelectronics Materials Center at University Research Park. The Center for High Technology Materials, currently housed in the UNM Electrical Engineering Building, will occupy the new facility. Funding for optoelectronics research at UNM totaled $10 million in 1994-95.

MANUFACTURING AND TRAINING CENTER

A manufacturing training and technology center will be built at UNM with funds acquired in 1994-95 from the federal government ($5.5 million), the State of New Mexico and private industry for a grand total of $9.3 million.

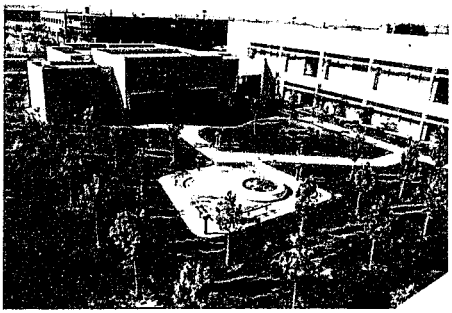
FACULTY SCHOLARSHIP

	# OF FACULTY WITH RESEARCH GRANTS	# OF GRANTS	AVERAGE AMOUNT OF GRANT	FULBRIGHT SCHOLARS
90-91		1,056	$67,459	6
91-92		1,249	$69,611	3
92-93	608	1,517	$75,514	4
93-94	618	1,845	$90,292	7

ARL LIBRARY RANKINGS

(Association of Research Libraries)

YEAR	UNM RANKING	TOTAL RANKED
1990	61	107
1991	60	107
1992	53	108
1993	61	108
1994	53	108



UNIVERSITY RESEARCH PARK

The new Science and Technology Corp. @ UNM, hired Albuqueque attorney Charles Wellborn as its first president and Chief Executive Officer. This not-for-profit organization based at University Center Research Park (pictured above) assists UNM in its technology transfer efforts and development of the research park.

FUNDING SUCCESSES

The School of Engineering received more than $38 million in research funds, and the College of Arts and Sciences obtained $16 million in grant and contract awards.

MARC INGBER

The most prestigious prize in supercomputing was recently awarded to a team that included Marc Ingber, an associate professor in the Department of Mechanical Engineering. At the Supercomputing '94 conference in Washington, D.C., the team won the Gordon Bell Prize for performance in large-scale scientific computing.

Ingber and his students developed a computer code that can be used to analyze fibers in composite materials and examine sound waves. The code speeded up the processing time so that up to 50,000 equations can be solved in 1.5 minutes.

KECK GRANT

The Los Angeles-based W.M. Keck Foundation awarded a $300,000 grant to UNM for construction of an ultra-high resolution optical and x-ray imaging laboratory. The facility uses extremely short laser pulses that will allow scientists to examine microscopic specimens with applications in physics, cell biology and medicine.

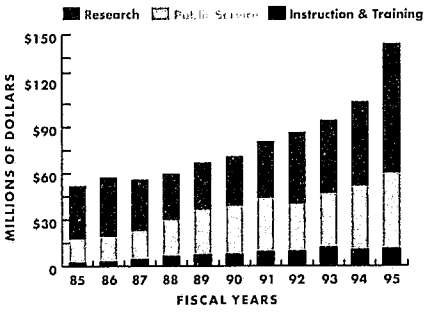
NSF GRANT

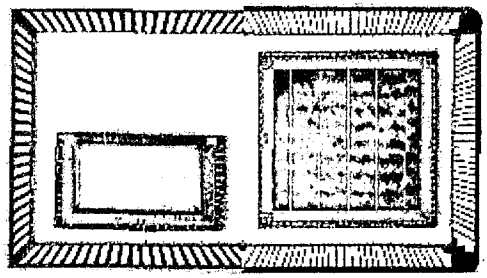
Professor James D. Hollan, chair of the Computer Science Department, was awarded a five year $1.25 million grant from the National Science Foundation Research Infrastructure program. The funding will be used to establish a National Information Infrastructure (NII) Experimental Laboratory in the Science and Engineering Library to conduct computer science research.

CANCER RESEARCH

A formal groundbreaking ceremony was held for a new three-story, 39,000 square foot, $6 million Cancer Research facility. The center will expand ongoing and undertake new research to reduce cancer incidences and mortality among the state's multi-ethnic population.

CONTRACT & GRANTS AWARDS TEN YEAR INCREASE





RS16 Rad Hard Gate Array (UTMC) next to Custom Design Rad Hard RS16 Chip (AMI) meeting the same specifications

MICROELECTRONICS RESEARCH

Technology transfer isn't just a laudable goal at UNM's Microelectronics Research Center. It's business as usual. "If we just publish a paper, the companies aren't interested," says Gary Maki, center director and professor of electrical and computer engineering. "We have to give them something back for their investment."

Since arriving in 1992, Maki and his team have given back extensively. One chip designed for Hewlett-Packard disc drives delivered almost supercomputing capacity. Another, designed for high-definition television, will have world-wide impact. More recently the center joined with NASA to establish a new Institute of Advanced Microelectronics for the design of next-generation electronics for NASA and the U.S. electronics industry.

NURTURING AREAS OF ACADEMIC EXCELLENCE

UNM has built a national reputation of academic excellence in areas as diverse as biology, fine arts, medicine, and anthropology. Some areas, such as anthropology and Latin American Programs, have been prominent for several decades. Others, like high performance computing and high technology endeavors, have recently gained national acclaim in their emerging fields.

Location benefits many of the University's areas of excellence. By being in proximity to the national laboratories, UNM has collaborated on projects and utilized the laboratories' resources. Because UNM is situated in the heart of the Southwest, it is only natural to focus on Southwestern history, art and culture and on Latin America.

MEDICAL SCHOOL PRIMARY CARE CURRICULUM

The School of Medicine was once again recognized by *U.S. News and World Report* as one of the top 10 medical schools for Primary Care in the country (ranked #7). The School was also ranked #4 in Family Medicine and #2 in Rural Medicine by the same report.

LATIN AMERICAN PROGRAMS

Long a strength at UNM, Latin American Programs continue to be known for their diversity and the innovative quality of academic programs, publications, special projects, research support, outreach activities and cooperative

relationships with Latin American universities. UNM's Latin American Institute is one of 12 federally designated National Resource Centers of Latin American Language and Area Studies.

HIGH PERFORMANCE COMPUTING

Over the past year UNM enhanced its reputation in the field of high performance computing. UNM continued to operate the Maui High Performance Computing Center through a $24 million cooperative grant. The center supports the U.S. Department of Defense scientific computer needs and fosters technology transfer.

DEPARTMENT OF ANTHROPOLOGY

The Department of Anthropology has had a national reputation for more than 50 years. In 1994-5 it ranked 10th in the nation.

FINE ARTS

Masters programs in print making and photography were highly rated by *U.S. News & World Report*. The photography area in the Art and Art History Department was second in the country, and the print making area was fourth. The fine arts curriculum recognizes the importance of the Southwest and Latin America. UNM's Ph.D. program in Native American Art is one of only two in the United States.

ANNIVERSARIES

School of Medicine: 30 years

Cancer Institute: 20 years

Institute of Meteoritics: 50 years

College of Nursing: 40 years

School of Architecture and Planning's Design and Assistance Center: 25 years

School of Public Administration: 25 years

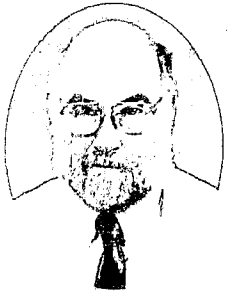
College of Education's Family Development Program: 10 years

Gallup Branch: 25 years

College of Pharmacy: 50 years

BIOLOGY PROGRAMS

The Biology Department's internationally recognized program in ecology and the environment moved ahead in 1994 with a 14 percent increase in graduate support stipends, searches for new faculty and plans to expand the Long-Term Ecological Research Program.



NEW SCHOOL OF MEDICINE CURRICULUM

The new curriculum in the School of Medicine offers the best of both worlds, says Dr. S. Scott Obenshain, MD, Associate Dean for Undergraduate Medical Education. "It combines the sound education in basic sciences of our traditional curriculum along with the problem-based student-centered, small-group tutorial learning of our Primary Care curriculum. To date the results indicate medical students who are extremely well prepared," Obenshain said.

During the fall of 1994, the second class of students learning under the new curriculum entered medical school. The World Health Organization has recognized the school's primary care curriculum as a model medical training program. Universities around the world are emulating this innovative way of educating medical students. The Robert Wood Johnson Foundation provided a $2.5 million grant to help fund the transition to the new curriculum at UNM.

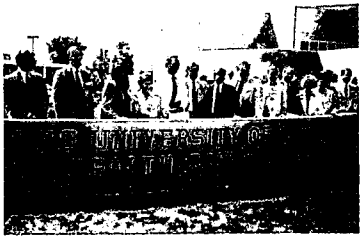
IMPROVING THE LIVES OF NEW MEXICANS

Every day UNM touches the lives of thousands of individuals throughout New Mexico, adding to the state's quality of life. In fulfilling its missions in teaching, research and public service, the University helps makes New Mexico a better place to live. UNM provides health care, offers cultural activities, broadcasts radio and television programs, assists small businesses, and much more, both in Albuquerque and throughout the state.

During 1994-95 the University continued its commitment to improving the quality of life for New Mexicans through expanded and new endeavors.

HEALTH SCIENCES CENTER

The UNM Health Sciences Center was inaugurated July 1, 1994 with the consolidation of all UNM's medical teaching, patient care and research facilities under the direction of the new Health Sciences Vice President, Jane Henney, M.D. Through its clinics, in Albuquerque and throughout the state, the Health Sciences Center served 120,000 people.



Dedication of the UNM Health Sciences Center

LOCUM TENENS

Last year Dr. Richard Diedrich gave pediatricians in Hobbs, Carlsbad, Alamogordo, Las Cruces, Silver City, Los Lunas, Espanola, Las Vegas and Farmington a chance to take a breather while he temporarily managed their practices.

Diedrich, an Assistant Professor of Pediatrics and Director of the Extension Services Program, is one of 60 UNM doctors participating in the Health Sciences Center-sponsored locum tenens program, which provides medical practice relief to rural New Mexico physicians.

"Several of these towns only have one or two pediatricians, which makes it nearly impossible for them to leave their practices for vacation, continuing education or personal medical need. One doctor for whom I substituted had not taken a vacation in two and a half years," Diedrich said.

At any given time the program will have five doctors, including practicing physicians and School of Medicine residents, in the field helping out for anywhere between four days and two weeks. During 1994-95 doctors covered the equivalent of 150 days a month, compared to 50 days when the program started in 1993. The program is funded through an appropriation from the New Mexico State Legislature.

PHARM.D.

The first five students graduated in May, 1995 from the new Doctorate in Pharmacy or "Pharm.D." program. The new curriculum will prepare pharmacists to take on the increasingly complex demands of their profession and more direct consultation with doctors and patients. 80 students have been admitted to the new program for the fall of 1995.

TOWN MEETINGS

University officials traveled to Gallup, Tucumcari, Santa Rosa, Taos, Los Alamos, Santa Fe, Espanola, Bernalillo, Farmington, Las Cruces, Las Vegas, Roswell, and Albuquerque South Valley to talk directly with citizens at town meetings about what the University is doing and to learn what more UNM can do to help local communities.

LODESTAR PROJECT

A state-wide consortium that includes UNM's Institute for Astrophysics faculty received a $15.8 million grant from the federal government and matching funds for a grand total of $32.8 million to establish the LoDeStar Project (initially called Cosmic Explora), a major new observatory and public park that will serve the University, community and public schools. The project will use astronomy as a vehicle for public science education.

FINE ARTS

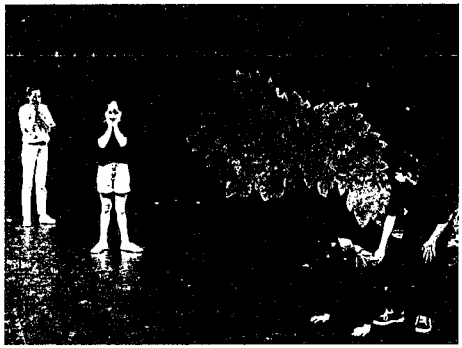
Cultural activities at Popejoy Hall and other theaters in the Fine Arts Center attracted 95,000 patrons last year. The College of Fine Arts sponsored more than 100 events in 15 counties. In addition, the college worked with hundreds of New Mexico school age children in workshops, lectures and demonstrations. The Department of Theatre and Dance initiated the Wrinkle Writing Program which engaged elementary school teachers and their students from throughout the state in dramatic writing and theater experiences.

FENCES

UNM sponsored the production of five television programs of "Fences" during 1994-95, with airing on KNME-TV scheduled for fall, 1995. "Fences" is a teen-oriented television program which entertains, educates and gives New Mexico teens a collective media voice.

CONTINUING EDUCATION

More than 40,000 people participated in continuing education programs at the main campus and three branches.



Wrinkle Writing Program, photo courtesy Keith Drosan

NATURAL HIGH

Natural High, a UNM outreach program that provides positive alternatives for youth, reached some 30,000 pre-school, elementary and middle school children last year. Funded in 1994-95 with a $151,000 grant from the State Legislature, Natural High coordinators serve as tutors, mentors, counselors and role models for the children. The young people participated in more than a dozen programs, including fine arts, performing arts, art murals, leadership and counseling, tutoring, family development, recreation and more.

Scott Taylor standing, assists student with income tax client

INCOME TAX

Over 1,400 low income New Mexico residents had their income tax returns prepared free this spring by students taking a tax law course in the School of Law. "This class, offered for the first time in spring 1994, benefited everyone, including the students who got hands-on experience preparing tax returns using the most up-to-date technology and low income persons who could not afford someone to prepare their returns," said Professor Scott Taylor, who taught the taxation course.

The 31 students took their free tax preparation service to a variety of sites throughout New Mexico, including Armijo Elementary, Isleta Pueblo, John Marshall Community Center, Healthcare for the Homeless, Lovelace Hospital, Tome, Joy Junction, Peanut Butter and Jelly Preschool, Association for Retarded Citizens of Albuquerque and Goodwill.

ATTRACTING AND RETAINING THE BEST AND BRIGHTEST

UNM recruits nationally respected faculty members and outstanding students because superior students and faculty attract other superior students. "Excellent faculty, staff and students impact every aspect of the University. Our programs must be excellent and our pay and scholarships competitive," said Arthur D. Melendres, Board of Regents President.

The University was successful in attracting and retaining the best and brightest at many levels and in many areas during 1994-95.

Top: Andrea Roth, undergraduate speaker at the May 1995 Commencement and a member of the first graduating class of Regents' Scholars

FIRST GRADUATING CLASS OF REGENTS' SCHOLARS

During spring 1995 commencement, students from the first class of Regents' Scholars Scholarship recipients graduated, all with honors. The fifth class of 14 Regents' Scholars will start in the fall of 1995, joining the 41 others already studying at UNM. The "full-ride" Regents' Scholars Program was established four years ago by the Board of Regents as a way to attract high school valedictorians, National Merit Scholars and other outstanding students to UNM.

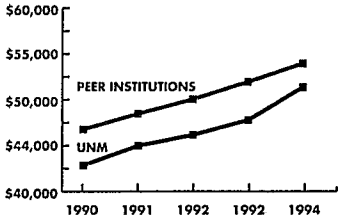
EXCELLENT FACULTY

Several outstanding faculty joined UNM last year, including anthropology professor and member of the National Academy of Sciences Jane Buikstra and Nobel Laureate Murray Gell-Mann in the Department of Physics and Astronomy. Assistant Professor Luke Lester at the Center for High Technology Materials was the recipient of the National Science Foundation Career Award, and Biology Professor James H. Brown was elected to the American Academy of Arts and Sciences. UNM ranked in the top 10 universities nationally in the number of Fulbright scholars. Five faculty members were pursuing their research as Presidential Young investigators during 1994-95.

ENDOWED CHAIRS/PROFESSORSHIPS

The numbers of endowed chairs and professorships increased during 1994-95. The Frank D. and Marie K. Gorham Trust established the first endowed chair in the School of Law, the Leon Karelitz Chair in Oil and Gas, honoring a retired state district court judge from Raton. Also, a perpetually-endowed professorship was established in the School of Medicine Department of Orthopaedics and Rehabilitation in honor of George E. Omer, Jr., M.D. It is the third endowed academic professorship/chair in the school.

AVERAGE FACULTY SALARIES 1990-94



FACULTY SALARIES 1990-91 to 1994-95

	FALL 1990		FALL 1994	
	AVERAGE SALARY	% OF PEERS	AVERAGE SALARY	% OF PEERS
Professors	$51,900	90.0%	$62,142	93.7%
Assoc. Professors	$38,100	90.3%	$46,468	96.9%
Asst. Professors	$35,200	97.1%	$39, 887	96.3%
All Ranks	$42,824	91.6%	$51,348	95.2%

Dwingeloo1, computer image courtesy Isaac Newton Telescope, Canary Islands

NEW GALAXY

Dr. Patricia Henning, an assistant professor with the Institute for Astrophysics, was part of an international team of astronomers that discovered a new galaxy last year. She helped design and implement a long-term astronomical survey that revealed the galaxy dubbed "Dwingeloo 1" (the white elliptical shape in the center of the above computer image). The galaxy had previously been hidden from view behind the stars and dust of the Milky Way.

"The exciting thing about this research is we know there are more galaxies out there that we haven't found yet. There must be many, many more that our surveys should turn up," Henning said.

TERRY LAGUNA

Terry Laguna spent her four years at UNM balancing her love of athletics and her love of learning. Attending on a Regents' Scholar Scholarship, the top scholarship at UNM, she had to maintain a high GPA while carrying fifteen to eighteen hours each semester. She also played varsity softball, which required her to practice year-round, sometimes three hours daily, giving up weekends.

"Every day was a challenge, but I managed to score my share of grand-slam homeruns, both on the field and in the classroom. I wouldn't trade my experiences at UNM for anything," the athlete-scholar said.

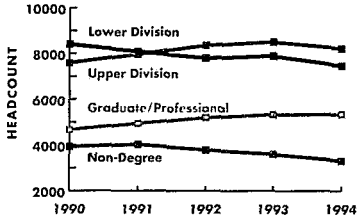
INCREASED PLAN A ADMISSIONS

The number of freshmen entering UNM on Plan A, which requires students to take a college preparatory program in high school, has increased from 67.2 percent in 1990 to 83.61 percent in fall of 1994. Students who are admitted with this rigorous college preparatory curriculum background have the highest college graduation rates.

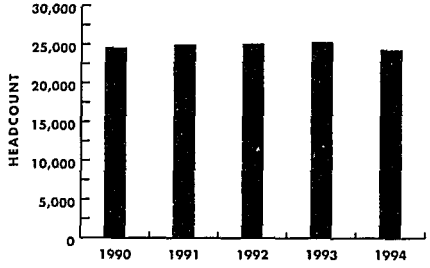
PRE-DOCTORAL FELLOWS

UNM was the recipient of 10 National Science Foundation grants, one Ford Foundation grant and one National Institute of Health grant to support outstanding pre-doctoral fellows.

STUDENT HEADCOUNT BY CLASSIFICATION - FALL1990-94



TOTAL STUDENT HEADCOUNT FALL 1990-94



FOSTERING TEACHER EXCELLENCE

UNM recognizes that teaching excellence is at the core of every fine university. And today that means advanced technology and innovative programs for faculty and students, as well as good libraries and a commitment to teaching.

LIBRARIES

UNM continued its quest to join the top 50 in the Association of Research Libraries by initiating a major fundraising drive. The UNM libraries are currently ranked 53. There are 3200 American colleges and universities.

TEACHING AWARDS

Teaching excellence was recognized in 1994-95 through various ceremonies and fellowship appointments. The Teaching Excellence Awards Committee honored four faculty members and six teaching assistants with Outstanding Teacher of the Year and Outstanding Teaching Assistant awards. Two Presidential Teaching Fellows were selected for 1995-97. The UNM General Libraries began the Faculty Acknowledgement Reception Series to recognize outstanding publications and projects produced by faculty.

ANDERSON SCHOOLS OF MANAGEMENT

Faculty began implementation of a comprehensive total quality management program for achieving teaching excellence. Special emphasis is being placed on measured learning.

CLINICAL LAW PROGRAM RANKED 5TH IN NATION

The School of Law's Clinical program made headlines when it was ranked number five in the nation by faculty experts in a *U.S News & World Report* survey. "The ranking," says Leo Romero, School of Law dean, "reflects the program's success in introducing our students to the practice of law by having them, under the supervision of our faculty, represent clients with real legal problems."

Over the past year UNM has taken special efforts to provide quality service to students, faculty, staff, patrons, visitors and the community at large.

MARGARET WERNER-WASHBURNE

Margaret Werner-Washburne is one of those professors who immerses herself in her teaching. In addition to doing research and running a molecular biology laboratory in the Biology Department, A recipient of the National Science Foundation Presidential Young Investigator Award in 1990, she works hard to impart her enthusiasm for molecular biology to her students and has been a role model and inspiration for minority students.

Her success in research and teaching stems from her view that science needs more diverse perspectives. "We don't need 10,000 people who see the world in the same way," Werner-Washburne said. "They will find only one answer, and we are going to need 10,000 answers within this decade."

MIDAS TOUCH

Ann Powell, Director of the UNM Office of Research Administration (right); Denise Wallen, Assistant Director

The UNM Office of Research has the "Midas Touch" when it comes to helping researchers seek monetary support for their projects.

In August, 1994 the office instituted an on-line computer server, called MIDAS, which dramatically simplified the search for research money. Today, all that faculty, staff and students have to do to learn about possible funding sources is turn on their computers and point to the MIDAS server. They can access 24 data bases with information on federal and private grants, contract opportunities, fellowships and sponsored research support.

"People are a lot happier because they get information faster," said Ann Powell, Director of the Office of Research Administration (at right in above photograph).

PROVIDING QUALITY SERVICE

EVENING AND WEEKEND DEGREE PROGRAMS

During 1994-95 UNM added course offerings so students can satisfy degree requirements for 12 majors and minors in the College of Arts and Sciences during a four-year period by taking evening or weekend classes. In addition, the first class of baccalaureate nursing students successfully completed degree requirements through the Evening and Weekend Program.

STUDENT SERVICES

For the first time students applied for admission via computer using the new "electronic admission application" program. Use of I-TEL-UNM, the telephone registration system, increased significantly.

SAFETY AND SECURITY MEASURES

Several projects were initiated during 1994-95 to make the campus a safer place. Ten police officers and six full-time security escorts were hired; $98,000 was allocated for special lighting projects designed to make dark areas safe. In addition, 35 emergency phones were purchased and installed at new locations throughout campus.

NEW BUSES

Ten new compressed natural gas fueled buses, purchased at a cost of nearly $1 million, shuttled students, faculty and staff from outlying parking lots to the UNM main campus during 1994-95. These shuttles were a tremendous improvement over the old school buses UNM had been using for years and greatly enhanced the shuttle system. The buses are environmentally friendly because they run on natural gas. They are also equipped with air conditioning and stereo systems, allowing for a more comfortable and pleasant ride.

PHOTO ID

A new system of color photo student identification cards was implemented. The "Lobo Card" provides students with access to dining halls, security doors, athletic events, Leisure Services as and the University's libraries.

NEW ALTERNATIVE DISPUTE RESOLUTION PROCESS

Erin Leff was hired as the University's dispute resolution coordinator. Her job is to mediate conflicts in the workplace before they become a problem. Also, a new streamlined alternative dispute resolution process was put in place.

A UNIVERSITY FOR THE AMERICAS

UNM is a University for the Americas because of its expertise and the high regard in which it is held by governments and institutions to the south. Virtually every UNM college and school is involved in academic, research and public service programs involving Latin America.

UNM has signed 16 convenios with universities and organizations in Latin America as well as one with the Organization of American States that calls for UNM to assist the OAS with educational, scientific and cultural programs. The UNM Latin American Institute oversees UNM's academic programs in Latin American Studies and advises UNM's colleges and schools in their efforts to develop programs with Latin American countries and institutions.

The 1994-95 fiscal year was a particularly busy year for UNM as a University for the Americas.

Top: Mariachi Sol de Mexico
Above: Ehecatl Aztec Dancers
Both groups appeared as part of "Arts of the Americas 1995," UNM College of Fine Arts

ANDERSON SCHOOLS OF MANAGEMENT

Dr. Geoffrey Bannister, an expert on the Mexican economy, was recruited from the World Bank to fill a faculty position in the School's International Management area. Bannister is helping expand the School's Latin American/International program. Building strong financial support from the business community and Hispano Chamber of Commerce, the program last year completed its fourth annual student exchange with the Universidad de Guanajuato, Mexico.

ARTS OF THE AMERICAS

Every summer the UNM College of Fine Arts offers a one-of-a-kind multi-cultural arts festival that features classes, workshops, exhibits and festivals focusing on a particular country or area—Mexico and Brazil in past years. The 1995 theme was "Celebrate the Southwest." Artists from throughout the southwestern United States and northern Mexico performed at the month-long festival.

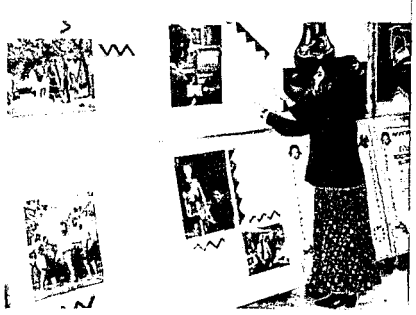
SCHOOL OF LAW

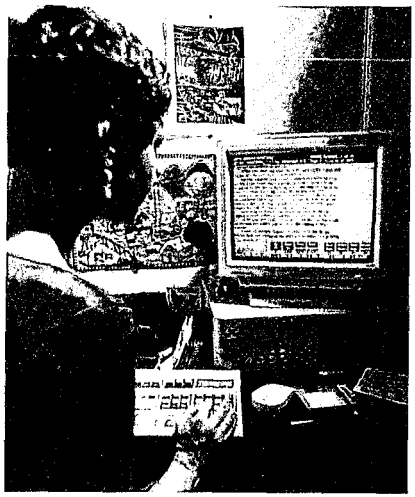
The School of Law maintains a faculty exchange program with the Universidad de Granada. The School has developed a Masters in Law degree

GUADALAJARA BOOK FAIR

UNM faculty, staff and students—scholars, writers, poets, artists, performers, administrators and technical staff— joined a delegation that represented New Mexico at the VIII International Book Fair in Guadalajara, Mexico, in the late fall of 1994.

Sponsored by the University of Guadalajara, the "Feria Internacional del Libro" is regarded as one of the three most important book fairs in the world. Every year the fair selects a nation to be the Honored Guest and Principal Attraction of the fair. In 1994, the honored guest was a state—the State of New Mexico, and the fair attracted more than 300,000 people during its 10-day run. To help showcase the state, UNM contributed work for the art exhibit, and faculty and staff members participated in literary, cultural, educational, legal and medical discussion groups.





program for Mexican lawyers which would be offered jointly with the Universidad de Guadalajara. UNM and three Mexican law schools initiated a Masters Program in Comparative and International Business Law in the summer of 1995.

UNM GENERAL LIBRARY

The UNM General Library is internationally recognized as having one of the most comprehensive Latin American research library collections in the country. Under a unique new cooperative interlibrary loan project with Brazil, the UNM Centennial Science and Engineering Library is electronically linked with the largest research institute in Latin America, the University of Campinas, Brazil. The project, initiated by the Ibero-American Science and Technology Education Consortium, breaks ground for extended library linkages.

SCHOOL OF PUBLIC ADMINISTRATION

The School was awarded a federal grant to provide technical assistance and training to Costa Rican government ministries and institutions in "Re-engineering Government."

UNM PRESS

The Press's prominence as a publisher of books on Latin America continues. *Coercion and Market: Silver Mining in Colonial Potosi, 1692-1826*, by Enrique Tandeter, won the 1994 Bolton Prize, the

most prestigious prize in colonial Latin American history.

SCHOOL OF ARCHITECTURE AND PLANNING

The School completed plans for the Arid Americas Design Center, which will study forms of earthen architecture, design issues related to energy conservation and scarce water, and the relationship between the arid geography of the Americas and the built landscape.

LATIN AMERICA DATA BASE

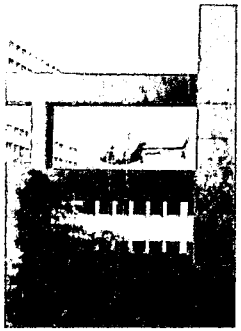
Links between Latin America and UNM are becoming stronger, due in part to the University's Latin America Data Base. A program of the Latin American Institute, the database offers information and news about Latin America, its people, politics and economics by computer to hundreds of subscribers.

Requests for information pour in daily from other universities, federal labs, local businesses, large corporations interested in technology transfer and businesses with an interest in the economic conditions of Latin American countries.

"We're in the right industry at the right time," says program manager Roma Arellano. "Our biggest challenge will be responding to a very rapidly changing industry in the right way."

Staff at the Latin American Institute including Nelson P. Valdes, Director (second from the left)

SCHOOL OF MEDICINE



The School of Medicine's Department of Emergency Medicine is implementing recommendations from its study of motor vehicle accidents on both sides of the U.S.-Mexico border. An emergency medicine exchange program with the University of Chihuahua Medical School and a faculty, student and resident exchange program with the Universidad Autonoma de Chihuahua occurred during the year. The school offered pulmonary epidemiology training at UNM for several physicians from Mexico.

The school has expanded its exchange program for housestaff and medical students to include rotations at the Hospital Vozandes in Quito, Ecuador, and the Hospital Bautista in Asuncion, Paraguay. The school is developing relations with the University of El Salvador where Dr. Warren Heffron of the UNM Department of Family and Community Medicine participated in an international workshop aimed at altering the curriculum of that university's medical students. UNM medical school faculty, in conjunction with faculty from the UNM Anthropology Department, are working with the Huichol Indians in southern Mexico. The tribe's recent contact with modern society has contributed to a large increase in tuberculosis and alcoholism among the tribe's members who are also suffering from the effects of environmental toxins.

ATHLETICS

WESTERN ATHLETIC CONFERENCE

The Western Athletic Conference (WAC) expanded from its current 10 member institutions to 16, effective fall 1996. The six newcomers are the University of Nevada, Las Vegas, Rice University, San Jose State University, Southern Methodist University, Texas Christian University and the University of Tulsa.

WAC COMPETITION

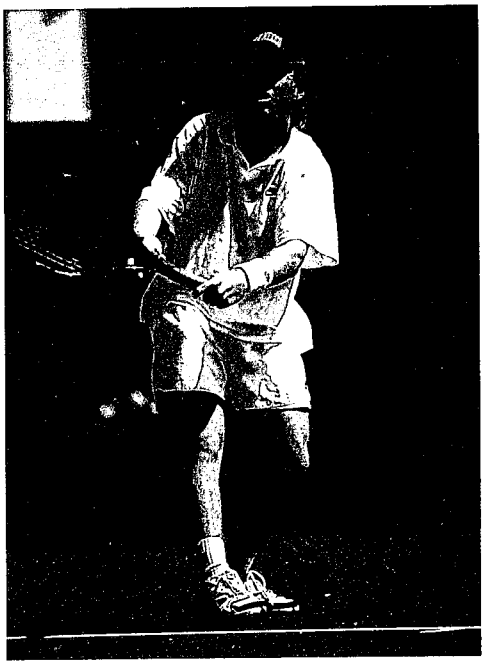
In WAC competition, nine of UNM's 19 WAC-affiliated sports finished fourth or better in the conference standings.

NCAA CHAMPIONSHIPS

A total of eight sports were reached their respective NCAA Championships.

CONFERENCE TITLES

The Lobos won two conference titles. Men's tennis won its fifth consecutive crown, while women's golf made it three in a row.



[illegible] Gerald M. Berezak

GOLF

Men's golf finished 3rd at WAC Championships, 2nd at NCAA West Regional.

GYMNASTICS

Men's Gymnastics ranked No.1 in the country for 10 out of 12 weeks.

COACHES OF THE YEAR

Three coaches—Rich Alday, baseball; Tim Cass, men's tennis; and John Fields, men's golf—were named WAC Coach of the Year.

FIRST TEAM ALL-WAC

In football, quarter back Stoney Case and tight end David Sloan were named first team All-WAC; Case was also named WAC Offensive Player of the Year.

BRANCH CAMPUSES

UNM-SANTA FE GRADUATE AND UPPER DIVISION PROGRAMS

- UNM Santa Fe experienced growth of nearly 40 percent.
- Program developments included the second phase of the master's degree in Instructional Technology. Other master's degrees offered were in Counseling and Public Administration.
- Distance Education carried the BS degree in Nursing to several locations, and the Bachelor's degree in University Studies was expanded considerably.

UNM-LOS ALAMOS

- UNM-Los Alamos neared completion of its 12,750 square foot Learning Center.
- Special programs were created and maintained to increase underrepresented group participation at UNM-Los Alamos.
- The New Mexico Arts Commission donated $10,000 to create a "Buon Fresco" mural on campus. Frederico Vigil, artist and muralist, has been selected to create the mural.
- Planning for new Student Services Building began. The new building will cover a gross area of approximately 12,700 square feet.

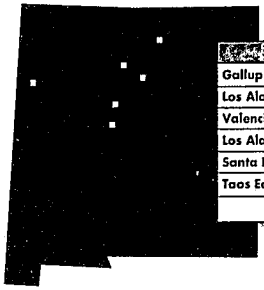
TAOS EDUCATION CENTER

- The center marked its 2nd anniversary in July 1995. Spring 1995 enrollment was 750 and 175 classes were offered in comparison to a fall 1993 enrollment of 360 with 55 classes offered.
- Construction began on phase one of the permanent campus facilities south of town.
- Internet access for 1600 users was established.
- Although the prime service area is Taos,the Center began expanding to the communities of Questa, Peñasco, Red River and Angel Fire.
- Registration in the Taos graduate and upper division programs increased by about 25 percent, and the first graduates were honored at the end of the 1994 summer session.
- The BUS degree was made available for the first time. It will provide the next stage of education for many of the early graduates of UNM's Taos Education Center.
- Notre Dame University and Alfred University of New York entered a consortium with the Taos graduate and upper-division programs for introducing a residential summer program in 1995.

UNM Taos Education Center in a collaborative project with La Plaza Telecommunity Foundation

UNM Gallup campus

STUDENTS - BRANCHES/GRADUATE CENTERS
FALL 1994



	HEADCOUNT	FTE
Gallup Branch	2,836	1,538
Los Alamos Branch	1,023	369
Valencia Branch	1,440	796
Los Alamos Grad Ctr	170	45
Santa Fe Grad Ctr	320	105
Taos Education Ctr	502	187
Total	6,291	3,040

UNM-GALLUP

- UNM-Gallup had a record enrollment for the Spring 1995 semester with a headcount of 2,908, an increase of 8.57 percent from Spring 1994.
- Dr. Robert Carlson was selected as the new director. Carlson has been the Manager of Economic Development for the San Diego Community College.
- Native American enrollment topped 2,000 for the first time. UNM-Gallup Branch has the highest Native American enrollment of any college in America.
- The branch received $100,000 through a special bill in the 1995 Legislature to start a Northside Adult Education Center and $100,000 for the new building.
- Construction of a new $3.5 million Lecture Hall and Computer Lab at UNM-Gallup began in October 1994. The anticipated occupancy is Fall Semester 1996.

UNM-VALENCIA

- UNM-Valencia completed an expansion and renovation project that added 8,700 square feet of space to the campus. The year-long project included the addition of a new physical plant building, two new general classrooms, a new biology lab, computer labs, two art studios, a photography darkroom, as well as other faculty and staff offices.
- Dr. Alice Letteney was selected from a field of 120 applicants as director.
- The dedication of the Valencia County Bar Association Library was held in January 1995. The library was re-located to the campus with a $30,000 grant from the state legislature.
- A new tenure-track chemistry professor was hired in July 1994, bringing the number of full-time faculty at the campus to 21.

FINANCIAL POSITION

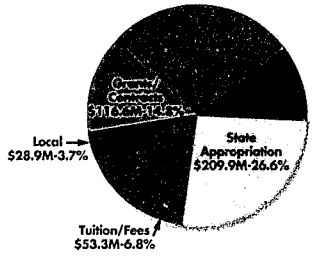
The University of New Mexico was in a strong financial position during the 1994-95 fiscal year.

LARGEST BUDGET EVER

UNM's consolidated FY94-95 budget of $788,715,370 was the largest in the institution's history.

BUDGET 1993-94 - $788.7 MILLION

REVENUES



SALARY INCREASES

Faculty and staff received an average 7 percent salary increase, with merit increases for faculty ranging from 2 percent to 17.5 percent.

TUITION

In-state residents full-time tuition was $1,884 per year, a 5.4 percent increase over 1993-94. Out-of-state tuition in 1994-95 was $7,114.

BOND ISSUE "B"

New Mexico voters approved Bond Issue "B" during the November, 1994 general election. The bond issue included the following items for UNM's main campus: $7,325,000 for construction of a new classroom facility, $1,418,000 for Riebsomer Hall (Chemistry) renovation; $1,052,400 for library acquisitions; and $877,200 for purchase of instructional equipment. The following items were included for UNM branch campuses: Gallup Branch, $1,238,750 for a computer classroom and lecture hall, $26,500 for library acquisitions and $68,100 for instructional equipment; Valencia Campus, $26,500 for library acquisitions and $36,300 for instructional equipment.

CENTENNIAL CAMPAIGN

The past year saw the completion of the five-year Centennial Campaign, a concentrated and comprehensive fund-raising effort on behalf of the University. The campaign surpassed its $100 million goal handsomely, raising $104,711,119. Also during FY94-95, the University raised $14 million in private funds.

RESEARCH DOLLARS

Over $183 million in research dollars were received, up 10 percent from the previous year.

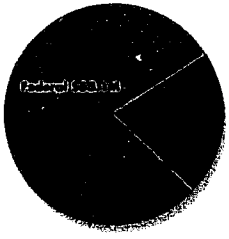
DIRECT LENDING

Planning was completed for a direct lending program made possible by the William D. Ford Federal Direct Loan Program. As a result of the program, student loans are no longer made through third-party lending institutions. Instead, starting July 1, 1995, UNM works directly with the federal government to administer loans. Government funds are deposited into the University's accounts for disbursal. Waiting for checks to arrive and tracking down those that get lost has been eliminated.

FINANCIAL AID - 1993-94

TYPE OF AID

SOURCE OF FUNDS



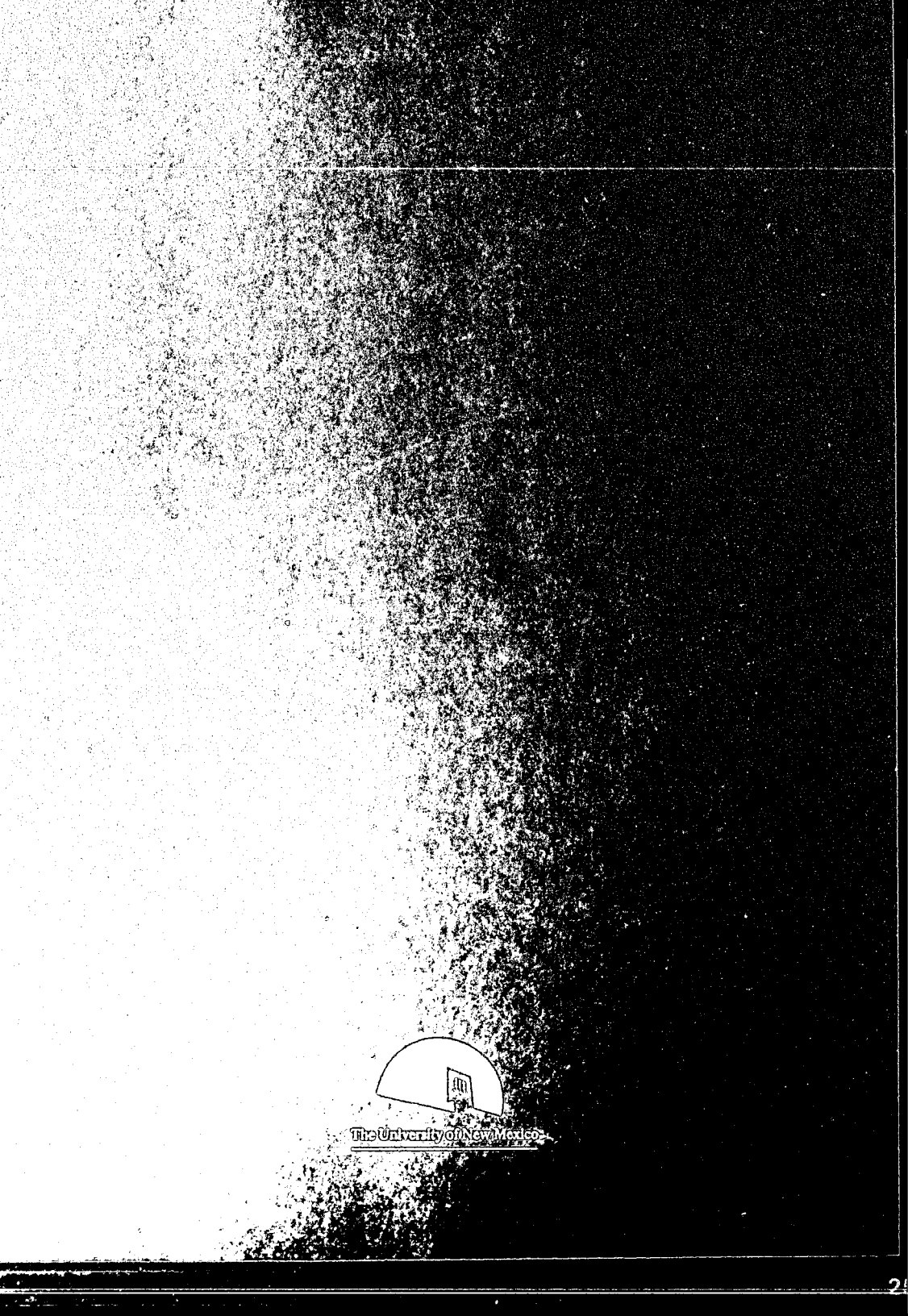
Financial aid for 1993-94 was $67,300,533
48% of undergraduates and 29% of graduate/professional students were financial aid recipients.

THE UNIVERSITY OF NEW MEXICO

FIVE YEARS IN REVIEW

	UNAUDITED 1995	AUDITED 1994	AUDITED 1993	AUDITED 1992	AUDITED 1991
FUND BALANCES					
Current - Unrestricted	40,740,251	35,819,551	33,759,816	26,904,935	17,508,765
Current - Restricted	8,826,697	7,442,047	23,708,658	18,390,384	17,848,498
Loan	14,902,655	14,802,313	14,831,705	14,934,522	15,064,921
Endowment	174,270,201	154,941,515	145,343,542	133,436,351	61,998,024
Plant	531,889,301	487,546,948	542,369,451	518,601,298	484,257,902
Component Units*	198,287,994	178,247,114	37,990,720	29,567,370	35,376,620
FUND BALANCE TOTAL	968,917,099	878,799,488	798,003,892	741,834,860	632,054,730
CURRENT & PLANT FUND REVENUE					
Tuition & Fees	47,651,478	46,791,201	42,889,140	38,423,840	35,399,551
State Appropriations	169,057,701	157,138,802	146,842,211	142,927,011	136,243,380
Local Appropriations	1,677,449	1,250,530	1,258,711	1,139,254	1,079,902
Govt. Grants & Contracts	125,508,024	86,722,266	85,402,325	75,661,762	63,761,535
Private Gifts & Grants	42,112,151	38,451,679	37,040,775	46,434,057	39,140,690
Land & Permanent Fund	4,911,760	5,141,967	5,192,310	5,153,292	5,263,521
Interest	1,973,540	1,368,316	1,059,379	1,467,554	1,988,058
University Physician Associates	3,288,600	3,288,600	3,288,600	3,288,600	3,288,600
Indirect Cost Recovered	20,879,766	17,525,575	16,112,143	14,645,578	12,699,830
Sales & Services	57,509,782	49,709,609	51,755,702	48,669,575	42,866,023
Other Income	38,250,809	23,433,186	23,213,420	15,377,798	13,180,967
Independent Operations/Component Units*	274,327,007	258,799,063	221 975,172	200,504,427	153,914,218
Plant Fund	17,972,418	22,730,664	26,963,380	42,963,342	15,513,779
TOTAL REVENUE	805,120,485	712,351,458	662,993,268	636,656,090	524,340,054
CURRENT & PLANT FUND EXPENSE					
Instruction	121,406,387	114,194,442	106,688,045	103,413,218	95,513,323
Academic Support	23,015,479	21,599,928	21,260,150	19,961,344	20,043,128
Student Services	13,673,051	12,470,357	11,255,225	10,687,424	10,294,652
Institutional Support	24,502,176	21,873,463	19,498,962	19,063,134	18,536,365
Operation & Maintenance of Plant	25,747,909	23,964,580	22,234,007	22,345,580	21,204,190
Student Social & Cultural Development	2,967,899	4,716,256	3,928,401	3,987,281	4,141,871
Research	108,451,556	77,944,857	67,426,488	64,404,601	54,056,149
Public Service	98,897,580	65,528,667	74,894,253	66,459,306	58,234,546
Internal Service	(2,927,477)	(2,545,943)	(2,632,029)	(1,840,985)	(836,399)
Student Aid	31,913,154	30,622,495	31,007,083	29,921,687	26,305,238
Auxiliary Enterprises	34,970,431	30,437,802	29,654,612	28,660,112	26,367,733
Intercollegiate Athletics	11,816,009	10,917,262	10,343,996	10,213,368	8,814,780
Independent Operations/Component Units*	254,286,126	239,892,572	198,243,942	189,899,142	142,889,143
Plant Fund	38,053,011	36,257 187	50,620,544	46,642,817	33,532,848
TOTAL EXPENSE	786,773,291	687,873,925	644,423,679	613,818,029	519,097,567
STUDENT LOANS OUTSTANDING	13,987,166	12,936,279	13,064,398	13,362,694	13,658,345
ENDOWMENTS HELD BY UNM	118,830,305	103,952,622	88,391,832	65,812,063	62,004,509
ENDOWMENTS - HELD BY OTHERS					
State Investment Council	75,385,917	67,820,453	71,523,780	67,683,377	61,500,000
INVESTMENT IN PLANT	601,650,044	555,084,933	582,864,067	548,661,750	509,814,675
PLANT LIABILITIES	112,612,482	115,690,112	115,610,337	107,807,412	80,601,144

* Note that beginning with FY 1994, pursuant to the implementation of GASB #14, certain component units are presented within the University combined financial statements that were previously not so presented.


The University of New Mexico

University of New Mexico

Athletic Teams

Annual Report

July 1, 1994 - June 30, 1995

The 1994-95 athletics season at The University of New Mexico was another prosperous one. A total of eight sports were represented by individuals or teams at their repsective NCAA Championships.

In Western Athletic Conference competition, nine of UNM's 19 WAC-affiliated sports finished fourth or better in the conference standings. In the unofficial composite rankings, the Lobo men finished third for the third straight year. The men have finished lower than third only twice in the past 12 years. The women placed seventh.

The Lobos won two conference titles. Men's tennis won its fifth consecutive crown, while women's golf made it three in a row. Three coaches - Rich Alday (baseball), Tim Cass (men's tennis), John Fields (men's golf) - were named WAC Coach of the Year.

In the academic arena, New Mexico's student-athletes compiled a 2.81 grade-point-average in the spring of 1995, the second highest semester GPA in the past seven years.

1994-95 SPORT-BY-SPORT HIGHLIGHTS

Baseball (Rich Alday, head coach)
- finished with a record of 29-26, 21-9 WAC (Eastern Division - 2nd place)
- Rich Alday WAC Eastern Division Coach of the Year
- Mark Wulfert WAC Eastern Division Player of the Year and 2nd Team All-America

Men's Basketball (Dave Bliss, head coach)
- finished 15-15 overall and 9-9 in the WAC, tied with Wyoming for fourth place; UNM has streaks of 20-win seasons (eight straight) and postseason appearances (11 in a row) end
- senior Marlow White named first team All-WAC; freshman Clayton Shields named to All-WAC Newcomer Team
- UNM hit 74.6% (44-59) of its shots against Eastern New Mexico on Dec. 6, the highest single-game percentage among NCAA Div. I schools in 1994-95
- two freshman - Shields and David Gibson - scored more than 200 points in a season, a first for the program
- Charles Smith became the fifth Lobo sophomore to lead the team in scoring averaging 15.9 points a game

Women's Basketball (Maureen "Mo" Eckroth, head coach)
- record was 5-22 overall and 2-12 in WAC
- Lobos were led by Tracy Aldridge with 10.9 points per game and 4.8 rebounds per game
- Aldridge honorable mention All-WAC

Cross Country (Richard Shanahan, head coach)
- men finished fifth and women placed sixth in WAC Championships
- Paul Ratnage earned All-WAC honors

Football (Dennis Franchione, head coach)
- finished with an overall record of 5-7 and a WAC mark of 4-4 to tie for fifth place, UNM's highest finish since 1983
- QB Stoney Case and TE David Sloan named first team All-WAC; Case also WAC Offensive Player of the Year
- Case received $18,000 postgraduate scholarship from National Football Foundation/College Football Hall of Fame; also Hitachi/CFA Scholar-Athlete Team
- UNM finished 6th in the nation in total offense averaging a school-record 472 yards a game; Lobos and Penn State only two teams in NCAA Div. I-A to rank in the top 25 in all four major offensive categories
- Lobos beat previously undefeated and No. 9-ranked Utah 23-21, the highest-ranked team New Mexico has ever beaten
- UNM set attendance record for second straight year averaging 26,848 a game

Men's Golf (John Fields, head coach)
- finished 12th at NCAA Championships
- finished 3rd at WAC Championships, 2nd at NCAA West Regional
- Rob McMillan WAC Freshman of the Year
- Mike Sauer NCAA West Regional individual champion
- John Fields named WAC Coach of the Year

Women's Golf (Sarah Hindi, head coach)
- finished 15th at NCAA Championships
- third consecutive WAC Championship
- Tracy May named WAC Player of the Year, J.J. McCormick WAC Freshman of the Year
- Joellyn Erdmann, Tracy May and J.J. McCormick All-WAC
- Sarah Hindi named 1994 LPGA Coach of the Year

Gymnastics (Rusty Mitchell, head coach)
- Ranked No. 1 in the country for 10 out of 12 weeks
- Lobos finished second in team competition in Mountain Pacific Sports Federation Championships
- Blaz Puljic earned All-America honors in the all-around, parallel bars and high bar at the 1995 NCAA Championships

Skiing (George Brooks, head coach)
- placed seventh in the NCAA Ski Championships
- Agneta Hjorth placed third in the women's slalom at the NCAA Championships
- New Mexico had four individuals named All-America

Men's Soccer (Klaus Weber, head coach)
- finished with a 14-6-0 mark
- Jason Hix and Michael Strati MPSF first team and freshman Justin Sells earned 2nd team All-MPSF

Women's Soccer (Amy Allmann, head coach)
- finished 6-12 in its second year

Softball (Susan Craig and Ken Johnson, co-head coaches)
- finished with a record of 12-36
- Terri Laguna District VI Academic All-America
- Casey Coffman named First Team All-WAC, Michelle Cash and Heather Medearis Second Team

Swimming (Bill Spahn, head coach)
- women placed fourth and men third at WAC Championships
- Nolan Wood finished 13th in the 200 IM and 21st in the 400 IM at the NCAA Championships

Men's Tennis (Tim Cass, head coach)
- Lobos won WAC Championship for the fifth consecutive year
- Cass named WAC Coach of the Year for the fifth consecutive year
- Berkowitz earned WAC Player of the Year
- Lobos ranked No. 6 in the nation for two weeks

Women's Tennis (Kathy Kolankiewicz, head coach)
- finished the season with a 13-9 mark
- Claudia Gutierrez earned first team All-WAC honors
- Alicia Meraz earned the Sportsmanship Award for the WAC
- cracked the national polls, climbing as high as No. 39

Indoor Track (Mike MacEachen, head coach)
- women's team placed 8th at the WAC Championships
- men's team placed 8th at the WAC Championships

Outdoor Track (Mike MacEachen, head coach)
- men's team placed 7th at the WAC Championships
- women's team finished 7th at the WAC Championships
- Sara Nicholsen qualified for the NCAA Championships in the javelin event

Volleyball (Laurel Brassey Iversen, head coach)
- Lobos finished with a 20-10 mark and 9-5 in WAC
- fifth consecutive appearance in NCAA Championship
- Tania Gooley and Robyn Wentworth All-WAC first team, Sally Downs and Mindy Hale second team

Wrestling (Bill Dotson, head coach)
- Lobos finished fifth at the WAC Championships
- Rico Garcia, Jeff Godbe and Mark Garcia placed fourth at the WAC Championships

FOOTBALL

The New Mexico Lobos completed their 96th season of football with a thrilling 25-21 win over the Texas-El Paso Miners. UNM trailed 21-6 with 13:29 left in the fourth quarter, however, senior quarterback Stoney Case engineered three scoring drives, including the game-winning 10-yard scoring pass to receiver Gavin Pearlman with 2:50 left. The 15-point deficit overcome is the largest fourth-quarter comeback in school history.

After an 0-5 start, New Mexico finished 5-7 and 4-4 in the Western Athletic Conference. UNM won four of its last five and went 5-2 in its last seven games. The Lobos tied Wyoming for fifth place in the WAC, the highest finish by UNM since 1983 when it placed fourth at 4-3. The Lobos have 11 wins the past two years, the most in consecutive seasons in 11 years (16 in 1982-83).

Case, the 1994 WAC Offensive Player of the Year, left college football as the 5th-most productive player in NCAA Div. I-A history with 10,651 yards (9,460 passing, 1,191 rushing) of total offense. For the second straight season, Case was the nation's 2nd-most productive player. He was responsible for 204 points (22 TD passes, 11 rushing, 3 2-point conversions), an average of 17 points a game. Case finished 3rd in the nation in total offense in 1994 averaging 304.1 yards a game.

Head coach Dennis Franchione is 14-20 after three years at UNM. Franchione has more wins (14) in his first three years than UNM posted in the six seasons before Coach Fran arrived (13 from 1986-91). Franchione is 94-39-2 (.704) in 12 years as a head coach.

For the second straight season, the Lobos set a school record for average attendance. UNM averaged 26,848 for five games in 1994 surpassing the 1993 record of 25,307. Two of the top four crowds in stadium history occurred in 1994: 30,743 for Utah; and 29,236 for Colorado State.

Case and tight end David Sloan were named 1st Team All-WAC. Second team picks were cornerback Art Celestine, center Brandon Turner and kicker Nathan Vail. Case, Sloan and wide receiver Manley Woods played in the Blue-Gray All Star Game. Sloan also appeared in the Senior Bowl.

UNM finished 3-4 on the road, including three straight wins at one point. It's the first time in 12 years a New Mexico team has won three in a row on the road. The wins were 38-21 at Hawaii, 56-31 at New Mexico State and 49-32 at Fresno State. The victory at New Mexico State was UNM's biggest on the road in 10 years and the second-most points ever scored by a Lobo team away from Albuquerque.

Senior receiver Gavin Pearlman led the team in receptions (55) and yards receiving (866), the 8th-best season for a Lobo receiver. Nathan Vail ended the season with 75 points (38-42 PATs, 12-18

FGs), the 7th-highest single season total in school history. Senior tailback Eric Young claimed the season rushing title with 732 yards.

Senior receiver Zack Wesley finished in 8th place at UNM with 91 career receptions. Wesley became the 15th Lobo to reach 1,000 yards receiving in a career. He finished with 1,040 yards.

Woods finished his career 2nd in kickoff returns (78), 2nd in kickoff return yardage (1,648), 8th in all-purpose yardage (3,105) and 9th in receiving yards (1,425).

Winslow Oliver begins his senior season in 4th place all-time at UNM with 2,417 yards rushing. He ranks 2nd in rushing attempts (529), is tied for 2nd in 100-yard rushing games (12) and is 5th in all-purpose yards (3,465). Oliver led the WAC and finished 14th in the nation in all-purpose yards averaging 139.7 yards a game.

Redshirt freshman LB Blake Irwin finished the season with 131 tackles to become only the second Lobo freshman to lead the team in tackles and the first since Johnny Jackson had 152 in 1981.

New Mexico's 1994 offense was one of the best in school history. The Lobos led the WAC and finished 6th in the nation averaging a school record 472 yards a game. The 1994 team was the fourth to lead the WAC in total offense joining the 1971, '78 and '86 squads. Nationally, UNM finished 11th in scoring offense (33.4), 14th in passing offense (261.4 ypg) and 21st in rushing offense (208.6 ypg). The Lobos and Penn State were the only two Div. I-A teams to be ranked in the top 25 in both rushing and passing offense.

The 1994 Lobos came within an eyelash of being the school's top scoring team of all-time. UNM averaged 33.4 points, second only to the 1982 team that averaged 34 a game. Two of UNM's top four scoring teams have been produced by Dennis Franchione since he became head coach in 1992. The Lobos also set a school record with 300 first downs in 1994.

1994 STATISTICS

RESULTS (5-7 OVERALL, 4-4 WESTERN ATHLETIC CONFERENCE)

Date		Opponent	Score	Attendance
Sept.	3	at Texas Tech	L, 37-31	27,234
Sept.	10	Texas Christian	L, 44-29	27,957
Sept.	17	at Southern Methodist	L, 34-31	11,100
Sept.	24	at Brigham Young	L, 49-47	60,265
Oct.	1	Colorado State	L, 38-31	29,236
Oct.	8	at Hawai'i	W, 38-21	33,719
Oct.	15	San Diego State	L, 20-13	26,831
Oct.	22	at New Mexico State	W, 56-31	26,528
Oct.	29	at Fresno State	W, 49-32	33,641
Nov.	5	Utah	W, 23-21	30,743
Nov.	12	at Wyoming	L, 38-28	13,455
Nov.	19	Texas-El Paso	W, 25-21	19,472

TEAM STATISTICS	NEW MEXICO	OPP.
Total First Downs	300	319
First Downs-Rushing	139	143
First Downs-Passing	138	157
First Downs-Penalty	23	19
Rushing Att-Yds	526-2,527	542-2,658
Pass Comp-Att-Int	235-411-12	238-374-9
Passing Yards	3,137	3,196
Total Offense Plays-Yards	937-5,664	916-5,854
Punting Number-Yds-Avg	50-1,961-39.2	46-1,880-40.9
Fumbles-Lost	21-9	34-18
Penalties-Yards	83-725	94-767
Sacks by-Yds Lost	31-203	15-125
Third Down Conversions	84-187	75-158
Third Down Conversion Pct.	.449	.475
Fourth Down Conversions	17-28	6-10
Fouth Down Conversion Pct.	.607	.600
Avg. Time of Possession	28:17	31:43

SCORING BY QUARTERS	1st	2nd	3rd	4th	TOT.	AVG.
NEW MEXICO	**51**	**145**	**88**	**117**	**401**	**33.4**
Opponent	74	119	77	116	386	32.2

RUSHING	G	ATT	GAIN	LOSS	NET	AVG	PG	TD	LP
Young, Eric	11	128	773	41	732	5.7	66.6	7	35
Oliver, Winslow	9	138	733	27	706	5.1	78.4	8	41
Case, Stoney	12	140	714	182	532	3.8	44.3	11	48
Shelton, Chris	11	47	244	3	241	5.1	21.9	2	34
Smith, Cleveland	7	26	122	3	119	4.6	17.0	0	19
Ghoston, Abe	11	29	123	6	117	4.0	10.6	0	17
Peterson, Scott	4	9	42	15	27	4.1	9.3	1	18
Woods, Manley	8	3	36	4	32	10.7	4.0	0	26
Houghtaling, Jeff	12	1	27	0	27	27.0	2.3	0	27
Adkins, Miles	7	1	5	0	5	5.0	0.7	0	5
Wesley, Zack	12	1	0	7	-7	-7.0	-0.6	0	0
Pearlman, Gavin	12	3	0	14	-14	-4.7	-1.2	0	3
NEW MEXICO	**12**	**526**	**2,819**	**292**	**2,527**	**4.8**	**210.6**	**29**	**48**
Opponents	12	542	2,993	335	2,658	4.9	221.5	29	

PASSING	G	ATT	CMP	INT	PCT	YDS	YDS/G	RTNG	TD	LP
Peterson, Scott	4	2	2	0	1.000	20	5.0	184.0	0	10
Case, Stoney	12	409	233	12	.570	3,117	259.8	132.9	22	65
NEW MEXICO	**12**	**411**	**235**	**12**	**.572**	**3,137**	**261.4**	**133.1**	**22**	**65**
Opponent	12	374	238	9	.550	3,196	266.3	146.5	18	

RECEIVING	G	REC	YDS	AVG	YDS/G	C/G	TD	LP
Pearlman, Gavin	12	52	866	16.7	72.2	4.3	2	56
Wesley, Zack	12	49	508	10.4	42.3	4.1	5	33
Sloan, David	9	24	320	13.3	35.6	2.7	1	32
Pagador, Steve	12	21	428	20.4	35.7	2.3	2	64
Oliver, Winslow	9	21	198	9.4	22.0	2.3	0	37
Young, Eric	11	20	157	7.9	14.3	1.8	2	65
Woods, Manley	8	19	278	14.6	34.8	2.4	4	40
Griffin, Chris	12	12	179	14.9	14.9	1.0	3	31
Ghoston, Abe	11	6	51	8.5	4.6	0.5	1	14
Gallegos, Dean	9	4	58	14.5	6.4	0.4	1	42
White, Roy	12	3	38	12.7	3.2	0.3	1	28
Shelton, Chris	11	2	36	18.0	3.3	0.2	0	18
Smith, Cleveland	7	1	15	15.0	2.1	0.1	0	15
Tyner, Matt	12	1	5	5.0	0.4	0.1	0	5
NEW MEXICO	**12**	**235**	**3,137**	**13.3**	**261.4**	**19.6**	**22**	**65**
Opponent	12	238	3,196	13.4	266.3	19.8	18	

TOTAL OFFENSE	G	PLAYS	RUSH	PASS	YARDS	TD	AVG
Case, Stoney	12	549	532	3,117	3,649	33	304.1
Oliver, Winslow	9	138	706	0	706	8	78.4
Young, Eric	11	128	732	0	732	7	66.6
Shelton, Chris	11	47	241	0	241	2	21.9
Smith, Cleveland	7	26	119	0	119	0	17.3
Peterson, Scott	4	11	37	20	57	1	14.3
Ghoston, Abe	11	29	117	0	117	0	10.6
Woods, Manley	8	3	32	0	32	0	4.0
Houghtaling, Jeff	12	1	27	0	27	0	2.3
Adkins, Miles	7	1	5	0	5	0	0.7
Wesley, Zack	12	1	-7	0	-7	0	-0.6
Pearlman, Gavin	12	3	-14	0	-14	0	-1.2
NEW MEXICO	**12**	**937**	**2,527**	**3,137**	**5,664**	**51**	**472.0**
Opponent	12	916	2,658	3,196	5,854	47	487.8

FIELD GOALS	G	1-19 FA-FM	20-29 FA-FM	30-39 FA-FM	40-49 FA-FM	50+ FA-FM	Total FA-FM	PCT	LP
Vail, Nathan	12	0-0	3-3	5-3	9-5	1-1	18-12	.670	50
NEW MEXICO	**12**	**0-0**	**3-3**	**5-3**	**9-5**	**1-1**	**18-12**	**.670**	**50**

TOTAL OFFENSE	TD	PAT	2-PT.	DXP	SAF	FG	PTS
Vail, Nathan	0	39-43	0-0	0-0	0	12-18	75
Case, Stoney	11	0-0	1-6	0-0	0	0-0	68
Young, Eric	9	0-0	0-0	0-0	0	0-0	54
Oliver, Winslow	8	0-0	0-0	0-0	0	0-0	48
Wesley, Zack	5	0-0	1-1	0-0	0	0-0	32
Woods, Manley	4	0-0	1-1	0-0	0	0-0	26
Griffin, Chris	3	0-0	0-0	0-0	0	0-0	18
Pearlman, Gavin	2	0-0	1-1	0-0	0	0-0	14
Pagador, Steve	2	0-0	0-0	0-0	0	0-0	12
Burrest, Damon	2	0-0	0-0	0-0	0	0-0	12
Shelton, Chris	2	0-0	0-0	0-0	0	0-0	12
Sloan, David	1	0-0	0-0	0-0	0	0-0	6
White, Roy	1	0-0	0-0	0-0	0	0-0	6
Gallegos, Dean	1	0-0	0-0	0-0	0	0-0	6
Ghoston, Abe	1	0-0	0-0	0-0	0	0-0	6
Peterson, Scott	1	0-0	0-0	0-0	0	0-0	6
NEW MEXICO	**53**	**39-43**	**4-9**	**0-0**	**0**	**12-16**	**401**
Opponents	34	37-41	5-7	0-0	0	17-23	386

PUNTING	G	NO	YDS	AVG	BLK	LP
Mansell, Coby	11	45	1,818	40.4	1	73
Conaway, Josh	3	4	130	32.5	0	58
Team	1	1	13	13.0	0	0
NEW MEXICO	**12**	**50**	**1,961**	**39.2**	**1**	**73**
Opponents	12	46	1,880	40.9	0	

PUNT RETURNS	G	NO	YDS	AVG	TD	LP
Sharper, Terrence	12	1	9	9.0	0	9
Oliver, Winslow	9	8	55	6.9	0	18
Young, Eric	11	4	3	0.8	0	3
NEW MEXICO	**12**	**13**	**67**	**5.2**	**0**	**18**
Opponents	12	18	60	3.3	0	

KICKOFF RETURNS	G	NO	YDS	AVG	TD	LP
Sharper, Terrence	12	1	9	9.0	0	9
Ghoston, Abe	11	1	30	30.0	0	30
Sharper, Terrence	12	3	77	25.7	0	33
Woods, Manley	8	10	217	21.7	0	47
Oliver, Winslow	9	14	298	21.3	0	37
Pagador, Steve	12	2	27	13.5	0	12
Wesley, Zack	12	2	27	13.5	0	23
Coverley, Rod	12	1	12	12.0	0	12
NEW MEXICO	**12**	**33**	**688**	**20.8**	**0**	**47**
Opponent	12	37	749	20.2	0	

INTERCEPTIONS	G	NO	YDS	AVG	TD	LP
Celestine, Art	12	3	32	10.7	0	22
Austin, Billy	12	1	29	29.0	0	29
Coverley, Dan	12	1	8	8.0	0	8
Burrest, Damon	11	1	6	6.0	1	6
Coit, Trent	12	1	0	0.0	0	0
Irwin, Blake	12	1	0	0.0	0	0
Butler, Charles	12	1	0	0.0	0	0
NEW MEXICO	**12**	**9**	**75**	**8.3**	**1**	**29**
Opponents	12	12	81	6.8	1	

1994 STATISTICS

DEFENSE	G	UT	AT	TOT/AVG	TFL-YDS	SCK-YDS	PBU	FC	FR
Irwin, Blake	12	65	66	131/10.9	6-12	0-0	3	1	0
Johnson, Daniel	10	61	53	114/11.4	7-37	4-41	0	0	0
Coit, Trent	12	50	40	90/7.5	2-2	105	4	0	2
Sharper, Terrence	12	50	33	83/6.9	0-0	0-0	2	0	1
Celestine, Art	12	52	23	75/6.3	2-14	0-0	8	3	1
Thomas, Roston	12	35	32	67/5.6	5-16	2-18	0	3	1
Austin, Billy	12	38	29	67/5.6	2-3	0-0	6	2	0
Butler, Charles	12	44	23	67/5.6	2-3	2-18	4	1	5
Wingate, John	12	24	41	65/5.4	11-27	8-48	0	0	2
Coverley, Dan	12	20	36	56/4.7	3-10	1-5	0	0	0
Carroll, Chris	7	22	28	50/7.1	4-7	0-0	1	0	0
Roquemore, Levi	12	20	29	49/4.1	1-5	0-0	2	0	0
Lucksinger, Brett	10	20	28	48/4.8	3-6	0-0	0	0	0
Solomon, Creighton	10	19	28	47/4.7	0-0	2-2	0	0	0
McGarrahan, Scott	12	25	20	45/3.8	0-0	0-0	0	0	1
Burrest, Damon	11	26	18	44/4.0	7-21	4-28	1	2	1
Coverley, Rod	12	23	21	44/3.7	0-0	1-2	0	1	3
Stapp, Clay	9	9	18	27/3.0	1-5	0-0	0	0	0
Williams, Todd	11	10	13	23/2.1	0-0	3-13	0	1	0
Lisker, John	12	6	13	19/1.6	1-1	1-1	0	2	0
Herring, Walter	9	10	6	16/1.8	1-1	2-21	0	0	0
Dunlap, Troy	10	7	5	12/1.2	3-11	1-7	0	1	0
Billingsley, Buddy	2	5	6	11/5.5	0-0	0-0	0	0	1
Barnard, Bart	11	4	3	7/0.6	0-0	0-0	1	0	0
Wesley, Zack	12	4	0	4/0.3	0-0	0-0	0	0	0
Houghtaling, Jeff	12	3	1	4/0.3	0-0	0-0	0	0	0
Sloan, David	9	2	1	3/0.3	0-0	0-0	0	0	0
Griffin, Chris	12	2	1	3/0.3	0-0	0-0	0	0	0
Alvarado, Vicente	11	0	3	3/0.3	0-0	0-0	0	0	0
Matthews, Glen	2	1	1	2/1.0	0-0	0-0	0	0	0
Adkins, Miles	6	2	0	2/0.3	0-0	0-0	0	0	0
Christian, Noel	6	2	0	2/0.3	0-0	0-0	0	0	0
Chavez, Coley	2	0	1	1/0.5	0-0	0-0	0	0	0
White, Roy	12	1	0	1/0.1	0-0	0-0	0	0	0
Tyner, Matt	12	1	0	1/0.1	0-0	0-0	0	0	0
Vail, Nathan	12	1	0	1/0.1	0-0	0-0	0	0	0
Pearlman, Gavin	12	1	0	1/0.1	0-0	0-0	0	0	0
Thomas, Johnnie	4	0	0	0/0.0	0-0	0-0	1	0	0

QUARTERBACK SACKS	G	NO	LOSS
Wingate, John	12	8	48
Burrest, Damon	11	4	28
Johnson, Daniel	10	4	41
Williams, Todd	11	3	13
Solomon, Creighton	10	2	2
Herring, Walter	9	2	21
Thomas, Roston	12	2	18
Butler, Charles	12	2	18
Lisker, John	12	1	1
Coverley, Dan	12	1	5
Coit, Trent	12	1	5
Dunlap, Troy	10	1	7
Coverley, Rod	12	1	2

TACKLES FOR LOSS	G	NO	LOSS
Wingate, John	12	11	27
Burrest, Damon	11	7	21
Johnson, Daniel	10	10	37
Irwin, Blake	12	6	12
Thomas, Roston	12	5	16
Carroll, Chris	7	4	7
Lucksinger, Brett	10	3	6
Coverley, Dan	12	3	10
Dunlap, Troy	10	3	11
Coit, Trent	12	2	2
Celestine, Art	12	2	14
Austin, Billy	12	2	3
Butler, Charles	12	2	3
Stapp, Clay	9	1	5
Lisker, John	12	1	1
Herring, Walter	9	1	1
Roquemore, Levi	12	1	5

PASSES BROKEN UP	G	NO
Celestine, Art	12	8
Austin, Billy	12	6
Coit, Trent	12	4
Butler, Charles	12	4
Irwin, Blake	12	3
Roquemore, Levi	12	2
Sharper, Terrence	12	2
Burrest, Damon	11	1
Barnard, Bart	11	1
Thomas, Johnnie	4	1
Carroll, Chris	7	1

FUMBLES CAUSED	G	NO
Thomas, Roston	12	3
Celestine, Art	12	3
Burrest, Damon	11	2
Lisker, John	12	2
Austin, Billy	12	2
Irwin, Blake	12	1
Dunlap, Troy	10	1
Coverley, Rod	12	1
Butler, Charles	12	1
Williams, Todd	11	1

FUMBLES CAUSED	G	NO
Butler, Charles	12	5
Coverley, Rod	12	3
Wingate, John	12	2
Coit, Trent	12	2
Burrest, Damon	11	1
Billingsley, Buddy	2	1
Sharper, Terrence	12	1
Thomas, Roston	12	1
Celestine, Art	12	1
McGarrahan, Scott	12	1

1994 GAME-BY-GAME STATISTICS

RUSHING

	Adkins	Case	Ghoston	Oliver	Peterson	Pearlman	Shelton	Smith	Woods	Young	Totals
Texas Tech	DNP	9-2-0-8	DNP	1-4-0-4	DNP	1-(-5)-0-0	6-27-0-8	2-4-0-3	0-0-0-0	17-51-2-23	36-83-2-23
TCU	DNP	15-61-1-9	DNP	Inj.	0-0-0-0	0-0-0-0	2-6-0-5	7-27-0-8	0-0-0-0	19-99-1-18	43-193-2-18
SMU	DNP	7-25-1-9	DNP	Inj.	DNP	0-0-0-0	5-20-0-8	0-0-0-0	0-0-0-0	21-81-1-15	33-126-2-15
BYU	DNP	11-29-0-21	11-78-0-17	Inj.	DNP	0-0-0-0	7-22-0-17	0-0-0-0	0-0-0-0	7-68-1-26	37-224-1-26
CSU	DNP	10-50-0-36	9-19-0-7	7-11-1-10	DNP	0-0-0-0	0-0-0-0	DNP	1-26-0-26	DNP	27-106-1-36
Hawai'i	DNP	14-53-1-20	0-0-0-0	17-104-2-15	1-(-3)-0-0	0-0-0-0	5-16-0-5	4-24-0-19	0-0-0-0	7-36-0-11	55-246-3-20
SDSU	DNP	13-94-1-48	0-0-0-0	27-163-0-35	DNP	0-0-0-0	1-4-0-4	DNP	2-10-0-10	9-62-0-15	52-329-1-48
NMSU	1-5-0-5	7-49-2-23	2-4-0-2	14-73-2-28	6-31-1-18	0-0-0-0	2-20-1-20	9-48-0-11	Inj.	10-67-0-12	51-297-6-28
Fresno State	0-0-0-0	16-114-3-25	0-0-0-0	14-106-1-41	2-9-0-10	1-(-3)-0-0	6-65-1-34	4-16-0-7	Inj.	8-59-0-16	51-366-5-41
Utah	DNP	12-(-1)- 0-15	0-0-0-0	25-83-0-11	DNP	1-(-6)-0-(-6)	12-59-0-20	DNP	Inj.	6-35-1-10	56-170-1-20
Wyoming	0-0-0-0	16-36-1-25	0-0-0-0	15-85-1-21	DNP	0-0-0-0	Inj.	0-0-0-0	Inj.	8-49-1-13	40-163-3-25
UTEP	0-0-0-0	10-20-1-17	0-0-0-0	18-77-1-14	DNP	0-0-0-0	1-2-0-2	DNP	0-0-0-0	16-125-0-24	45-224-2-24

Legend: Attempts-Net Yards-TD-Long Run

PASSING

	Case	Peterson	Totals
Texas Tech	16-33-3-235-1	DNP	16-33-3-235-1
TCU	37-62-1-403-2	0-0-0-0-0	37-62-1-403-2
SMU	14-26-1-184-2	DNP	14-26-1-184-2
BYU	25-43-1-375-6	DNP	25-43-1-375-6
CSU	29-43-3-363-3	DNP	29-43-3-363-3
Hawai'i	14-20-1-184-2	0-0-0-0-0	14-20-1-184-2
SDSU	20-43-0-175-0	DNP	20-43-0-175-0
NMSU	18-25-0-267-1	2-2-0-20-0	20-27-0-287-1
Fresno State	9-14-0-199-2	0-0-0-0-0	9-14-0-199-2
Utah	18-32-0-240-1	DNP	18-32-0-240-1
Wyoming	18-33-1-248-0	DNP	18-33-1-248-0
UTEP	15-35-1-244-2	DNP	15-35-1-244-2

Legend: Completions-Attempts-Interceptions-Yards-TD

RECEIVING

	Gallegos	Ghoston	Griffin	Oliver	Pagador	Pearlman	Sloan	Smith	Wesley	White	Woods	Young	Totals
Texas Tech	DNP	1-3-0-3	0-0-0-0	1-2-0-1	1-39-0-39	4-117-1-45	1-9-0-9	0-0-0-0	3-34-0-22	0-0-0	2-32-0-19	3-(-1)-0-0	16-235-1-45
TCU	3-57-1-42	0-0-0-0	1-28-0-28	Inj.	3-24-0-11	6-69-0-17	5-41-0-14	1-15-0-1	8-75-0-16	0-0-0	2-23-0-15	8-71-1-21	37-403-2-42
SMU	0-0-0-0	0-0-0-0	0-0-0-0	Inj.	0-0-0-0	2-15-0-8	4-62-0-29	0-0-0-0	4-30-1-9	0-0-0	0-0-0-0	3-59-1-65	14-184-2-65
BYU	0-0-0-0	3-23-1-14	0-0-0-0	Inj.	3-57-0-36	4-72-0-40	2-14-1-11	DNP	7-128-3-33	0-0-0	4-63-1-40	2-18-0-14	25-375-6-40
CSU	DNP	1-11-0-11	1-31-1-31	3-23-0-16	2-42-1-29	6-95-0-25	6-78-0-21	DNP	6-50-1-17	0-0-0	3-28-0-18	DNP	29-363-3-31
Hawai'i	1-1-0-1	0-0-0-0	1-7-0-7	3-25-0-19	1-18-0-18	2-17-0-14	1-26-0-26	0-0-0-0	2-21-0-11	0-0-0	2-51-2-38	0-0-0-0	14-184-2-38
SDSU	0-0-0-0	DNP	0-0-0-0	5-26-0-13	0-0-0-0	2-23-0-14	1-27-0-27	DNP	7-48-0-11	0-0-0	5-51-0-14	0-0-0-0	20-175-0-27
NMSU	0-0-0-0	0-0-0-0	2-10-1-9	3-85-0-37	0-0-0-0	5-87-0-40	4-63-0-32	0-0-0-0	4-33-0-15	0-0-0	Inj.	2-9-0-10	18-267-1-40
Fresno State	0-0-0-0	0-0-0-0	4-58-1-18	0-0-0-0	3-88-1-64	2-53-0-47	0-0-0-0	0-0-0-0	0-0-0-0	0-0-0	Inj.	0-0-0-0	9-199-2-64
Utah	DNP	0-0-0-0	2-20-0-12	2-31-0-31	5-46-0-16	5-123-0-56	Inj.	DNP	2-13-0-8	1-2-1-2	Inj.	1-5-0-5	18-240-1-56
Wyoming	0-0-0-0	1-14-0-14	1-25-0-25	3-(-2)-0-5	2-56-0-29	5-92-0-27	Inj.	0-0-0-0	3-31-0-13	2-36-0-28	Inj.	1-(-4)-0-(-4)	18-248-0-29
UTEP	0-0-0-0	0-0-0-0	0-0-0-0	1-8-0-8	1-58-0-58	9-103-1-26	Inj.	DNP	3-45-0-19	0-0-0-0	1-30-1-30	0-0-0-0	15-244-2-58

Legend: Receptions-Yards-TD-Long Reception

TACKLES

NAME	Texas Tech	TCU	SMU	BYU	CSU	Hawai'i	SDSU	NMSU	Fresno St.	Utah	Wyoming	UTEP
Alvarado	0-0-0	0-0-0	0-0-0	0-0-0	0-0-0	0-0-0	0-0-0	0-3-3	0-0-0	0-0-0	0-0-0	0-0-0
Austin	3-3-6	2-0-2	2-3-5	2-3-5	3-2-5	3-4-7	2-0-2	3-1-4	3-3-6	6-4-10	7-1-8	2-5-7
Barnard	DNP	0-0-0	0-0-0	0-0-0	2-0-2	2-0-2	0-0-0	0-1-1	0-0-0	1-1-2	0-0-0	1-1-2
Billingsley	4-4-8	1-2-3	Inj.	Inj.	Inj.	Inj.	Inj.	Inj.	Inj.	Inj.	Inj.	Inj.
Burrest	5-3-8	2-1-3	0-0-0	2-2-4	4-1-5	2-1-3	3-1-4	1-2-3	1-2-3	3-2-5	2-2-4	1-3-4
Butler	4-4-8	1-2-3	6-2-8	3-2-5	2-3-5	3-2-5	2-0-2	3-1-4	5-1-6	7-4-11	7-1-8	1-1-2
Carroll	4-4-8	4-3-7	2-6-8	1-4-5	1-5-6	5-2-7	5-4-9	DNP	DNP	DNP	DNP	DNP
Celestine	8-2-10	3-0-3	5-1-6	5-3-8	4-2-6	4-3-7	5-1-6	1-0-1	5-4-9	3-2-5	4-1-5	5-4-9
Colt	5-4-9	10-4-14	3-1-4	3-2-5	2-8-10	4-3-7	7-6-13	6-2-8	2-2-4	1-4-5	5-2-7	2-2-4
Coverley, D.	0-3-3	0-7-7	0-5-5	5-1-6	2-3-5	1-0-1	0-0-0	1-2-3	2-2-4	3-6-9	2-2-4	2-4-6
Coverley, R.	2-1-3	1-2-3	0-4-4	4-2-6	1-2-3	3-0-3	1-1-2	2-2-4	1-3-4	1-2-3	2-2-4	2-1-3
Dunlap	0-0-0	0-0-0	3-0-3	0-0-0	1-1-2	2-0-2	1-1-2	0-2-2	0-0-0	0-1-1	0-0-0	0-0-0
Ellington	DNP	DNP	DNP	DNP	DNP	DNP	DNP	0-2-2	DNP	DNP	DNP	DNP
Herring	1-0-1	0-0-0	0-0-0	0-0-0	0-0-0	1-0-1	0-0-0	3-2-5	3-4-7	Inj.	Inj.	Inj.
Irwin	7-6-13	3-2-5	5-5-10	9-7-16	6-9-15	4-6-10	3-6-9	4-2-6	12-5-17	3-6-9	7-6-13	2-6-8
Johnson, D.	8-9-17	8-5-13	4-4-8	3-5-8	4-5-9	9-4-13	3-4-7	DNP	DNP	5-4-9	9-5-14	3-9-12
Lisker	2-3-5	0-5-5	4-1-5	0-0-0	0-0-0	1-0-1	0-0-0	0-3-3	0-0-0	0-0-0	1-2-3	0-0-0
Lucksinger	0-0-0	0-0-0	2-4-6	1-3-4	4-3-7	4-3-7	1-4-5	0-4-4	2-2-4	2-2-4	0-0-0	3-6-9
Matthews	DNP	DNP	1-1-2	DNP	DNP	DNP	DNP	DNP	0-0-0	0-0-0	DNP	DNP
McGarrahan	0-1-1	0-0-0	0-0-0	2-0-2	3-3-6	3-2-5	2-0-2	0-1-1	6-6-12	3-2-5	3-3-6	1-2-3
Roquemore	1-0-1	1-0-1	2-6-8	0-3-3	1-0-1	3-4-7	2-2-4	5-4-9	2-6-8	2-2-4	1-0-1	0-2-2
Sharper	10-3-13	4-3-7	8-3-11	9-2-11	5-2-7	4-5-9	3-4-7	4-1-5	0-0-0	2-4-6	0-3-3	1-3-4
Solomon	2-3-5	2-2-4	DNP	DNP	4-5-9	1-4-5	3-4-7	3-1-4	3-1-4	2-2-4	1-7-8	1-3-4
Stapp	0-0-0	0-1-1	2-5-7	5-6-11	0-3-3	1-1-2	1-2-3	0-0-0	0-0-0	Inj.	Inj.	Inj.
R. Thomas	5-3-8	6-3-9	0-5-5	4-1-5	3-1-4	5-0-5	2-2-4	2-4-6	2-3-5	3-5-8	3-2-5	1-0-1
Williams	DNP	DNP	0-0-0	2-1-3	0-1-1	2-0-2	4-1-5	1-2-3	1-3-4	0-4-4	0-1-1	0-1-1
Wingate	1-3-4	1-2-3	5-7-12	1-2-3	2-6-8	1-3-4	1-4-5	2-2-4	0-5-5	6-2-8	0-4-4	2-3-5
Totals	72-59-131	49-44-93	54-63-117	61-49-110	54-65-119	68-47-115	51-47-98	41-48-89	50-52-102	53-59-112	54-44-98	30-56-86

Legend: Solo-Assists-Total

1994 GAME-BY-GAME STARTERS

OFFENSE

	WR	WR	WR	TE	ST	SG	C	QG	QT	QB	TB
Texas Tech	Wesley	Pearlman	Griffin(TE)	Sloan	Tyner	Allen	Turner	Crowder	Mummert	Case	Oliver
TCU	Wesley	Pearlman	Woods	Sloan	Tyner	Allen	Turner	Crowder	Mummert	Case	Young
SMU	Wesley	Pearlman	Woods	Sloan	Wallace	Gleason	Turner	Crowder	Mummert	Case	Young
BYU	Shelton (FB)	Pearlman	Woods	Sloan	Tyner	Allen	Turner	Crowder	Mummert	Case	Young
CSU	Wesley	Pearlman	Shelton(FB)	Sloan	Tyner	Allen	Turner	Crowder	Mummert	Case	Ghoston
Hawai'i	Wesley	Pearlman	Shelton(FB)	Sloan	Tyner	Allen	Turner	Crowder	Mummert	Case	Oliver
SDSU	Wesley	Pearlman	Shelton(FB)	Sloan	Tyner	Allen	Turner	Crowder	Mummert	Case	Oliver
NMSU	Wesley	Pearlman	Griffin(TE)	Sloan	Tyner	Allen	Turner	Crowder	Mummert	Case	Oliver
Fresno State	Wesley	Pearlman	Griffin(TE)	Sloan	Tyner	Allen	Turner	Crowder	Mummert	Case	Oliver
Utah	Wesley	Pearlman	Pagador	Griffin	Tyner	Allen	Turner	Crowder	Mummert	Case	Oliver
Wyoming	Wesley	Pearlman	Ghoston(FB)	Griffin	Tyner	Crowder	Turner	Jaeger	Mummert	Case	Oliver
UTEP	Wesley	Pearlman	Pagador	Houghtaling	Tyner	Gleason	Turner	Crowder	Mummert	Case	Oliver

DEFENSE

	DE	NT	DT	OLB	ILB	ILB	OLB	LCB	FS	SS	RCB
Texas Tech	Billingsley	Lisker	Burrest	D. Coverley	Johnson	Irwin	Thomas	Butler	Colt	Sharper	Celestine
TCU	Billingsley	Lisker	Burrest	D. Coverley	Johnson	Carroll	Thomas	Butler	Colt	Sharper	Celestine
SMU	Stapp	Lisker	Wingate	D. Coverley	Carroll	Irwin	Thomas	Butler	Colt	Sharper	Celestine
BYU	Stapp	Lisker	Wingate	D. Coverley	Johnson	Irwin	Thomas	Butler	Colt	Sharper	Celestine
CSU	Stapp	Lucksinger	Wingate	D. Coverley	Johnson	Irwin	Thomas	Butler	Colt	Sharper	Austin
Hawai'i	Stapp	Lucksinger	Wingate	D. Coverley	Johnson	Irwin	Thomas	Butler	Colt	Sharper	Celestine
SDSU	Stapp	Lucksinger	Burrest	T. Williams	Johnson	Irwin	Thomas	Butler	Colt	Sharper	Celestine
NMSU	Wingate	Lucksinger	Burrest	T. Williams	Herring	Irwin	Thomas	Butler	Colt	Sharper	Austin
Fresno State	Wingate	Lucksinger	Burrest	D. Coverley	Herring	Irwin	Thomas	Austin	Colt	Butler	Celestine
Utah	Wingate	Lucksinger	Burrest	D. Coverley	Roquemore	Irwin	Thomas	Austin	Colt	Butler	Celestine
Wyoming	Wingate	Lucksinger	Burrest	D. Coverley	Johnson	Irwin	Thomas	Austin	Colt	Butler	Celestine
UTEP	Wingate	Lucksinger	Burrest	D. Coverley	Johnson	Irwin	Thomas	Austin	Colt	Butler	Celestine

1994 SUPERLATIVES

NEW MEXICO (TEAM)

	HIGH	LOW
Points scored	56 vs. New Mexico St.	13 vs. San Diego State
First Downs	32 vs. TCU, BYU	15 vs. Texas Tech
Rushing	18 vs. Fresno State	3 vs. Texas Tech
Passing	21 vs. TCU	6 vs. SMU
Penalty	4 vs. SMU	0 two times
Rushing Attempts	56 vs. Utah	27 vs. Colorado State
Rushing Yardage	366 vs. Fresno State	83 vs. Texas Tech
Passing Attempts	62 vs. TCU	14 vs. Fresno State
Passing Completions	37 vs. TCU	9 vs. Fresno State
Passing Yardage	403 vs. TCU	175 vs. San Diego State
Passes Intercepted	3 vs. Texas Tech	0 three times
TOTAL OFFENSE	599 vs. BYU	310 vs. SMU
Total Plays	105 vs. TCU	59 vs. SMU
Fumbles	3 three times	0 New Mexico St.
Lost	3 vs. San Diego State	0 three times
Penalties	12 vs. TCU	3 vs. UTEP
Yards	96 vs. TCU	31 vs. UTEP
Time of Possession	33:33 vs. Texas Tech	22:54 vs. SMU

OPPONENT (TEAM)

	HIGH	LOW
Points Scored	49 BYU	20 San Diego State
First Downs	31 SMU	17 New Mexico St.
Rushing	18 SMU, BYU	4 New Mexico St.
Passing	20 Colorado State	8 UTEP
Penalty	4 SMU	0 BYU
Rushing Attempts	57 SMU	31 Hawai'i
Rushing Yardage	322 TCU	155 Hawai'i
Passing Attempts	45 Hawai'i	21 UTEP
Passing Completions	28 Hawai'i	9 UTEP
Passing Yardage	427 Wyoming	89 UTEP
Passes Intercepted	2 SMU, Fresno State	0 six times
TOTAL OFFENSE	606 TCU	374 New Mexico St.
Total Plays	88 Wyoming	61 New Mexico St.
Fumbles	7 Texas Tech	0 two times
Lost	5 Texas Tech	0 three times
Penalties	13 Wyoming	4 San Diego State, Utah
Yards	130 Wyoming	30 San Diego State
Time of Possession	37:06 SMU	26:27 TCU

NEW MEXICO (INDIVIDUAL)

Rushing Attempts	27	Winslow Oliver vs. San Diego State
Rushing Yards	163	Winslow Oliver vs. San Diego State
Longest Rush	48	Stoney Case vs. San Diego State
Longest TD Rush	41	Winslow Oliver vs. Fresno State
Pass Attempts	62	Stoney Case vs. TCU
Pass Completions	37	Stoney Case vs. TCU
Passing Yardage	403	Stoney Case vs. TCU
Longest Pass	65	Stoney Case to Eric Young vs. SMU
Longest TD Pass	65	Stoney Case to Eric Young vs. SMU
Receptions	9	Gavin Pearlman vs. UTEP
Yards Receiving	128	Zack Wesley vs. BYU
Touchdowns	3	Zack Wesley vs. BYU, Stoney Case vs. FSU
Points	18	Zack Wesley vs. BYU, Stoney Case vs. FSU
Longest Punt	73	Coby Mansell vs. SMU
Longest Field Goal	50	Nathan Vail vs. Wyoming
Punt Return	13	Winslow Oliver vs Utah
Kickoff Return	47	Manley Woods vs. TCU
Interception Return	29	Billy Austin vs. Fresno State
Fumble Return	75	Damon Burrest vs. Texas Tech

NEW MEXICO (INDIVIDUAL)

Rushing Attempts	31	Andre Davis, TCU
Rushing Yards	325	Andre Davis, TCU
Longest Rush	87	Andre Davis, TCU
Longest TD Rush	87	Andre Davis, TCU
Pass Attempts	45	John Hao, Hawai'i
Pass Completions	28	John Hao, Hawai'i
Passing Yardage	427	John Gustin, Wyoming
Longest Pass	63	Marcus Harris, Ryan Christopherson, Wyoming
Longest TD Pass	63	John Gustin to Marcus Harris, Wyoming
Receptions	9	Phil Cunningham, Hawai'i
Yards Receiving	167	Marcus Harris, Wyoming
Touchdowns	2	held by six players
Points	12	held by six players
Longest Punt	55	Brian Gragert, Wyoming
Longest Field Goal	52	Jon Davis, Texas Tech
Punt Return	16	Jason Cooper, BYU
Kickoff Return	50	Basil Mitchell, TCU
Interception Return	35	Zack Thomas, Texas Tech
Fumble Return	None	

1994 New Mexico

No.	Name	Pos.	Ht.	Wt.	Cl-Exp.	Birthdate	Age+	Hometown (Last School)
48	Miles Adkins	FB	5-10	219	Sr-1L	3-2-73	21	Albuquerque (Albuquerque HS)
65	Manny Alderete #	C	6-2	288	So-RS	11-19-73	20	Albuquerque (Manzano HS)
70	Calvin Allen	OT	6-7	365	Jr-2L	3-14-73	21	Sugar Land, Tex. (Clements HS)
46	Vicente Alvarado	LB	6-1	204	Jr-1L	2-26-73	21	Albuquerque (Del Norte HS)
61	Eric Alwin #	OG	6-6	286	Fr-RS	12-30-74	19	Woodbridge, Ill. (Downers Grove South HS)
	Eddy Aragon #	P	6-2	190	Fr-RS	2-21-75	19	Albuquerque (St. Pius X HS)
	Pat Arnold #	LB	6-1	175	Fr-RS	12-6-72	21	Webster, N.Y. (Webster HS)
16	Billy Austin #	CB	5-10	185	Fr-RS	3-8-75	19	Houston, Tex. (Kempner HS)
51	Bart Barnard	LB	6-2	210	Fr-HS	2-23-76	18	Boulder, Colo. (Boulder HS)
59	Buddy Billingsley	DE	6-3	233	So-1L	9-11-73	20	Lubbock, Tex. (Monterey HS)
	Josh Boies #	P	6-3	187	Fr-RS	12-14-74	19	Santa Fe, N.M. (Santa Fe HS)
98	Bill Borchers	LB	6-3	240	Fr-HS	1-28-76	18	Del City, Okla. (Del City HS)
17	Brad Boyd	QB	6-0	190	Fr-HS	2-25-75	19	Harlingen, Tex. (Harlingen HS)
75	Damon Burrest	DT	6-3	311	Sr-2L	10-11-71	22	Tabb, Va. (NE Oklahoma A&M)
9	Charles Butler	CB	5-9	176	Sr-2L	4-11-72	22	Dallas, Tex. (Carter HS)
2	Chris Carroll	LB	5-11	211	So-1L	1-19-74	20	Dallas, Tex. (Skyline HS)
25	Stoney Case	QB	6-3	197	Sr-3L	7-7-72	22	Odessa, Tex. (Permian HS)
30	Art Celestine	CB	5-9	186	Jr-2L	7-12-73	21	Riverside, Calif. (Notre Dame HS)
	Coley Chavez	LB	6-4	220	So-HS	4-2-74	20	Tucson, Ariz. (Sahuaro HS)
	Noel Christian #	FB	5-11	193	Fr-RS	3-12-74	20	Irving, Tex. (Irving HS)
41	Trent Coit	FS	6-1	195	Sr-3L	1-23-72	22	Dallas, Tex. (Kimball HS)
87	Anthony Coleman	WR	6-0	175	Fr-HS	3-10-76	18	Palmdale, Calif. (Palmdale HS)
49	Dan Coverley	LB	6-5	227	Sr-1L	12-12-69	24	Mindin, Nev. (Ricks College)
23	Rod Coverley	LB	6-2	186	Sr-1L	12-12-69	24	Mindin, Nev. (Ricks College)
72	Alex Crowder	OG	6-5	299	Sr-3L	12-9-71	22	Las Vegas, Nev. (Chaparral HS)
36	Marcus Dowdy	FS	6-4	207	Fr-HS	4-8-76	18	Park Forest, Ill. (Rich East HS)
33	Troy Dunlap	FB	5-10	176	So-HS	2-19-74	20	Houston, Tex. (Klein Forest HS)
	Mike Ellington #	NT	6-0	235	Fr-RS	11-17-74	19	Eucha, Okla. (Culver Military)
31	Corbin Epps	FB	6-0	230	Fr-HS	7-25-75	19	Edinburg, Tex. (Edinburg HS)
	Chad Everts	QB	5-10	185	Fr-Tr	1-15-75	19	Albuquerque (Mt. San Antonio College)
32	Dean Gallegos	WR	5-9	166	Jr-1L	7-25-73	20	Albuquerque (Rio Grande HS)
90	Barrett Garrison	DE	6-4	230	Fr-HS	4-7-76	18	Spicewood, Tex. (Marble Falls HS)
76	Andy Gleason	OG	6-5	290	So-1L	2-12-74	20	Del City, Okla. (Del City HS)
81	Chris Griffin	TE	6-3	255	Jr-2L	7-26-74	20	Oklahoma City, Okla. (Putnam North HS)
	Trey Helle #	CB	5-10	195	Fr-RS	3-28-75	19	Houston, Tex. (Mission HS)
58	Walter Herring	LB	5-10	203	Sr-1L	11-13-72	21	Phoenix, Ariz. (Mesa CC)
13	Jeff Houghtaling	QB	6-4	192	So-HS	10-29-73	20	Artesia, N.M. (Artesia HS)
39	Blake Irwin #	LB	6-0	192	Fr-RS	4-20-75	19	Boulder, Colo. (Boulder HS)
56	Shane Jaeger #	OG	6-2	270	Fr-RS	9-3-74	19	Carrolton, Tex. (Newman Smith HS)
	Chris Johnson #	TB	5-10	198	So-Tr	11-18-72	21	Houston, Tex. (Southwest Texas State)
44	Daniel Johnson	LB	5-11	211	So-1L	9-2-73	20	Lubbock, Tex. (Dunbar HS)
	Chris Kohn	LB	5-10	221	So-HS	1-20-73	21	Albuquerque (Highland HS)
73	John Lisker	DT	6-3	270	Sr-1L	11-30-71	22	West Palm Beach, Fla. (Trinity Valley College)
52	Brett Lucksinger	NT	6-1	271	Fr-HS	11-24-75	18	Houston, Tex. (Stratford HS)
	Coby Mansell #	P	5-11	181	Fr-RS	8-28-74	19	Fort Lauderdale, Fla. (Culver Military)
78	Glen Matthews	DT	6-3	260	Fr-HS	1-26-77	17	Chicago, Ill. (De La Salle Institute)
35	Jasper Matthews	CB	5-9	164	Sr-1L	12-2-71	22	Natchez, Miss. (Copiah-Lincoln JC)
19	Scott McGarrahan	FS	6-1	173	Fr-RS	2-12-74	20	Arlington, Tex. (Lamar HS)
24	Jimmy McGrew	CB	6-2	180	Fr-HS	6-25-76	18	Lubbock, Tex. (Coronado HS)

Alphabetical Roster

No.	Name	Pos.	Ht.	Wt.	Cl-Exp.	Birthdate	Age+	Hometown (Last School)
93	Derrick Milner	LB	6-3	200	Fr-HS	6-20-76	18	El Paso, Tex. (Austin HS)
86	Mando Morlos	TE	6-4	220	Fr-HS	1-15-76	18	Thornton, Colo. (Thornton HS)
77	Ryan Mummert	OT	6-3	283	Jr-2L	7-5-73	21	Trabuco Canyon, Calif. (Santa Margarita HS)
71	Kevin Ned #	OG	6-4	320	So-Tr	7-19-74	20	Houston, Tex. (U. of Cal-Berkeley)
5	Winslow Oliver	TB	5-8	172	Jr-2L	3-3-73	21	Houston, Tex. (Kempner HS)
80	Steve Pagador	WR	5-10	179	Jr-Tr	2-17-73	21	Santa Clara, Calif. (West Valley College)
1	Gavin Pearlman	WR	5-8	156	Sr-1L	1-16-72	22	Albuquerque (Kenyon College)
12	Scott Peterson	QB	6-1	187	Jr-1L	2-14-73	21	Thousand Oaks, Calif. (Thousand Oaks HS)
45	Caleb Quinn	TB	5-11	180	Fr-HS	7-30-76	18	El Paso, Tex. (Irvin HS)
10	Kevin Richards #	WR	6-2	186	Fr-RS	5-8-75	19	Albuquerque (La Cueva HS)
89	Ricky Roberts	WR	6-3	206	So-HS	2-8-74	20	Albuquerque (Cibola HS)
55	Levi Roquemore	LB	6-0	225	Fr-HS	3-12-76	18	Mission Viejo, Calif. (Capistrano Valley HS)
74	Donovan Roy #	OT	6-5	320	Jr-Tr	2-17-73	21	Van Nuys, Calif. (Southern California)
63	Aaron Saavedra	OT	6-4	339	Jr-1L	6-21-73	21	Albuquerque (N.M. Highlands)
8	Rocque Sandoval	QB	6-2	185	Fr-HS	10-6-76	17	Palmdale, Calif. (Palmdale HS)
57	Rusty Savage	NT	6-2	259	Jr-HS	12-16-72	21	Sherman Oaks, Calif. (Montclair Prep)
37	Terrence Sharper	SS	5-9	177	Jr-1L	8-29-72	21	Dallas, Tex. (Roosevelt HS)
38	Chris Shelton #	FB	5-10	207	Fr-RS	7-22-75	19	Palestine, Tex. (Palestine HS)
3	Matt Simmons #	TB	5-10	190	Fr-RS	2-13-75	19	Albuquerque (La Cueva HS)
88	David Sloan	TE	6-7	250	Sr-1L	6-8-72	22	Clovis, Calif. (Fresno City College)
	Ed Slomka #	DT	6-5	234	So-RS	11-29-72	21	Gibsonia, Pa. (Gannon)
27	Chad Smith	SS	5-10	175	Fr-HS	7-27-75	19	Porterville, Calif. (Porterville HS)
96	Creighton Solomon	NT	6-0	345	So-1L	12-18-74	19	El Reno, Okla. (El Reno HS)
94	Clay Stapp #	DE	6-3	224	Fr-RS	7-26-75	19	Amarillo, Tex. (Amarillo HS)
11	Tyson Stull	TB	6-0	197	Jr-1L	1-22-73	21	San Dimas, Calif. (Long Beach State)
21	Johnnie Thomas #	TB	6-1	154	Fr-RS	12-15-73	20	Chicago, Ill. (Lane Tech HS)
85	Milton Thomas	WR	6-1	171	So-1L	4-15-75	19	Livingston, Tex. (Livingston HS)
34	Roston Thomas	LB	6-4	225	Jr-2L	8-14-73	20	Marina del Rey, Calif. (St. Monica HS)
	Jasper Toledo	LB	5-7	205	Jr-HS	7-16-71	23	Crownpoint, N.M. (Crownpoint HS)
66	Brandon Turner	C	6-3	275	So-1L	2-7-74	20	Lindale, Tex. (Lindale HS)
53	Matt Tyner #	OT	6-3	296	Fr-RS	3-4-75	19	Edgewood, Tex. (Edgewood HS)
6	Nathan Vail	K	6-0	192	Sr-1L	1-19-73	21	Santee, Calif. (Grossmont College)
79	Chris Wallace	OG	6-2	300	Fr-HS	7-29-76	18	Spring, Tex. (Spring HS)
	David Webb	LB	5-11	196	So-HS	1-31-69	25	Colorado Springs, Colo. (Adams State)
28	Zack Wesley	WR	6-0	180	Sr-2L	2-6-71	23	Albuquerque (Manzano HS)
82	Charles Westmoreland	WR	6-3	198	Fr-HS	10-15-74	19	Carthage, Tex. (Carthage HS)
84	Roy White #	TE	6-2	251	Fr-RS	11-23-74	19	Kerrville, Tex. (Tivy HS)
7	Todd Williams	LB	6-2	222	Sr-1L	8-16-72	21	Chicago, Ill. (Highland College)
68	Aaron Wilson	C	6-2	252	So-HS	8-8-74	19	Oakland, Calif. (Bishop O'Dowd HS)
95	John Wingate #	DE	6-3	231	Fr-RS	5-9-75	19	Castroville, Tex. (Medina Valley HS)
18	Jameal Woods #	SS	6-1	170	Fr-RS	7-10-74	20	Killeen, Tex. (Killeen HS)
83	Manley Woods #	WR	6-2	167	Sr-3L	7-28-72	22	Gardena, Calif. (Gardena HS)
91	Antoine Wright	LB	6-2	215	Fr-HS	6-3-76	18	Wichita Falls, Tex. (Hirschi HS)
4	Eric Young #	TB	5-9	182	Sr-1L	7-19-71	23	Broken Bow, Okla. (NE Oklahoma A&M)
	Mark Young #	LB	6-7	207	Fr-RS	5-3-75	19	Raton, N.M. (Raton HS)

+ ages as of Aug. 1, 1994
# 1993 Redshirt

VOLLEYBALL

The volleyball team finished the season 20-10 overall and 9-5 in the WAC, good enough for third place in conference standings. The1994 season was the fifth season UNM had 20 or more wins by a Brassey Iversen led team. Brassey Iversen's record at New Mexico now stands at 192-108 (.640) in 10 years of coaching. New Mexico participated in its fifth consecutive and seventh overall NCAA postseason tournament. The Lobos defeated Washington State in the first round to advance to the second round where UNM was defeated by a tough Southern California team.

The Lobos graduated five seniors who were all named team Most Valuable Players for the 1994 season. One senior left her mark on the court of New Mexico record books. Tania Gooley established herself as one of New Mexico's best players by breaking career records and planting herself in others. Gooley established three records in UNM's career record book with 1,579 kills (2nd in WAC Career Records), in attempts with 3,721 and 122 service aces. Gooley led the team (season) in kills (465), attempts (1,131), service aces (39), and digs (351). She also placed first in single season individual record books with 1,131 attempts.

Gooley and Robyn Wentworth were named first team All-WAC members as well as the AVCA second team. Named to the second team All-WAC were seniors Sally Downs and Mindy Hale. Gooley, Wentworth, Downs and Hale were also selected All-WAC Academics.

Season honors include Gooley being selected WAC player of the week twice and Hale once. Hale was also named AVCA National player of the week marking the first time a New Mexico player was selected for the prestigious national honor. Sally Downs was named Amateur Athlete of the Week by local television station KRQE-TV for her defensive efforts in the Jones Intercable Classic hosted by New Mexico.

In every tournament New Mexico participated in at least one or more of the Lobos were selected to the all-tournament team. Leading the way was Gooley who garnered five tournament selections plus one Most Valuable Player. Gooley made the Sunwest Bank (MVP), Illinois, Nebraska, Stanford, and Pacific Invitational all-tournament teams. Downs was named Jones Intercable Classic MVP and made the Sunwest Bank Invitational all-tournament team. Alicia Bergmann made the Sunwest, Nebraska and Stanford Invitational teams and Mindy Hale was selected to the Jones Intercable Classic, Illinois, Nebraska, and Stanford all-tournament teams.

As a team UNM made an impact on the Western Athletic Conference 1994 season records. New Mexico had team bests in four categories: hitting percentage-.448 vs. UTEP (65 kills, 13 errors in 116 attempts), kills-99 vs. Washington State, assists-88 vs. Washington State, and digs-131 vs. Washington State. Tania Gooley had a season best .773 hitting percentage against UTEP with 17 kills, no errors in 22 total attacks. Several Lobos made the lists in attempts (Gooley-70 vs. CSU), digs (Gooley-26 vs. Washington St.), assists (Bergmann-77 vs. Washington St.) and service aces (Downs-5 vs. Texas).

Throughout the season New Mexico was ranked in the top-20 polls finishing the season No. 20 and ranking as high as No. 15. In attendance UNM finished the regular season ranked No. 12 nationally which was conference best. Average attendance for 14 home matches was 1,412 with a season high 3,868 rowdy fans for the match against Wyoming.

New Mexico returns two juniors, two sophomores, and seven freshmen (including red-shirts).

NEW MEXICO PLAYER NOTES...

#1 Alicia Bergmann...named to three All-Tournament teams including the Sunwest Bank, Nebraska and Stanford Invitational's...named one of three co-captains this season...placed second this season in 1994 WAC single match records with 77 assists against Washington State...finished with 39 service aces which tied her with Tania Gooley for the team best...hit a season high .800 against Fresno State with eight kills and no errors...finished the season with a career total 2,658 assists, good for 4th place in the Lobo record book with one more year to go...needs 556 to break Sharon Brownings' assists record of 3,214...had a team and career best 1,079 assists which places her third in single season individual records...had career bests in assists (1,079), service aces (39), block solos (8), block assists (62) and digs (273).

#3 Reta Dominguez...named one of five team Most Valuable Players for the 1994 season...defensive specialist who came off the bench for the Lobos...totaled 19 service aces which tied her career best...made her mark defensively for the Lobos with 203 digs for the season...recorded her third career kill against Wyoming in her final home match as a Lobo...recorded 1 kill, no errors for a 1.000 hitting percentage against LSU...her career kill total was 6...had career bests in kills (4), attempts (30), assists (13), and digs (203).

#4 Gretchen Gegenfurtner...finished with a total assist mark of 346...hit .583 against LSU with 8 kills, 1 error in 12 attempts...had career highs in kills (110), attempts (348), service aces (23), block solos (7), block assists (31) and digs (275).

#5 Kristine Butler...came off the bench as a middle blocker...had 28 total blocks, 27 kills and 28 digs...had an impressive block solo against the Women of Troy...had career bests in kills (27), attempts (81), assists (9), block solos (4), block assists (24) and digs (28).

#6 Mindy Hale...named a 1994 Second-Team and Academic All-WAC member...named one of three co-captain's by her teammates...named one of five team Most Valuable Players for the 1994 season...named to three All-Tournament teams-the Jones Intercable, Illinois and Stanford Invitationals...named WAC and AVCA National Player of the Week (10-24-94) for her play at the Stanford Invite...finished second on the team with 391 kills...had a season high 25 kills against the Cougars with 14 digs defensively.....made the UNM record books (single season individual records) by finishing third in attempts with 1,030...had career bests in kills (391), attempts (1,030), service aces (16), block solos (11), block assists (33) and digs (324).

#7 Tania Gooley...named to the First-Team and Academic All-WAC Teams...named to the 1994 Second-Team All-West Region Team by the AVCA...named one of five team Most Valuable Players for the 1994 season...named WAC Player of the Week twice this season...named Sunwest Bank Invitational Tournament MVP...named to five All-Tournament Teams including the Sunwest Bank, Illinois, Nebraska, Stanford and Pacific Invitational tournaments...hit a season-high (UNM and WAC) .773 in the home match against the Miners with 17 kills, no errors, in 22 attempts...led the team in kills-465, attempts-1,131, hitting percentage .287, service aces-39, and digs-351...established three records in UNM's career record book with 1,579 kills (2nd in WAC Career Records), 3,721 attempts and 122 service aces...also made her mark in single season individual records in attempts (1,131-1st place), kills (465-3rd place), service aces (39-T3rd), and digs (351-T3rd)...placed fifth in single season individual match records with 28 kills against Washington St., third in attempts with 70 against CSU, and fifth in hitting percentage .773 against UTEP.

#8 Jamie Wilson...saw playing time in one game against Kansas...saw playing time against the Miners at home.

#9 Robyn Wentworth...named to the 1994 Second Team All-West Region by the AVCA...named to the First Team All-WAC and All-Academic teams...named one of five team Most Valuable Players for the 1994 season...dominated the middle...finished with a .285 hitting percentage (304-104-701)...hit .607, one of her best matches at home against UTEP with 19 kills, 2 errors in 28 attempts...broke several career individual records in block assists with 110 and blocks with 139 which sets UNM single season individual records...placed fifth in individual single season match records with 8 block assists against SDSU (11/04)...finished with career bests in kills (304), attempts (701), hitting percentage (.285), and block assists (110).

#10 Sally Downs...was named a Second Team All-WAC player...named one of five team Most Valuable Players for the 1994 season...named Jones Intercable Classic MVP for her defensive effort in the tournament...named to the Sunwest Bank Invitational All-Tournament team...had five service aces versus No. 8 Texas which was also good for second place in 1994 WAC season record books...finished the season with 38 services aces-second on the team and ties her for fourth place in UNM individual single season records...named one of three co-captain's by her teammates...finished with 273 digs a career best.....finished third in hitting at .274 with 276 kills...set career bests in kills (276), attempts (672), hitting percentage (.274), assists (20), services aces (38), block solos (19), and digs (273).

#12 Nancy Crandall...played in a total of seven games this season...has one service ace and three digs.

#13 Maria Stutsman y Marquez...defensive specialist...came off the bench in 58 games recording 55 digs...had 9 digs against Wyoming...had four digs in the first round match against Washington State.

#15 Ingrid Roosild...outside hitter...played in 20 games this season...had a great series against UTEP tallying 17 kills, 2 errors, in 33 attempts for .455 hitting percentage for the weekend...hit .250 against LSU with 4 kills, 2 errors in 8 attempts...had 4 digs for the Pacific Tournament.

Single Season Individual Records:

**attempts - 1,131*
Tania Gooley -1st place
- 1,030, Mindy Hale -3rd place

**blocks - 139*
Robyn Wentworth -1st place

**block assists - 110*
Robyn Wentworth -1st place

kills - 465
Tania Gooley - 3rd place

service aces - 39
Tania Gooley & Alicia Bergmann - T3rd
-38, Sally Downs T4th

assists - 1,079
Alicia Bergmann - 3rd place

digs - 351
Tania Gooley - T3rd

Single Season Individual Match Records:

kills - 28
Tania Gooley vs. Washington St. (T5th place)

attempts - 70
Tania Gooley vs. CSU (3rd place)

hitting eff. -.773
Tania Gooley vs. UTEP (5th place)

block assists -8
Robyn Wentworth vs. SDSU (T4th place)

Individual Career Records:

**kills - 1,579*
Tania Gooley-1st place-1991-94

**attempts - 3,721*
Tania Gooley-1st place-1991-94

**service aces - 122*
Tania Gooley - 1st place-1991-94

**block assists - 245*
Robyn Wentworth - 1st place -1992-94
-178 , Tania Gooley - 5th place 1991-94

digs - 1,113
Tania Gooley - 2nd place - 1991-94

assists - 2,658
Alicia Bergmann - 4th place - 1992-current

**new records*

Single Season Team Records:

Total Attacks (4,561-2nd)
Kills (1,767-3rd)
Assists (1,544-3rd)
Service Aces (194-3rd)
Block Assists (396-3rd)
Digs (1,951-3rd)

Single Season Match Records (Team):

(all set against Washington State - 11/30/94)

assists- 88 -T4th
digs-131 - 3rd
kills-99 - T5th
total attacks -246 - 4th place

1994 WAC Team Superlatives:

New Mexico had WAC team bests in four categories:

1. ***Hitting Percentage - .448 vs. UTEP (65K-13E-116TA)***
2. ***Kills - 99 vs. Washington State***
3. ***Assists - 88 vs. Washington State***
4. ***Digs - 131 vs. Washington State***

WAC Individual season bests:

1. ***Tania Gooley - .773 Hitting % (17K-0E-22TA) vs. UTEP***

5. Tania Gooley - 70 Attempts vs. CSU

3. Tania Gooley - 26 Digs vs. Washington State

2. Alicia Bergmann - 77 Assists vs. Washington State

2. Sally Downs - 5 Service Aces vs. Texas

WAC
UNIVERSITY OF NEW MEXICO Volleyball
12/05/94

Final Stats

All Matches

Record:20-10 Home:11- 3 Away: 6- 6 Neutral: 3- 1

Player	MP	GP	K	E	TA	PCT	A	SA	SE	RE	DG	BS	BA	TB	BE	BHE	PER GAME AVERAGE K	TA	SA	DG	TB	A
Gooley, T	30	106	465	140	1131	.287	34	39	27	28	351	19	54	73	5	3	4.39	10.67	0.37	3.31	0.69	0.32
Wentworth, R	30	107	304	104	701	.285	23	16	19	11	136	29	110	139	3	5	2.84	6.55	0.15	1.27	1.30	0.21
Downs, S	30	106	276	92	672	.274	20	38	57	21	273	19	80	99	10	8	2.60	6.34	0.36	2.58	0.93	0.19
Roosfld, I	9	20	35	16	88	.216	3	2	4	1	29	1	2	3	1	0	1.75	4.40	0.10	1.45	0.15	0.15
Hale, M	30	105	391	170	1030	.215	13	16	19	24	324	11	33	44	3	8	3.72	9.81	0.15	3.09	0.42	0.12
Gegenfurtner, G	30	107	110	56	348	.155	346	23	51	15	275	7	31	38	4	14	1.03	3.25	0.21	2.57	0.36	3.23
Bergmann, A	30	107	155	97	473	.123	1079	39	86	1	273	8	62	70	0	39	1.45	4.42	0.36	2.55	0.65	10.08
Butler, K	24	62	27	20	81	.086	9	1	7	1	28	4	24	28	3	1	0.44	1.31	0.02	0.45	0.45	0.15
Dominguez, R	30	107	4	2	30	.067	13	19	13	18	203	0	0	0	0	2	0.04	0.28	0.18	1.90	0.00	0.12
Stutsman y Marquez,	25	58	0	0	4	.000	3	0	1	5	55	0	0	0	0	0	0.00	0.07	0.00	0.95	0.00	0.05
Crandall, N	5	7	0	0	1	.000	1	1	2	0	3	0	0	0	0	0	0.00	0.14	0.14	0.43	0.00	0.14
Wilson, J	2	2	0	0	2	.000	0	0	0	0	0	0	0	0	0	0	0.00	1.00	0.00	0.00	0.00	0.00
Dziamka, P	1	1	0	0	0	.000	0	0	0	0	1	0	0	0	0	0	0.00	0.00	0.00	1.00	0.00	0.00
Team RE										8												
NEW MEXICO	30	107	1767	697	4561	.235	1544	194	286	133	1951	98	396	296	29	80	16.51	42.63	1.81	18.23	2.77	14.43
Opponents	30	107	1520	735	4324	.182	1340	127	269	194	1723	78	463	310	54	73	14.21	40.41	1.19	16.10	2.89	12.52

WAC Matches

Record: 9- 5 Home: 4- 3 Away: 5- 2 Neutral: 0- 0

Player	MP	GP	K	E	TA	PCT	A	SA	SE	RE	DG	BS	BA	TB	BE	BHE	PER GAME AVERAGE K	TA	SA	DG	TB	A
Roosfld, I	4	9	17	3	38	.368	2	1	3	0	12	1	1	2	0	0	1.89	4.22	0.11	1.33	0.22	0.22
Wentworth, R	14	54	162	55	376	.285	15	9	12	2	71	14	56	70	1	3	3.00	6.96	0.17	1.31	1.30	0.28
Downs, S	14	54	142	47	343	.277	7	18	21	9	108	9	46	55	6	2	2.63	6.35	0.33	2.00	1.02	0.13
Gooley, T	14	54	201	64	536	.256	21	22	13	13	155	9	26	35	1	3	3.72	9.93	0.41	2.87	0.65	0.39
Hale, M	14	53	208	96	559	.200	6	7	8	5	161	7	15	22	2	3	3.92	10.55	0.13	3.04	0.42	0.11
Butler, K	14	36	13	8	40	.125	4	1	3	1	12	3	13	16	1	1	0.36	1.11	0.03	0.33	0.44	0.11
Dominguez, R	14	54	3	1	17	.118	6	5	3	8	103	0	0	0	0	1	0.06	0.31	0.09	1.91	0.00	0.11
Gegenfurtner, G	14	54	52	34	179	.101	125	14	27	8	148	3	17	20	1	4	0.96	3.31	0.26	2.74	0.37	2.31
Bergmann, A	14	54	60	41	196	.097	542	15	45	0	147	4	41	45	0	17	1.11	3.63	0.28	2.72	0.83	10.04
Stutsman y Marquez,	13	35	0	0	1	.000	3	0	0	3	31	0	0	0	0	0	0.00	0.03	0.00	0.89	0.00	0.09
Crandall, N	3	5	0	0	0	.000	1	0	0	0	2	0	0	0	0	0	0.00	0.00	0.00	0.40	0.00	0.20
Wilson, J	1	1	0	0	1	.000	0	0	0	0	0	0	0	0	0	0	0.00	1.00	0.00	0.00	0.00	0.00
Team RE										0												
NEW MEXICO	14	54	858	349	2286	.223	732	92	135	49	950	50	215	158	12	34	15.89	42.33	1.70	17.59	2.92	13.56
Opponents	14	54	762	385	2199	.171	673	49	133	92	857	39	225	152	26	35	14.11	40.72	0.91	15.87	2.81	12.46

UNIVERSITY OF NEW MEXICO
1994 Results
12/05/94

DATE	OPPONENT/TOURNAMENT	LOC	W/L	SCORES	CNF	ATTND
09/02	Weber State	H	W	3-0 15-8,15-11,15-5	N	1,028
	SUNWEST BANK INVITE					
09/03	EASTERN ILLINOIS	H	W	3-0 15-8,15-7,15-2	N	675
	SUNWEST BANK INVITE					
09/03	TEXAS	H	W	3-0 15-4,15-3,15-10	N	1,137
	SUNWEST BANK INVITE					
09/09	Illinois	A	W	3-0 15-10,15-13,15-7	N	1,833
	ILLINOIS INVITE					
09/10	STANFORD	N	L	0-3 13-15,9-15,3-15	N	2,333
	ILLINOIS INVITE					
09/16	BAYLOR	H	W	3-0 15- 4,15-11,15- 5	N	1,312
	JONES INTERCABLE					
09/17	BAYLOR	H	W	3-0 15- 6,16-14,15-11	N	388
	JONES INTERCABLE					
09/17	SANTA CLARA	H	W	3-0 15- 3,15-11,15- 5	N	1,807
	JONES INTERCABLE					
09/23	KANSAS	N	W	3-0 15- 4,15- 1,15-12	N	225
	NEBRASKA INVITE					
09/24	NEBRASKA	A	L	1-3 5-15,6-15,15-10,15-17	N	4,577
	NEBRASKA INVITE					
09/30	FRESNO STATE	H	W	3-0 15- 8,15- 6,15- 6	Y	1,563
10/02	SAN DIEGO STATE	H	L	2-3 3-15,12-15,15- 9,15-11,13-15	Y	1,046
10/07	Colorado State	A	W	3-2 12-15,15-12,15-11,10-15,15-12	Y	735
10/08	WYOMING	A	W	3-2 15-12,13-15,11-15,18-16,15-7	Y	1,237
10/14	BRIGHAM YOUNG	H	L	0-3 11-15,6-15,14-16	Y	2,338
10/15	UTAH	H	W	3-0 15- 5,15- 9,15- 5	Y	704
10/21	UC-SANTA BARBARA	N	W	3-0 16-14,15-11,15-12	N	1,651
	STANFORD INVITE					
10/22	STANFORD	A	L	1-3 15-11,8-15,7-15,7-15	N	2,566
	STANFORD INVITE					
10/29	TEXAS-EL PASO	A	W	3-1 15-7,15-6,12-15,15-8	Y	150
10/30	TEXAS-EL PASO	H	W	3-0 15- 1,15- 7,15- 7	Y	1,342
11/03	FRESNO STATE	A	W	3-1 16-14,14-16,15- 4,15-12	Y	390
11/04	SAN DIEGO STATE	A	L	1-3 5-15,9-15,18-16,13-15	Y	338
11/11	WYOMING	H	L	2-3 9-15,15-6,15-6,10-15,8-15	Y	3,868
11/12	COLORADO STATE	H	W	3-0 15-6,15-10,15-6	Y	1,296
11/18	UTAH	A	W	3-0 15-9,15-3,15-6	Y	432
11/19	BRIGHAM YOUNG	A	L	1-3 10-15,15-6,9 -15,12-15	Y	1,313
11/25	PACIFIC	A	L	1-3 8 -15,15-13,11-15,12-15	N	2,858
	PACIFIC INVITE					
11/26	LOUISIANA STATE	N	W	3-0 15-13,15- 5,15- 9	N	3,363
	PACIFIC INVITE					
11/30	WASHINGTON STATE	H	W	3-2 15-8,8 -15,13-15,15-11,15-8	N	1,266
	NCAA 1ST ROUND					
12/03	SOUTHERN CALIFORNIA	A	L	0-3 13-15,4 -15,6 -15	N	409
	NCAA 2ND ROUND					

ATTENDANCE

SITE	MP	TOTAL	PER MATCH
HOME:	14	19,770	1,412.1
AWAY:	12	16,838	1,403.2
NEUTRAL:	4	7,572	1,893.0
TOTAL:	30	44,180	1,472.7

0018

THE UNIVERSITY OF NEW MEXICO

1994 Volleyball Roster

No.	Name	Ht.	Pos.	Yr/Exp.	Hometown (Last School)
1	Alicia Bergmann	5-9	S/OH	Jr./2L	Amherst, NY (Sweet Home HS)
2	Paulina Dziamka	5-9	OH	Fr./WO	Albuquerque, NM (Albuquerque HS)
3	Reta Dominguez	5-7	DS	Sr./3L	Albuquerque, NM (West Mesa HS)
4	Gretchen Gegenfurtner	5-7	OH	So./1L	Amherst, NY (Sweet Home HS)
5	Kristine Butler	6-1	MB	So./1L	Agoura, CA (Oak Park HS)
6	Mindy Hale	5-10	OH	Sr./3L	Albuquerque, NM (Cibola HS)
7	Tania Gooley	5-10	OH	Sr./3L	Adelaide, Australia (Daws Road HS)
8	Jamie Wilson	5-10	S/OH	Fr./RS	Puyallup, WA (Rogers HS)
9	Robyn Wentworth	6-0	MB	Sr./2L	Canberra, Australia (St. Clare's College)
10	Sally Downs	6-0	MB	Sr./3L	Melbourne, Australia (Karingal HS)
11	Zhao Lu	6-0	OH	Fr./HS	Beijing, China (People's University of China)
12	Nancy Crandall	5-6	OH/DS	Jr./RS	Saratoga, CA (De Anza JC)
13	Maria Stutsman y Marquez	5-10	S/OH	Fr./RS	Albuquerque, NM (West Mesa HS)
14	Paula Feathers	5-9	S/OH	Fr./HS	Zuni, NM (Zuni HS)
15	Ingrid Roosild	5-7	OH	Jr./1L	Reston, VA (South Lakes HS)
xx	Amanda Fielding	5-9	S/OH	Fr./HS	Sunnybank Hills, Australia (Runcorn State HS)
xx	Shannon Offut	5-9	OH	Fr./HS	Medford, OR (North Medford HS)

Head Coach: Laurel Brassey-Iversen (12th year • 172-98 • .637)
Assistant Coaches: Matt McShane & "Jenny" Lang Ping

Roster Breakdown by Class

Seniors (5): Reta Dominguez, Sally Downs, Tania Gooley, Mindy Hale, Robyn Wentworth. **Juniors (3):** Alicia Bergmann, Nancy Crandall, Ingrid Roosild. **Sophomores (2):** Kristine Butler, Gretchen Gegenfurtner. **Redshirt Freshmen (2):** Maria Stutsman y Marquez, Jamie Wilson. **Freshmen (5):** Paulina Dziamka, Paula Feathers, Amanda Fielding, Zhao Lu, Shannon Offut.

DEPARTMENT OF INTERCOLLEGIATE ATHLETICS
Sports Information
Albuquerque, NM 87131-0041
Phone: (505) 277-2026 FAX: (505) 277-0142

MEN'S SOCCER SEASON RECAP FOR 1994

The question marks about youth, inexperience, and senior leadership were all answered positively by the 1994 men's soccer team. Coming into the season the Lobos had some offensive and defensive questions due to the departure of many of the 1993 starters. The recruits which were picked up in the off season had the coaching staff excited, but they were realistically thinking that this was to be a rebuilding year.

The team, however, had different plans.

This team came together a lot faster than many, especially the coaches, had figured. In their first three games of the season, the Lobos came out and crushed Loyola (Chicago) 7-2, Colorado School of Mines 8-1, and Bradley 6-0. The team was rolling.

The seniors had asserted themselves, and the young players stepped up, particularly freshman Justin Sells, and sophmores Troy Burnett and Malcolm Nicholls. Sells showed why he was so actively recruited. He fit into Klaus Weber's offensive scheme as if he'd been playing at UNM for years. Burnett, a transfer from San Diego, also showed his skills by climbing up the UNM scoring charts. Nicholls controlled the middle, like a single man wrecking crew, gobbling up any loose balls, and/or opponents which happened to be within his wide range. Senior Mike Strati and junior Jason Hix had put together their third straight season of success, trying to push this team to overachieve and reach the promised land of the NCAA tournament.

After starting the season off so successfully, the Lobos had a bit of a letdown, and were 7-5 midway through October. If the Lobos were going to reach their goals for the season, they had to finish the way they started- with some big wins. The Lobos finished the season winning seven of their last eight and moved into fourth place in the Midwest regional rankings. The Lobos finished second in the Pacific Division of the MPSF, their highest finish ever in the new conference.

The Lobos offense was rewarded for their fine play during the season. The two leaders, Strati and Hix received their second straight MPSF All-Federation 1st team honors. Sells, the freshman, garnered 2nd team All-MPSF honors, the first freshman from UNM to receive so lofty an award.

Defensively, the Lobos did not allow many threats on sophomore keeper Trevor Shannon. The line of Nick Bramini, Milo Woodson, and Dave Brown struck fear in their opponents, allowing a stingy 1.25 goals per game, compared to the 2.10 gaa from last year's squad. Brown, another freshman, gained All-MPSF honorable mention laurels.

On Monday, November 14th, the Lobos coaching staff waited to hear if the NCAA awarded their strong finish with a berth into the post season tournament. Unfortunately, the Lobos had played their last game. "We had a great season, I'm very happy at the way the team came together this year." said coach Weber. "We may have lost some games we shouldn't have, but we can't worry about that now. We're looking forward to next season." The Lobos return eight starters from this year's team, four of them have three years of eligibility left. The question marks were answered, now the Lobos are ready to make new statements next year. "We're still very young" said Coach Weber. Except now the Lobos are experienced as well.

0020

1994 NEW MEXICO MEN'S SOCCER

Final Statistics - 20 Games

Overall record: 14-6-0 **MPSF:** 5-2-0 **Home:** 5-5-0 **Road:** 7-1-0 **Neutral:** 2-0-0

PLAYER (Year)	G/S	MINUTES	SHOTS	GOALS	ASSISTS	POINTS
STRATI, Mike (Sr.)	19/19	1,720	77	15	9	39
SELLS, Justin (Fr.)	20/20	1,635	66	13	1	27
BURNETT, Troy (So.)	20/8	760	16	5	5	15
HIX, Jason (Jr.)	19/19	1,705	27	2	9	13
NICHOLLS, Malcolm (So.)	18/18	1,375	31	4	3	11
THIEBAUT, William (Sr.)	20/20	1,490	19	4	1	9
NILSSON, Jonas (Fr.)	16/8	995	16	3	2	8
RHODES, Jim (Fr.)	14/2	482	4	2	2	6
KRAEMER, Steve (Fr.)	20/19	1,615	24	2	1	5
JONES, Stephen (So.)	8/1	265	3	1	1	3
McMURRY, James (Fr.)	12/0	290	9	1	1	3
ROGERS, Joel (Fr.)	16/5	385	3	1	0	2
BRAMINI, Nicolo (Sr.)	20/20	1,815	2	1	0	2
REINHART, Kelly (Jr.)	6/0	110	1	0	1	1
WOODSON, Milo (So.)	17/17	1,500	2	0	0	0
BROWN, David (So.)	16/9	1,125	4	0	0	0
BRADFORD, Alex (Jr.)	4/0	45	1	0	0	0
WILKES, Kyle (Fr.)	9/8	600	2	0	0	0
RICKER, Jason (So.)	1/0	15	0	0	0	0
JOHANNESSEN, Erik (Jr.)	6/3	290	0	0	0	0
TRUTY, Luke (Jr.)	1/0	10	0	0	0	0
OLINEK, Jason (So.)	2/0	40	0	0	0	0
THEISZ, Kristian (So.)	1/0	75	1	0	0	0
THEISZ, Erik (Jr.)	1/0	5	0	0	0	0
NEW MEXICO	**20**	**18,422**	**318**	**55**	**36**	**146**
OPPONENT	**20**	**18,600**	**187**	**25**	**17**	**67**

• MISCELLANEOUS STATS •

	NM	OPP
Corners:	93	66
Fouls:	354	326
Cards:	39Y, 7R	32Y, 2R
Score by periods:	26-24-3-2	14-10-0-1
Penalty kicks:	3/4	2/2

CARD BREAKDOWN:

Yellow: Nicholls 7, Strati 5, Hix 4, Kraemer 4, Woodson 3, Bramini 3, Brown 3, Rhodes 2, Sells 2, McMurry 2, Johannessen 2, Wilkes 2, Nilsson, Burnett

Red: Wilkes, Woodson, Rhodes, Johannessen, Brown, Coach Ramos, Kraemer

5 cards: Nicholls (out 9/30), Strati (out 11/5)

GOALKEEPER	G/GS	MINUTES	SAVES	SHUTOUTS	GA	GAA	W-L-T
SHANNON, Trevor (So.)	18/18	1,495	47	6*	20	1.23	12-6-0
HESS, Greg (Fr.)	8/2	365	15	2*	5	1.28	2-0-0
NEW MEXICO	**20**	**1,860**	**62**	**6**	**25**	**1.25**	**14-6-0**
OPPONENT	**20**	**1,860**	**116**	**4**	**55**	**2.75**	**6-14-0**

• 1994 MATCH RESULTS •

DATE	OPPONENT	RESULT	LOBO GOAL SCORERS
Sept. 5	Loyola	W. 7-2	Thiebaut 2, Rogers, Sells, Jones, Hix, Strati
Sept. 6	Colorado School of Mines	W. 8-1	Strati 4, Sells 2, McMurry, Bramini
Sept. 9	**BRADLEY**	**W. 6-0**	**Burnett 2, Nicholls, Sells, Strati, Thiebaut**
Sept. 11	**VANDERBILT**	**L. 1-0**	
Sept. 16	**DRAKE**	**W. 2-1**	**Strati 2**
Sept. 18	**EVANSVILLE**	**L. 1-0**	
Sept. 23	Memphis	W. 2-0	Sells 2
Sept. 25	Western Kentucky	W. 4-0	Sells 2, Hix, Nicholls
Sept. 30	**WEST TEXAS STATE**	**L. 2-1**	**Burnett**
Oct. 2	**FORT LEWIS**	**W. 2-0**	**Sells 2**
Oct. 7	**CAL- IRVINE***	**L. 4-2**	**Strati 2**
Oct. 9	**UCLA***	**L. 1-0**	
Oct. 14	San Diego State*	W. 3-2	Sells 2, Strati
Oct. 16	Cal State- Fullerton*	W. 4-2 OT	Sells, Strati, Kraemer, Burnett
Oct. 21	**CAL STATE- NORTHRIDGE***	**W. 2-0**	**Nicholls, Strati**
Oct. 23	**CAL- SANTA BARBARA***	**W. 3-0**	**Thiebaut, Kraemer, Nilsson**
Oct. 26	**UNLV***	**W. 2-1**	**Strati 2**
Oct. 30	Cal Poly- San Luis Obispo	L. 4-0	
Nov. 6	Air Force	W. 3-1	Nilsson 2, Nicholls
Nov. 7	Regis	W. 4-2 OT	Rhodes 2, Woodson, Burnett

* Mountain Pacific Sports Federation (MPSF) Pacific Opponents
BOLD WITH CAPS INDICATES HOME GAME

POW- Jonas Nilsson (Fr.) 2 goals, 1 assist. Scored game winner versus Air Force in 3-1 victory Saturday, 11/5.

1994 NEW MEXICO MEN'S SOCCER

NUMERICAL ROSTER

NO	NAME	POS	HT	WT	YR-EXP	HOMETOWN (Last School)
00	Greg Hess	GK	6-3	170	Fr-HS	Alamogordo, NM (Alamogordo HS)
00	Justin Schorr	GK	6-3	170	Fr-HS	Mission Viejo, CA (Mission Viejo HS)
00	Trevor Shannon	GK	6-5	200	So-1L	El Paso, TX (Coronado HS)
2	Stephen Jones	FW	5-8	155	So-IL	Albuquerque, NM (Eldorado HS)
3	David Brown	DF	6-1	190	So-TR	Albuquerque, NM (San Diego University)
4	Nicolo Bramini	DF	6-2	170	Sr-1L	Albuquerque, NM (Yavapai College)
5	Kelly Reinhart	MF	5-5	130	Jr-2L	Clifton Park, NY (Shenendehowa HS)
6	Justin Sells	FW	5-8	145	Fr-HS	Roscoe, IL (Hononegah HS)
7	Jason Hix	MF	6-0	175	Jr-2L	Albuquerque, NM (Sandia HS)
9	Joel Rogers	MF	5-10	159	Fr-HS	Albuquerque, NM (Eldorado HS)
10	Michael Strati	MF	5-9	150	Sr-3L	Albuquerque, NM (St. Pius X HS)
11	Jonas Nilsson	MF	5-9	160	Fr-HS	Braås, Sweden (Teknikum Växjœ)
12	William Thiebaut	FW	5-9	155	Sr-3L	Pueblo, CO (South HS)
13	Erik Johannessen	MF	5-10	150	Jr-TR	Sarpsborg, Norway (St. Olav v.g.s.)
14	Malcolm Nicholls	DF	5-9	165	So-1L	Wellington, New Zealand (Wellington HS)
15	Jim Rhodes	MF	6-0	163	Fr-HS	Alamogordo, NM (Alamogordo HS)
16	Steve Kraemer	MF	5-10	160	Fr-HS	Los Alamos, NM (Los Alamos HS)
17	Kyle Wilkes	MF	5-11	150	Fr-HS	Rio Rancho, NM (Cibola HS)
18	Milo Woodson	DF	6-1	175	So-1L	Albuquerque, NM (Highland HS)
19	Troy Burnett	MF	5-7	165	So-TR	El Paso, TX (El Paso HS)
20	James McMurry	MF	5-8	150	Fr-HS	Alamogordo, NM (Alamogordo HS)
21	Jason Ricker	MF	5-10	160	So-HS	Albuquerque, NM (La Cueva HS)
	Matt Prokosch	MF	6-0	160	Fr-HS	Albuquerque, NM (Eldorado HS)
	Alexandre Bradford	FW	5-10	152	Jr-RS	Rio de Janeiro, Brazil (Colegio Bahiense)
	Frank Giannetta	MF	5-11	175	Fr-HS	Brantford, Ontario (St. John's HS)
	Luke Truty	FW	5-11	155	Jr-HS	Albuquerque, NM (La Cueva HS)
	Kristian Theisz	MF	5-9	150	Fr-RS	Spearfish, SD (Spearfish HS)
	Eric Chavez	FW	5-3	125	Fr-HS	Albuquerque, NM (Manzano HS)
	Erik Theisz	FW	5-9	160	Jr-2L	Spearfish, SD (Spearfish HS)
	Isaac Donkor	MF	6-0	175	Jr-TR	Accra, Ghana (New Mexico Military Institute)
	Antonio Lara	MF	5-7	160	Fr-HS	Las Cruces, NM (Las Cruces HS)
	Nathan Bohl	FW	6-0	180	Fr-HS	Spearfish, SD (Spearfish HS)
	Jason Olinek	MF	6-1	175	So-RS	Littleton, CO (Heritage HS)
	Jared Gruber	MF	5-10	160	Fr-HS	Cincinnati, OH (Cicero-North HS)

ALPHABETICAL ROSTER

NO	NAME	POS	HT	WT	YR-EXP	HOMETOWN (Last School)
	Nathan Bohl	FW	6-0	180	Fr-HS	Spearfish, SD (Spearfish HS)
	Alexandre Bradford	FW	5-10	152	Jr-RS	Rio de Janeiro, Brazil (Colegio Bahiense)
4	Nicolo Bramini	DF	6-2	170	Sr-1L	Albuquerque, NM (Yavapai College)
3	David Brown	DF	6-1	190	So-TR	Albuquerque, NM (San Diego University)
19	Troy Burnett	MF	5-7	165	So-TR	El Paso, TX (El Paso HS)
	Eric Chavez	FW	5-3	125	Fr-HS	Albuquerque, NM (Manzano HS)
	Isaac Donkor	MF	6-0	175	Jr-TR	Accra, Ghana (New Mexico Military Institute)
	Frank Giannetta	MF	5-11	175	Fr-HS	Brantford, Ontario (St. John's HS)
	Jared Gruber	MF	5-10	160	Fr-HS	Cincinnati, OH (Cicero-North HS)
00	Greg Hess	GK	6-3	170	Fr-HS	Alamogordo, NM (Alamogordo HS)
7	Jason Hix	MF	6-0	175	Jr-2L	Albuquerque, NM (Sandia HS)
13	Erik Johannessen	MF	5-10	150	Jr-TR	Sarpsborg, Norway (St. Olav v.g.s.)
2	Stephen Jones	FW	5-8	155	So-IL	Albuquerque, NM (Eldorado HS)
16	Steve Kraemer	MF	5-10	160	Fr-HS	Los Alamos, NM (Los Alamos HS)
	Antonio Lara	MF	5-7	160	Fr-HS	Las Cruces, NM (Las Cruces HS)
20	James McMurry	MF	5-8	150	Fr-HS	Alamogordo, NM (Alamogordo HS)
14	Malcolm Nicholls	DF	5-9	165	So-1L	Wellington, New Zealand (Wellington HS)
11	Jonas Nilsson	MF	5-9	160	Fr-HS	Braås, Sweden (Teknikum Växjœ)
	Jason Olinek	MF	6-1	175	So-RS	Littleton, CO (Heritage HS)
	Matt Prokosch	MF	6-0	160	Fr-HS	Albuquerque, NM (Eldorado HS)
5	Kelly Reinhart	MF	5-5	130	Jr-2L	Clifton Park, NY (Shenendehowa HS)
15	Jim Rhodes	MF	6-0	163	Fr-HS	Alamogordo, NM (Alamogordo HS)
21	Jason Ricker	MF	5-10	160	So-HS	Albuquerque, NM (La Cueva HS)
9	Joel Rogers	MF	5-10	159	Fr-HS	Albuquerque, NM (Eldorado HS)
00	Justin Schorr	GK	6-3	170	Fr-HS	Mission Viejo, CA (Mission Viejo HS)
6	Justin Sells	FW	5-8	145	Fr-HS	Roscoe, IL (Hononegah HS)
00	Trevor Shannon	GK	6-5	200	So-1L	El Paso, TX (Coronado HS)
10	Michael Strati	MF	5-9	150	Sr-3L	Albuquerque, NM (St. Pius X HS)
	Erik Theisz	FW	5-9	160	Jr-2L	Spearfish, SD (Spearfish HS)
	Kristian Theisz	MF	5-9	150	Fr-RS	Spearfish, SD (Spearfish HS)
12	William Thiebaut	FW	5-9	155	Sr-3L	Pueblo, CO (South HS)
	Luke Truty	FW	5-11	155	Jr-HS	Albuquerque, NM (La Cueva HS)
17	Kyle Wilkes	MF	5-11	150	Fr-HS	Rio Rancho, NM (Cibola HS)
18	Milo Woodson	DF	6-1	175	So-1L	Albuquerque, NM (Highland HS)

WOMEN'S SOCCER

Heading into the season, high expectations were commonplace in the women's soccer program. An 11-5-1 record in the program's first season -- fourth best in the country -- and nine returning starters gave cause for optimism. There was talk of a run at a NCAA berth.

The Lobos hit some bumps in the road before the season even started. Starting defender Courtney Hall injured her knee in spring practice, forcing her to miss the season. Another returning starting defender decided not to play, turning an area that was a strength in 1993 into a question mark heading into the season.

The schedule had been upgraded significantly from the previous season and the Lobos got a taste of that right off the bat at the Plano, Texas, tournament where the team lost 3-1 to Arkansas and 3-0 to Texas A&M. An even bigger loss came in the Arkansas match as All-American midfielder Nicole Highfill, the team's top scorer in 1993, suffered a season-ending knee injury. The tough opening schedule continued as the Lobos fell to San Diego 5-0 and San Diego State 3-2 before they finally came home to regroup.

After New Mexico earned their first win of the season over Hawaii, the club turned in their best performance of the season, shutting out No. 14 Washington State 2-0. Freshman Stephanie Rider and senior Meg Hayes collected the goals, while sophomore Dani Rangel turned in a solid performance in midfield, but her season came to an end as well due to a stress fracture in her leg which required surgery.

Head coach Amy Allmann refused to use the injuries as an excuse, and her team continued to play well through the middle of the season, pushing San Francisco and UCLA to overtime and then winning three of four to boost the squad's record to 6-8. Only two upperclassmen -- Hayes and junior Jennifer Caldwell -- started for the Lobos, and four of the five top scorers on the team -- Laurie Hegedorn, April Herrity, Rene Gonzales and Stephanie Rider -- are freshmen. Sophomore Nikki Knutson, who inherited the central midfield position for much of the season, was the second leading scorer. Another sophomore, Amy Felker, led the team in hustle and determination playing defender and midfield.

Goalkeeper Melissa Liston, an All-America selection as a freshman, had another excellent season, keeping the team in many matches while facing a barrage of shots all season and recorded 130 saves, placing her among the best in the region.

While the team dropped their final four matches to finish 6-12, the experience gained by this youthful team points to a bright future for New Mexico women's soccer.

1994 New Mexico Statistics

PLAYER	G/S	MINUTES	SHOTS	GOALS	ASSISTS	POINTS
HEGEDORN, Laurie	18/18	1607	53	7	3	17
KNUTSON, Nikki	18/17	1560	21	4	3	11
HERRITY, April	17/17	1437	16	4	3	11
GONZALES, Rene	17/10	979	15	4	0	8
RIDER, Stephanie	17/11	1176	11	3	1	7
HAYES, Meg	18/18	1495	18	2	1	5
FELKER, Amy	18/18	1544	15	1	1	3
OGDEN, Allison	17/5	984	2	1	0	2
MILLS, Heather	3/0	97	3	0	2	2
O'SULLIVAN, Shauna	18/16	1487	5	0	1	1
BLACK, Michelle	16/12	1241	6	0	0	0
CALDWELL, Jennifer	18/17	1519	3	0	0	0
GOOD, Julie	17/12	1320	4	0	0	0
HIGHFILL, Nicole	1/1	45	1	0	0	0
LISTON, Melissa	1/0	24	0	0	0	0
RANGEL, Dani	4/3	200	2	0	0	0
RIOS, Leanne	8/0	194	2	0	0	0
SAUNDERS, Jennifer	9/2	180	5	0	0	0
NEW MEXICO	**18/18**	**17,089**	**182**	**26**	**15**	**67**
OPPONENTS	**18/18**	**17,100**	**299**	**31**	**18**	**80**

GOALKEEPER	G/S	MINUTES	SAVES	SHUTOUTS	GA	GAA	W-L-T
LISTON, Melissa	17/17	1588	130	3*	29	1.64	5-12-0
DALTON, Bre	3/1	122	1	1*	2	1.48	1-0-0
NEW MEXICO	**18/18**	**1710**	**131**	**3**	**31**	**1.63**	**6-12-0**
OPPONENT	**18/18**	**1710**	**78**	**7**	**26**	**1.37**	**12-6-0**

***SHARED SHUTOUTS:** Liston 1, Dalton 1

MISCELLANEOUS	CORNERS	FOULS	CARDS
NEW MEXICO	**32**	**172**	**6**
OPPONENT	**92**	**198**	**9**

PENALTY KICKS--New Mexico 1/1 (Knutson 1/1), Opponents 1/1
YELLOW CARDS: Felker 2, Hegedorn 1, Black 1, Good 1, Liston 1

1994 New Mexico Lobos Roster

No.	Name	Pos.	Yr.	Age	Ht.	Hometown (Last School)
00	Bre Dalton	GK	Fr.	19	5-8	Tacoma, WA (Clover Park HS)
1	Melissa Liston*	GK	So.	19	5-9	La Verne, CA (Bonita HS)
2	Allison Ogden	DF	Fr.	18	5-7	Albuquerque, NM (Manzano HS)
3	Dani Rangel*	FW/MF	So.	19	5-1	Chino Hills, CA (Don A. Lugo HS)
4	Leanne Rios	FW	So.	19	5-0	Santa Fe, NM (Carlisle HS)
7	Nikki Knutson*	MF	So.	19	5-6	Albuquerque, NM (La Cueva HS)
8	Laurie Hegedorn	FW	Fr.	18	5-6	El Paso, TX (Eastwood HS)
9	Shauna O'Sullivan*	DF	So.	19	5-4	Honolulu, HI (Air Academy HS)
10	Amy Felker*	DF	So.	19	5-4	Federal Way, WA (Federal Way HS)
11	April Herrity	MF	Fr.	17	5-6	Simi Valley, CA (Simi HS)
12	Courtney Hall*	DF	So.	19	5-4	Tucson, AZ (Canyon Del Oro HS)
13	Nicole Highfill***	FW/MF	Sr.	21	5-3	Albuquerque, NM (Univ. of Portland)
14	Meg Hayes*	FW	Sr.	22	5-6	Albuquerque, NM (Highland HS)
15	Rene Gonzales	MF	Fr.	18	5-4	Albuquerque, NM (Eldorado HS)
17	Julie Good*	MF	So.	19	5-6	El Paso, TX (Coronado HS)
18	Jennifer Saunders*	FW	Jr.	19	5-8	Houston, TX (Tenn. Wesleyan)
19	Michelle Black	FW/MF	Fr.	18	5-7	Albuquerque, NM (La Cueva HS)
20	Jennifer Caldwell*	DF	Jr.	20	5-6	Albuquerque, NM (Sandia HS)
21	Stephanie Rider	FW	Fr.	18	5-8	Albuquerque, NM (La Cueva HS)
22	Heather Mills	MF	Fr.	18	5-1	Dallas, TX (Hillcrest HS)

Head Coach: Amy Allmann (Central Florida '89)
Assistant Coach: Amy Baird (Santa Clara '91)

*Denotes College Letters Earned

MEN'S AND WOMEN'S CROSS COUNTRY...

The University of New Mexico's men's cross country team faced an uphill battle in 1994, mainly due to the young nature of the team. In the preseason poll the Lobos were picked to finish seventh out of eight cross country teams in the conference. Head coach Richard Shanahan's predictions of juniors Paul Ratnage and Kieth Rieger along with sophomore Tony Evers leading the way for the Lobos proved to be accurate.

Paul Ratnage was an All-WAC performer finishing eighth at the District 7/WAC Cross Country Championships held in Salt Lake City, Utah. While Rieger and Evers finished 18th and 20th respectively. As a team UNM finished fifth at the WAC Championships held on November 12 in Salt Lake City, Utah.

The women's cross country team looked to begin "a new generation" in 1994. The squad did not have a single senior on the roster. The Lobos were picked to finish seventh in the preseason poll.

Leading the New Mexico efforts during the season were sophomore Susan Prentice, junior Danielle Carpenter and freshman Tangi Galloway.

Prentice had her best showing of the season at the District 7/WAC Championships finishing 19th, while Carpenter finished 28th and Galloway placed 32nd. As a team the Lobo women finished sixth in the conference.

1994 Women's Results

DATE	RACE	UNM FINISH
Sept. 9	Lori Fitzgerald Invitational/UTEP	2nd of 4 teams (52 pts.)
Oct. 1	Rocky Mountain Shootout/Colorado	8th of 12 teams (228 pts.)
Oct. 15	Cowboy Jamboree/Oklahoma State	3rd of 10 teams (62 pts.)
Oct. 29	UNM Invitational	4th of 5 teams (115 pts.)
Nov. 12	District 7/WAC Championships	6th of 8 teams (160 pts.)

Individual	**UTEP**	**CU**	**OSU**	**UNM**	**WAC/District 7**
Danielle Carpenter	20:30.4 (7th)	19:35 (42nd)	19:41 (11th)	20:05 (31st)	19:04 (28th)
Moss DeWindt		20:35 (72nd)	20:14 (19th)	19:58 (30th)	19:41 (36th)
Tangi Galloway	21:20.8 (17th)	19:29 (38th)	19:23 (8th)	19:07 (19th)	19:13 (32nd)
Jill Gamble	19:45.4 (4th)	20:13 (58th)	20:22 (24th)	19:30 (24th)	20:14 (45th)
Karla Melendez	22:55.9 (22nd)	21:22 (96th)	21:04 (33rd)	22:34 (42nd)	20:47 (50th)
Noel Meredith	25:31.0 (26th)				
Susan Prentice	20:45.0 (10th)	19:28 (37th)	19:25 (9th)	19:49 (27th)	18:34 (19th)
Molly Thompson	21:28.9 (18th)	19:57 (53rd)	20:25 (25th)		20:20 (48th)

1994 Men's Results

DATE	RACE	UNM FINISH
Sept. 9	Lori Fitzgerald Invitational/UTEP	2nd of 4 teams (37 pts.)
Oct. 1	Rocky Mountain Shootout/Colorado	9th of 13 teams (245 pts.)
Oct. 15	Cowboy Jamboree/Oklahoma State	7th of 10 teams (156 pts.)
Oct. 29	UNM Invitational	7th of 17 teams (195 pts.)
Nov. 12	District 7/WAC Championships	5th of 8 teams (115 pts.)

Individual	**UTEP**	**CU**	**OSU**	**UNM**	**WAC/District 7**
Ryan Bartell	23:19 (18th)	28:38 (61st)	35:33 (71st)	26:32 (82nd)	
Matt Dix	23:37 (20th)	28:56 (71st)	34:09 (57th)		33:13 (36th)
Karl Dreyer	25:22 (29th)				
Nils Eng				26:28 (76th)	35:12 (53rd)
Tony Evers	23:14.1 (16th)	28:23 (55th)	32:46 (40th)	25:37 (41st)	31:52 (20th)
Mike Lang	24:16 (24th)	29:31 (85th)			
Amery Martinez		30:26 (99th)			
Paul Ratnage	21:32 (2nd)	28:02 (47th)	32:08 (24th)	24:49 (17th)	31:14 (8th)
Keith Rieger	21:50 (5th)	27:16 (28th)	32:17 (29th)	25:21 (33rd)	31:46 (18th)
Gilbert Salazar	22:55 (12th)	29:11 (76th)	34:20 (58th)	26:37 (89th)	34:04 (46th)
Jeremy Vehar	22:42 (10th)	28:23 (54th)	34:26 (60th)	26:09 (60th)	33:01 (33rd)

1994 ROSTERS

Women's Roster

Name	Class	Hometown
Nicole Beers	Junior	Los Alamos, NM
Danielle Carpenter	Junior	Farmington, NM
Stacey Cox	Freshman	Houma, LA
Moss Dewindt	Sophomore	Santa Fe, NM
Tangi Galloway	Freshman	Atwater, CA
Jill Gamble	Freshman	Owen Sound, Ontario
Stephanie Haas	Freshman	Ruidoso, NM
Karla Melendez	Junior	Pojoaque,NM
Noel Meredith	Junior	Rio Rancho, NM
Susan Prentice	Sophomore	Albuquerque, NM
Dionne Shepard	Sophomore	Shiprock, NM
Molly Thompson	Sophomore	Minneapolis, MN
Kristi Wolfe	Freshman	Los Lunas, NM

Men's Roster

Name	Class	Hometown
Ryan Bartell	Freshman	San Diego, CA
Matt Dix	Freshman	Albuquerque, NM
Karl Dreyer	Freshman	Woodstock, IL
Nils Eng	Junior	Silver City, NM
Tony Evers	Sophomore	Sydney, Australia
Mike Lang	Freshman	San Diego, CA
Amery Marteniz	Sophomore	Chimayo, NM
Paul Ratnage	Junior	Kings Lynn, England
Kieth Rieger	Junior	Ontario, Canada
Gilbert Salazar	Junior	Long Beach, CA
Jeremy Vehar	Freshman	Albuquerque, NM

MEN'S AND WOMEN'S SWIMMING AND DIVING

Bill Spahn's men's and women's swimming and diving teams finished the 1994-95 season in third and fourth place, respectively, in the Western Athletic Conference. Sophomore Nolan Wood was the only NCAA Championships qualifier from either team as he swam in both the 200 and 400 individual medley events. Wood took 14th in the 200 IM, qualifying him for honorable mention all-America status, and 21st in the 400 IM.

The men broke several school records: 200 free relay, 200 and 400 IM, and the 400 and 800 free relays. The women set school records in the 1650 free, 200 breast, the 400 IM, 200 and 400 free relays, and the 200 medley relay. Wood set the new standards in the 200 and 400 IM, Jenny McMinn now holds the record in the women's 400 IM, Amy Cordaro broke her own record in the 1650 free, and Jenny Karlberg is the new record-holder in the 200 breaststroke.

Several swimmers were honored as members of the WAC Academic all-Conference team. On the men's side, Alex Brandl, Bob Goldie, John Haas, and Wood were named. For the women, Cordaro, Amy Cunningham, Kerri Felcyn, Katherine Kerr, Meredith Lavery, and Melissa Trachi were honored.

Both teams had smaller squads this season than in the past. The women did have several dual meet wins as they defeated Utah, Wyoming, and New Mexico State. The men defeated both Wyoming and New Mexico State.

At the WAC Championships, Wood had first-place finishes in both the 200 and 400 IM. Brandl also finished first in the 100 butterfly. Wood also placed second in the 200 backstroke, while Brandl took second in the 200 fly. Ross Noble had a second-place finish in the 1650 free.

Top performances on the women's side were by Kristen Miller in the 100 free (third place), and Cordaro in the 1650 free (4th).

Coach Spahn's 14th season at New Mexico did add to his list of accomplishments as a college swimming coach. Spahn has now coached 12 all-Americans and 37 WAC champions.

1994-95 MEN'S SWIMMING & DIVING RESULTS

Date	Opponent	Result
Nov. 5-6	**Lobo Invitational**	**Nonscoring**
Nov. 11	Arizona	L, 163-107
Dec. 1-3	Speedo Cup Invitational	4th of 19, 297.0
Jan. 20	**BYU**	**L, 141-100**
Jan. 21	**Utah**	**L, 130-111**
Jan. 28	**Northern Arizona**	**L, 120-117**
Feb. 3	Wyoming	W, 165-111
Feb. 4	Air Force	L, 144-97
Feb. 11	New Mexico State	W, 129-85
Mar. 2-5	WAC Championships	3rd of 6

Home meets in bold

Record: 2-5 Duals

INDIVIDUAL BEST TIMES

Event	Participant(s)	Time	Date/Location
50 Freestyle	Griffore	21.25	Dec. 1/Long Beach, Calif.
100 Freestyle	Wagner	45.34	March 2/Las Vegas
200 Freestyle	Haile	1:40.32	March 2/Las Vegas
500 Freestyle	Klein	4:34.22	March 2/Las Vegas
1000 Freestyle	Noble	9:34.54	Nov. 11/Tucson
1650 Freestyle	Noble	15.44.21	March 2/Las Vegas
100 Butterfly	Brandl	49.22	March 2/Las Vegas
200 Butterfly	Brandl	1:49.16	March 2/Las Vegas
100 Backstroke	Wood	53.59	Nov. 11/Tucson
200 Backstroke	Wood	1:48.73	March 2/Las Vegas
100 Breaststroke	Chumley	1:01.00	Nov. 11/Tucson
200 Breaststroke	Goldie	2:13.96	Feb. 3/Laramie
200 Individual Medley	Wood	1:48.35	March 2/Las Vegas
400 Individual Medley	Wood	3:53.29	March 2/Las Vegas
200 Freestyle Relay		1:21.78	March 2/Las Vegas
400 Freestyle Relay	Wood, Wagner, LeDuc, Griffore	3:00.34	March 2/Las Vegas
800 Freestyle Relay	Wood, Haile, Klein, Brandl	6:38.61	March 2/Las Vegas
200 Medley Relay		1:36.64	Dec. 1/Long Beach, Calif.
400 Medley Relay		3:24.40	March 2/Las Vegas
1-Meter Diving	Knippa	396.20	March 2/Las Vegas
3-Meter Diving	Knippa	447.90	March 2/Las Vegas

1994-95 WOMEN'S SWIMMING & DIVING RESULTS

Date	Opponent	Result
Nov. 5-6	**Lobo Invitational**	**Nonscoring**
Nov. 11	Arizona	L, 189-86
Dec. 1-3	Speedo Cup Invitational	7th of 23, 231.0
Jan. 20	**BYU**	**L, 157-85**
Jan. 21	**Utah**	**W, 139-86**
Jan. 28	**Northern Arizona**	**L, 150-81**
Feb. 2	Colorado State	L, 157-86
Feb. 3	Wyoming	W, 172-109
Feb. 4	Air Force	L, 159-84
Feb. 11	New Mexico State	W, 123.5-119.5
Mar. 2-5	WAC Championships	4th of 7

Home meets in bold

Record: 3-5 Duals

INDIVIDUAL BEST TIMES

Event	Participant(s)	Time	Date/Location
50 Freestyle	Miller	24.25	Dec. 1/Long Beach, Calif.
100 Freestyle	Miller	51.88	March 1/Las Vegas
200 Freestyle	Cordaro	1:54.05	March 1/Las Vegas
500 Freestyle	Cordaro	5:03.57	Dec. 1/Long Beach, Calif.
1000 Freestyle	Cordaro	10:37.00	Nov. 11/Tucson
1650 Freestyle	Cordaro	17:15.87	March 1/Las Vegas
100 Butterfly	Schieltz	59.02	Dec. 1/Long Beach, Calif.
200 Butterfly	McMinn	2:09.90	Dec. 1/Long Beach, Calif.
100 Backstroke	Cunningham	59.52	March 1/Las Vegas
200 Backstroke	Kerr	2:07.10	Dec. 1/Long Beach, Calif.
100 Breaststroke	Karlberg	1:09.14	Dec. 1/Long Beach, Calif.
200 Breaststroke	Karlberg	2:23.02	March 1/Las Vegas
200 Individual Medley	McMinn	2:09.53	Dec. 1/Long Beach, Calif.
400 Individual Medley	McMinn	4:31.94	Dec. 1/Long Beach, Calif.
200 Freestyle Relay	Miller, Schieltz, Kerr, Cunningham	1:36.33	March 1/Las Vegas
400 Freestyle Relay	Cunningham, Cordaro, Schieltz, Miller	3:32.60	March 1/Las Vegas
800 Freestyle Relay	Cunningham, Ellsworth, Kerr, Cordaro	7:49.18	Dec. 1/Long Beach, Calif.
200 Medley Relay	Cunningham, Karlberg Schieltz, Miller	1:48.58	March 1/Las Vegas
400 Medley Relay	Hardee, Karlberg, Schieltz, Miller	4:01.86	Dec. 1/Long Beach, Calif.
1-Meter Diving	Green	270.15	Feb. 4/Colorado Springs
3-Meter Diving	Green	358.15	March 1/Las Vegas

1994-95 UNM SWIMMING & DIVING ROSTERS

MEN

Name	Hgt.	Wgt.	Year	Events	Hometown (Last School)
Alex Brandl	6-0	175	So.	butterfly	Traismaver, Austria (BRG KREMS)
Bob Goldie	6-2	186	Sr.	freestyle	El Paso, Texas (Coronado HS)
c-Dave Griffore	5-11	163	Jr.	freestyle	Burnsville, Minn. (Burnsville HS)
John Haas	6-0	180	Sr.	butterfly	Wilmette, Ill. (Loyola Academy)
Lance Haile	6-0	160	Sr.	freestyle	Albuquerque (Cibola HS)
Brad Klein	6-1	173	Sr.	freestyle	Albuquerque (Highland HS)
Adam Knippa	5-10	150	Fr.	diving	San Antonio, Texas (MacArthur HS)
Richard LeDuc	5-10	150	So.	freestyle	Denver, Colo. (Regis Jesuit HS)
Chris Lengerich	6-0	160	Fr.	freestyle, butterfly	Salida, Colo. (Cheyenne Mountain HS)
Ross Noble	5-10	170	Jr.	freestyle	Dollor, Scotland (Alve Academy)
Josh Ramey	6-2	175	Fr.	backstroke	Carlsbad, N.M. (Carlsbad HS)
Travis Rickey	6-0	175	So.	freestyle	Colorado Springs, Colo. (Cheyenne Mountain HS)
Brian Stroshane	6-0	170	So.	freestyle	Richfield, Minn. (Richfield HS)
Nick Talarico	6-3	185	Jr.	backstroke	Arvada, Colo. (Pomona HS)
Mark Thomas	5-11	175	Jr.	freestyle	Carmel, Ind. (Carmel HS)
Rob Wagner	6-8	198	Jr.	freestyle	Fountain, Colo. (Widefield HS)
Nolan Wood	6-3	185	So.	IM, backstroke	Overland Park, Kan. (Blue Valley North HS)
George Wrolstad	5-11	155	So.	butterfly	Albuquerque (Eldorado HS)

WOMEN

Name	Hgt.	Year	Events	Hometown (Last School)
Lindsey Baggs	5-5	Fr.	diving	Greenwood Village, Colo. (Cherry Creek HS)
c-Amy Cordaro	5-10	Sr.	freestyle	Albuquerque (Albuquerque HS)
Amy Cunningham	5-8	Jr.	freestyle	Glendale, Ariz. (Apollo HS)
Kara Ellsworth	5-8	Fr.	freestyle	Sacramento, Calif. (El Camino HS)
c-Liane Elsener	5-3	Jr.	IM/breaststroke	Roeland Park, Kan. (Bishop Miege HS)
Kerri Felcyn	5-3	Jr.	diving	Peoria, Ill. (Richwoods HS)
Courtney Green	5-7	Fr.	diving	Northglenn, Colo. (Northglenn HS)
Christine Hardee	5-8	So.	backstroke	Olympia, Wash. (Olympia HS)
Hannah Johnson	5-5	So.	freestyle	Albuquerque (La Cueva HS)
Kiana Kaiser	54	Sr.	diving	Honolulu, Hawai'i (Punahon HS)
Jenny Karlberg	5-6	So.	IM/breaststroke	Aurora, Colo. (Overland HS)
Rebekah Kehrman	5-4	Fr.	freestyle	Carlsbad, N.M. (Carlsbad HS)
Katherine Kerr	5-9	Jr.	backstroke	Avondale, Ariz. (Agua Fria HS)
Meredith Lavery	5-3	Sr.	backstroke	Wichita, Kan. (Southeast HS)
Jennifer McMinn	5-7	So.	IM	Poway, Calif. (Poway HS)
Kristen Miller	5-7	Jr.	freestyle	Albuquerque (Wheatridge HS)
Caitlin Moore	5-8	Fr.	IM, butterfly	Aurora, Colo. (Smoky Hill HS)
Nicole Robertson	5-8	Sr.	breaststroke	El Paso, Texas (Hanks HS)
Suzanne Schieltz	5-2	So.	butterfly	Beaverton, Ore. (Beaverton HS)
Melissa Trachi	5-4	Jr.	IM, backstroke	Lake Oswego, Ore. (Lakeridge HS)
Mari Uchida	5-3	Sr.	butterfly	Friendswood, Texas (Clear Brook HS)

c-denotes captain

WRESTLING...

WRAP IT UP -- The University of New Mexico wrestling team wrapped up its 33rd year of competition with a fifth place finish at the Western Athletic Conference Championships.

Fresno State won its third straight WAC title with 107.5 points. Wyoming finished second with 92.5 points, Brigham Young was third with 54.5 points, Air Force placed fourth with 47.5 points and New Mexico was fifth with 10 points.

INDIVIDUALLY AT THE WAC -- New Mexico's only realistic hope at the WAC Championships came in the form of two individuals who had the best opportunity to fare well in their particular weight classes.

Axel Siverts, a 167-pound junior, was UNM's best entrant based on individual results during the season. Siverts, compiled a 17-6 record heading into the championships and a third place finish in last year's WAC Championships.

Unfortunately, Siverts proabably had the worst day of his season at the WAC Championships. Siverts lost his first match to Jake Sherer of Air Force, 2-1, which put him in the loser's bracket. Siverts also lost his second match, this time to Jeremy Lott of BYU, 4-2. That loss ended Siverts' day and a very successful 1994-95 season. Siverts ended up with a team-best 17-8 (.680) record.

New Mexico's other hope came in defending WAC Champion Rico Garcia. Garcia, a 190-pound senior, struggled throughout the 1994-95 campaign, but still possessed the ability and talent to make a strong showing at the WAC Championships.

Garcia won his first match via the pin over Wyoming's Pete Szymczak at the 2:20 mark. Garcia then took on former WAC Champion Johnny Harrison of Air Force and lost a decisive 15-5 decision. Garcia once again took on Szymczak, for third place and lost a 9-4 decision, giving him a fourth place finish.

Other individuals of note for New Mexico included 158-pounder Jeff Godbe. Godbe also placed fourth for the Lobos. Godbe lost the third place match by the score of 7-5 against BYU's Morgan Robertson. Mark Garcia also placed fourth in the 118-pound class after dropping a 9-4 decsion to BYU's Marcus Stones.

DUALING IT OUT -- New Mexico had a fairly successful season despite the disappointing finish at the WAC Championships. New Mexico went 4-4 in dual competition, which was its best dual record since a 4-2 campaign during the 1989-90 season. New Mexico took victories over Western State (18-14), Cal State Fullerton (27-16), Fort Lewis (34-10) and Phoenix College (43-6).

Two of New Mexico's four dual losses came at the hands of ranked opposition. The Lobos dropped a 42-0 decision to 16-ranked Arizona State. Central Oklahoma, ranked No. 1 and the defending Division II national champions, shutout New Mexico by the count of 39-0. The Lobos other losses came at the hands of Cal Poly SLO (42-0) and Air Force (31-3).

TOURNAMENT ACTION -- New Mexico competed in five tournaments through the course of the season including the WAC Championships. Axel Siverts had the best record in those tournaments with a pair of first place finishes in the Colorado Open and the Skyhawk Open. He also placed third in a very competitive Cal State Bakersfield Tournament.

Rico Garcia placed first in the Skyhawk Open and was also named Outstanding Wrestler in that tournament, second in the Colorado Open, eighth in the very competitive Las Vegas Invitational and fifth in the strong Cal State Bakersfield Tournament.

Mark Garcia placed second in the Skyhawk Open and fourth in the Cal State Bakersfield Tournament. Kevin Ruth placed third in the Bakersfield Tournament and Randy Griswold placed third in the Colorado Open and fourth in the Skyhawk Open

SENIORS -- New Mexico loses three seniors on this year's roster including Mike Perez (142), Kevin Ruth (177) and Rico Garcia (190). The Lobos will start the 1995-96 season with 12 letterwinners returning.

COACHES CORNER -- New Mexico head coach Bill Dotson has completed his 15th year at the helm of the Lobo wrestling program. He is only the third coach in the 33-year history of the program.

Dotson has compiled a career record of 81-68-1 in 19 years of collegiate coaching. The Dotson ledger stands at 64-65-1 (.496) in 15 years at New Mexico.

1994-95 New Mexico Wrestling Roster

Wrestler	Ht.	Wt.	Yr./Exp.	Hometown (Last School)
Toby Frescas	5-2	118	Fr./HS	El Paso, Texas (Coronado HS)
Mark Garcia	5-2	118	So./1L	Albuquerque (Rio Grande HS)
Scott Lewis	5-7	126	So./1L	Albuquerque (Eldorado HS)
Chris Padilla	5-2	126	Jr./2L	Belen, N.M. (Belen HS)
Sal Grimaldi	5-7	134	So./Tr.	Yonkers, N.Y. (Manhattan College)
Mike Perez	5-7	134	Sr./2L	El Paso,Texas (Eastwood HS)
Gabriel Sanchez	5-8	134	Jr./HS	Santa Fe, N.M. (Santa Fe HS)
Jon Godbe	5-7	142	So./1L	Montrose, Colo. (Montrose HS)
Tony Leon	5-7	150	So./HS	Santa Fe, N.M. (Capitol HS)
Matt McElroy	5-10	150	Fr./HS	Waynesville, Mo. (Waynesville HS)
John Bonney	6-0	158	Fr./HS	Belen, N.M. (Belen HS)
Jeff Godbe	5-10	158	Jr./1L	Montrose, Colo. (Montrose HS)
Rod Ludington	5-8	158	Jr./1L	Victorville Valley, Calif. (Cerritos Junior College)
Chad Valdez	5-8	158	Fr./HS	Albuquerque (Rio Grande HS)
Axel Siverts	5-9	167	Jr./2L	Lafayette, Colo. (Centaurus HS)
Kevin Ruth	5-11	177	Sr./3L	Henderson, Nev. (Basic HS)
Rico Garcia	6-0	190	Sr./1L	San Jose, Calif. (San Jose Community College)
Matt Deller	6-3	Hvt.	Jr./1L	Cerritos, Calif. (Cerritos Junior College)
Mark Frederick	6-4	Hvt.	So./1L	Carlsbad, N.M. (Carlsbad HS)

Head Coach: Bill Dotson (15th year @ UNM • 64-65-1)
Assistant Coach: Scott Dotson
Assistant Coach: Steve Yarbrough

1994-95 New Mexico Wrestling Stats
(Final)

Wrestler	Record	TD	Esc.	Rev.	NF	Sup.	TF	F
Mark Garcia (118)	13-14 (.481)	43	55	5	4	0	0	1
Scott Lewis (126)	5-14 (.263)	8	22	5	5	1	0	0
Sal Grimaldi (134)	0-10 (.000)	5	26	4	1	0	0	0
Mike Perez (134)	1-4 (.200)	2	6	0	1	0	0	0
Gabriel Sanchez (134)	1-6 (.143)	2	11	2	1	0	0	0
Jon Godbe (142)	7-14 (.333)	21	44	3	3	0	0	2
Randy Griswold (150)	9-6 (.600)	12	18	10	20	0	0	1
Tony Leon (150)	4-8 (.333)	9	24	1	1	0	0	0
Chad Valdez (150)	0-4 (.000)	1	9	1	0	0	0	0
John Bonney (158)	0-2 (.000)	1	2	0	0	0	0	0
Jeff Godbe (158)	12-15 (.444)	32	32	3	2	0	0	0
Axel Siverts (167)	17-8 (.680)	52	31	1	6	1	0	3
Kevin Ruth (177)	10-11 (.476)	20	25	1	2	0	0	0
Rico Garcia (190)	14-13 (.583)	27	27	7	13	0	0	9
Matt Deller (Hvt.)	12-8 (.600)	25	21	3	2	0	0	0
Mark Frederick (Hvt.)	4-1 (.800)	3	6	2	0	0	0	0
Team Totals	109-138 (.441)	258	359	48	61	2	0	16

1994-95 New Mexico Wrestling Results/Schedule

Nov. 6 @ Colorado Open (Pueblo, Colorado • No Team Scoring)
Individuals • 1st place - Axel Siverts (167 lbs.); 2nd place - Rico Garcia (190 lbs.); 3rd place - Randy Griswold (150 lbs.), Matt Deller (Hvt); 4th place - Jeff Godbe (158 lbs.)

Nov. 19 at Skyhawk Open (Durango, Colo. • All Day)
Individuals • 1st place - Axel Siverts (167 lbs.) Outstanding Wrestler Award, Rico Garcia (190 lbs.); 2nd place - Mark Garcia (118 lbs.), Matt Deller (Hvt.); 3rd place - Mark Frederick (Hvt.); 4th place - Randy Griswold (150 lbs.), Jon Godbe (142 lbs.)

Nov. 26 at Las Vegas Invitational (Las Vegas, Nev. • All Day)
Individuals • 8th place - Rico Garcia (190 lbs.)

Dec. 10 Western State (New Mexico, 18-14 • Dual Record, 1-0)

Jan. 7 at Cal State Fullerton (New Mexico, 27-16 • Dual Record, 2-0)

Jan. 8 at Cal State Bakersfield Tournament (Bakersfield, Calif. • No Team Scoring)
Individuals • 3rd place - Axel Siverts (167 lbs.); 3rd place - Kevin Ruth (177 lbs.); 4th place - Mark Garcia (118 lbs.); 5th place - Rico Garcia (190 lbs.); 6th place - Jeff Godbe (150 lbs.); 7th place - Matt Deller (Hvt.)

Jan. 10 at Cal Poly SLO (Cal Poly SLO, 42-0 • Dual Record, 2-1)

Jan. 28 Fort Lewis (New Mexico, 34-10 • Dual Record, 3-1)

Feb. 4 at Arizona State (Arizona State, 42-0 • Dual Record, 3-2)

Feb. 4 Phoenix College @ Tempe, Ariz. (New Mexico, 43-6 • Dual Record, 4-2)

Feb. 11 at Central Oklahoma (Central Oklahoma, 39-0 • Dual Record, 4-3)

Feb. 18 Air Force (Air Force, 31-3 • Dual Record, 4-4)

Mar. 4 at WAC Championships (5th out of 5 teams • 10 pts.)

MEN'S BASKETBALL

The New Mexico Lobos completed their 92nd season of basketball on the earliest date in 12 years when they fell to Utah in the semifinals of the WAC Tournament in Albuquerque. For the first time since 1983, New Mexico did not advance to postseason play. UNM went to the NCAA Tournament in 1991, '93 and '94, and the NIT from 1984-90 and '92.

New Mexico finished the season at 15-15 ending a streak of eight 20-win seasons. Coming into 1994-95, only New Mexico, Duke, Syracuse and North Carolina had won at least 20 games in each of the past eight seasons.

By winning five of its last six conference games, UNM finished 9-9 in the WAC to tie Wyoming for 4th place.

Dave Bliss completed his seventh season at New Mexico. Bliss has compiled a record of 144-78 (.649) at UNM, ranking him fourth all-time in terms of victories. He needs just 13 more wins to move into second place ahead of Gary Colson and Roy Johnson. New Mexico has averaged 20.6 wins a year and advanced to postseason six times with Bliss in charge, the best seven-year run in school history. His teams have never finished lower than fifth in the Western Athletic Conference, and have been third or better five times.

Senior Marlow White was named 1st team All-WAC by the coaches and U.S. Basketball Writers, and 2nd team by the media. He was also named to the All-WAC Defensive Team by the coaches. Sophomore Charles Smith was honorable mention All-WAC by the coaches. Freshman Clayton Shields was chosen to the All-Newcomer team by the media.

White came within seven points of becoming only the sixth player in school history to score 1,000 points in two years. He finished with 993 points, good for 18th place all-time at UNM.

Smith became the sixth Lobo sophomore to lead the team in scoring averaging 15.9 points a game. Smith joined Gig Brummell (1959), Francis Grant (1960), Mel Daniels (1965), Kenny Page (1980) and Phil Smith (1982) as the only sophomores to lead the team in scoring.

Youth was plentiful for the Lobos. UNM freshmen played 39.7% of the team's minutes and scored 31.1% of the points. Shields finished third on the team in scoring (10.5 ppg) and second in rebounding (4.7). David Gibson averaged 7.4 points and was among the WAC leaders in assists (113). Royce Olney averaged 19.8 minutes a game, 4.6 points, and was third on the team in steals (32).

For the first time in school history, two UNM freshmen scored 200 points in the same season.

Shields had 314, the 3rd-best total by a Lobo frosh, while Gibson scored 223, which ranks 6th-best.

New Mexico had the highest single-game field goal percentage among NCAA Division I teams in 1994-95: 74.6% (44-59) vs. Eastern New Mexico on Dec. 6.

The Lobos also had a lot of tough luck. Seven of UNM's nine WAC losses were by five points or less. UNM had a 6-11 record in games decided by seven points or less.

The departure of seniors Brian Hayden and White and redshirt freshman Cornelius Ausborne means UNM loses 33.7% of its scoring and 27.7% of its rebounding.

UNM sold 12,179 season tickets, the most since the 1990-91 season. It's the 26th straight season Lobo fans have purchased at least 10,000 season tickets.

When the 1995-96 season opens, UNM will be seeking win No. 400 in The Pit. New Mexico is 399-99 (.801) in 29 years. The second home game next year will be No. 500 for New Mexico in The Pit.

New Mexico again hosts the WAC Tournament Mar. 6-9, 1996, and the 1996 NCAA Tournament First and Second Rounds Mar. 14 and 16.

1994-95 STATS

ALL GAMES
15-15, 12-8 home, 3-7 road

			/-----TOTAL-----/			/-----3PT-----/								OFF	DEF	TOT								
PLAYER	G	GS	FG	FGA	FG%	FG	FGA	FG%	FT	FTA	FT%	PTS	AVG	REB	REB	REB	AVG	PF	DQ	AST	TO	BLK	STL	MIN
Charles Smith	29	29	180	400	.450	31	116	.267	70	105	.667	461	15.9	30	97	127	4.4	58	0	95	63	17	34	929
Marlow White	30	29	148	328	.451	77	211	.365	93	110	.845	466	15.5	47	86	133	4.4	79	3	66	46	30	55	955
Clayton Shields	30	25	116	240	.483	32	88	.364	50	76	.658	314	10.5	44	98	142	4.7	80	1	33	61	10	22	696
Brian Hayden	30	28	101	186	.543	0	0	.000	65	102	.637	267	8.9	44	100	144	4.8	70	0	21	40	8	19	691
David Gibson	30	28	73	144	.507	17	45	.378	60	104	.577	223	7.4	16	63	79	2.6	87	2	113	60	3	26	1046
Greg Schornstein	30	5	67	132	.508	17	43	.395	36	50	.720	187	6.2	42	60	102	3.4	70	2	22	37	4	12	522
Shawn Simpson	30	2	53	88	.602	0	0	.000	34	83	.410	140	4.7	34	53	87	2.9	62	0	19	26	41	9	465
Royce Olney	30	3	40	109	.367	18	50	.360	41	67	.612	139	4.6	10	44	54	1.8	67	2	62	43	1	32	594
Cornelius Ausborne	9	1	9	26	.346	6	20	.300	3	4	.750	27	3.0	4	3	7	0.8	4	0	6	7	0	2	88
Cedric Hopkins	5	0	2	7	.286	1	5	.200	2	2	1.000	7	1.4	0	1	1	0.2	0	0	0	1	0	0	8
Marty Cotwright	16	0	7	19	.368	0	0	.000	8	11	.727	22	1.4	10	11	21	1.3	14	0	0	6	3	2	99
Cody Willard	5	0	3	5	.600	0	1	.000	0	0	.000	6	1.2	2	0	2	0.4	0	0	0	0	0	0	7
Team Rebound																125								
New Mexico	30		799	1684	.474	199	579	.344	462	714	.647	2259	75.3	283	616	1024	34.1	591		437	390	117	213	6100
Opponents	30		750	1708	.439	186	517	.360	478	706	.677	2164	72.1	384	695	1079	36.0	626		381	429	102	168	6100

WESTERN ATHLETIC CONFERENCE
Record: 9-9 (T4th), 6-3 home, 3-6 road

			/-----TOTAL-----/			/-----3PT-----/								OFF	DEF	TOT								
PLAYER	G	GS	FG	FGA	FG%	FG	FGA	FG%	FT	FTA	FT%	PTS	AVG	REB	REB	REB	AVG	PF	DQ	AST	TO	BLK	STL	MIN
Marlow White	18	18	104	220	.473	53	139	.381	62	73	.849	323	17.9	29	58	87	4.8	52	1	38	27	19	35	617
Charles Smith	17	17	105	228	.461	14	56	.250	41	59	.695	265	15.6	19	54	73	4.3	38	0	58	36	12	19	533
Clayton Shields	18	15	59	141	.418	21	60	.350	25	42	.595	164	9.1	22	56	78	4.3	44	1	15	38	8	12	424
David Gibson	18	16	36	79	.456	7	23	.304	39	60	.650	118	6.6	9	39	48	2.7	53	2	62	26	1	16	617
Brian Hayden	18	17	48	100	.480	0	0	.000	20	40	.500	116	6.4	28	49	77	4.3	38	0	6	23	2	11	400
Greg Schornstein	18	3	41	79	.519	14	29	.483	19	25	.760	115	6.4	22	36	58	3.2	38	2	12	16	3	6	311
Royce Olney	18	3	27	74	.365	12	32	.375	28	44	.636	94	5.2	7	31	38	2.1	44	1	43	27	0	21	390
Shawn Simpson	18	1	32	56	.571	0	0	.000	18	51	.353	82	4.6	19	32	51	2.8	35	0	13	19	28	5	308
Cornelius Ausborne	2	0	1	3	.333	1	3	.333	2	2	1.000	5	2.5	1	0	1	0.5	0	0	2	1	0	0	18
Cedric Hopkins	2	0	0	3	.000	0	2	.000	2	2	1.000	2	1.0	0	0	0	0.0	0	0	0	1	0	0	4
Cody Willard	2	0	1	2	.500	0	0	.000	0	0	.000	2	1.0	1	0	1	0.5	0	0	0	0	0	0	3
Marty Cotwright	12	0	4	7	.571	0	0	.000	1	3	.333	9	0.8	3	7	10	0.8	7	0	0	4	1	1	50
Team Rebounds																67								
New Mexico	18		458	992	.462	122	344	.355	257	401	.641	1295	71.9	160	362	589	32.7	349		249	218	74	126	3675
Opponents	18		433	985	.440	105	290	.362	298	425	.701	1269	70.5	210	426	636	35.3	367		225	248	71	96	3675

1994-95 STATS GAME-BY-GAME

Opponent	FG-FGA	Pct.	3FG-A	Pct.	FT-FTA	Pct.	R	PF-D	A	T	B	S
SAN FRANCISCO (L, 80-74)	26-61	.426	6-26	.231	16-20	.800	40	17-0	13	17	6	6
STEPHEN F. AUSTIN (W, 122-105)	47-77	.610	7-18	.389	21-34	.618	49	21-0	29	13	1	8
TEXAS SOUTHERN (L, 73-67)	26-52	.500	8-20	.400	7-11	.636	27	24-1	20	15	2	4
ARIZONA STATE (W, 87-71)	31-53	.585	8-15	.533	17-33	.515	32	16-0	17	16	7	14
EASTERN NEW MEXICO (W, 110-49)	44-59	.746	7-15	.467	15-20	.750	43	16-0	26	12	6	5
at New Mexico State (L, 74-65)	23-54	.426	9-23	.391	10-24	.417	33	20-0	11	17	2	6
NEW MEXICO STATE (L, 96-89)	27-58	.466	9-26	.346	26-35	.743	29	28-2	13	16	2	6
IDAHO (W, 76-54)	30-53	.566	6-19	.316	10-19	.526	29	19-0	16	13	4	12
CAL STATE NORTHRIDGE (W, 86-73)	24-51	.471	2-15	.133	36-47	.766	42	16-0	17	13	3	8
UNC CHARLOTTE (L, 78-75, OT)	28-71	.394	8-21	.381	11-16	.688	42	20-0	12	11	4	6
FRESNO STATE (W, 74-66)	28-59	.475	2-18	.111	16-22	.727	35	19-0	13	15	2	12
AIR FORCE (W, 86-72)	28-52	.538	13-26	.500	17-20	.850	37	15-0	23	12	6	3
at Hawai'i (L, 62-61)	22-52	.423	4-16	.250	13-27	.481	37	16-0	11	17	3	6
at San Diego State (L, 72-69)	26-66	.394	7-24	.292	10-21	.476	45	26-1	12	16	9	4
COLORADO STATE (W, 71-68)	25-50	.500	8-18	.444	13-24	.542	32	16-0	12	12	7	5
WYOMING (L, 75-61)	23-52	.442	2-14	.143	13-24	.542	24	21-0	8	12	1	6
TEXAS-EL PASO (W, 66-63, OT)	21-59	.356	11-34	.324	13-27	.481	49	20-1	13	10	6	4
at Utah (L, 85-80)	25-57	.439	11-20	.550	19-25	.760	26	24-0	16	10	2	8
at Brigham Young (L, 81-63)	22-54	.407	4-18	.222	15-18	.833	30	17-0	7	18	5	4
UTAH (L, 95-91, OT)	32-63	.508	8-19	.421	19-27	.704	34	18-0	17	12	3	9
BRIGHAM YOUNG (L, 74-72)	22-51	.431	3-14	.214	25-33	.758	19	23-0	12	7	1	15
at Texas-El Paso (L, 83-79)	29-56	.518	7-18	.389	14-22	.636	27	20-1	12	13	7	8
at Colorado State (W, 91-74)	32-56	.571	9-17	.529	18-27	.667	32	29-2	19	12	3	9
at Wyoming (W, 62-61)	25-53	.472	4-13	.308	8-10	.800	31	18-0	12	15	4	6
HAWAI'I (W, 72-68)	24-51	.471	9-19	.474	15-24	.625	29	15-0	16	12	4	7
SAN DIEGO STATE (W, 67-42)	25-55	.455	6-21	.286	11-20	.550	42	21-1	17	8	4	5
at Fresno State (W, 72-69)	27-52	.519	8-21	.381	10-17	.588	28	18-1	18	10	5	8
at Air Force (L, 59-58)	22-54	.407	6-14	.429	8-13	.615	32	13-0	11	11	2	7
					WAC Tournament							
Wyoming (W, 63-56)	17-49	.347	5-16	.313	24-34	.706	45	24-0	9	14	4	4
Utah (L, 86-50)	18-54	.333	2-21	.095	12-20	.600	24	21-0	5	16	2	8

OPPONENT GAME-BY-GAME

Opponent	FG-FGA	Pct.	3FG-A	Pct.	FT-FTA	Pct.	R	PF-D	A	T	B	S
SAN FRANCISCO	30-65	.462	8-18	.444	12-17	.706	36	16-0	18	12	4	10
STEPHEN F. AUSTIN	36-80	.450	12-22	.545	21-28	.750	39	26-2	17	13	2	5
TEXAS SOUTHERN	24-54	.444	7-20	.350	18-31	.581	36	16-0	10	13	0	4
ARIZONA STATE	29-54	.537	5-12	.417	8-16	.500	27	25-2	14	22	5	10
EASTERN NEW MEXICO	19-66	.288	2-19	.105	9-17	.529	26	17-0	8	16	0	7
at New Mexico State	29-56	.518	7-19	.368	9-22	.409	42	20-0	16	16	1	4
NEW MEXICO STATE	30-55	.545	9-17	.529	27-37	.730	37	25-1	14	14	3	6
IDAHO	20-57	.351	1-17	.058	13-20	.650	40	18-0	10	20	0	5
CAL STATE NORTHRIDGE	28-66	.424	11-29	.379	6-11	.545	32	32-1	19	15	3	3
UNC CHARLOTTE	27-62	.435	8-18	.444	16-23	.696	45	19-0	10	15	8	3
FRESNO STATE	23-51	.451	8-18	.444	12-18	.667	34	22-0	10	23	2	7
AIR FORCE	28-65	.431	6-18	.333	10-15	.667	27	15-0	11	5	4	7
at Hawai'i	22-54	.407	4-14	.286	14-21	.667	33	21-0	13	16	7	6
at San Diego State	24-66	.364	5-10	.500	19-32	.594	47	19-0	7	14	6	6
COLORADO STATE	25-61	.410	8-22	.364	10-12	.833	33	21-1	10	12	3	7
WYOMING	26-46	.565	6-15	.400	17-22	.773	35	22-1	14	18	6	6
TEXAS-EL PASO	23-58	.397	7-18	.389	10-17	.558	40	24-1	10	9	6	6
at Utah	27-55	.491	6-15	.400	25-33	.758	40	20-0	19	10	6	1
at Brigham Young	31-55	.564	4-9	.444	15-20	.750	30	17-0	18	15	2	7
UTAH	36-65	.554	4-11	.364	19-28	.679	36	21-1	17	13	1	3
BRIGHAM YOUNG	20-40	.500	6-15	.400	28-32	.875	38	23-2	16	21	2	1
at Texas-El Paso	24-55	.436	8-19	.421	27-34	.794	38	19-0	12	16	1	6
at Colorado State	19-54	.352	6-20	.300	30-43	.698	38	24-0	8	15	3	7
at Wyoming	20-47	.426	5-19	.263	16-23	.696	27	14-0	8	12	7	9
HAWAI'I	26-57	.456	5-11	.455	11-14	.786	34	21-0	17	14	6	3
SAN DIEGO STATE	12-45	.267	2-16	.125	16-28	.571	34	19-2	6	11	2	0
at Fresno State	24-55	.436	9-25	.360	12-22	.545	36	18-1	16	13	1	8
at Air Force	23-56	.411	6-15	.400	7-11	.636	36	14-0	13	11	6	6
					WAC Tournament							
Wyoming	17-61	.279	3-21	.143	19-30	.633	43	27-1	7	10	4	6
Utah	28-47	.596	8-15	.533	22-29	.759	40	18-0	13	15	1	9

1994-95 STATS - HIGHS AND LOWS

		NEW MEXICO LOBOS		*OPPONENT*	
Points 1st Half	High	58	vs. STEPHEN F. AUSTIN	52	by STEPHEN F. AUSTIN
	Low	20	vs. Wyoming	20	by SAN DIEGO STATE
Points 2nd Half	High	64	vs. STEPHEN F. AUSTIN	53	by STEPHEN F. AUSTIN
	Low	23	vs. Air Force	22	by SAN DIEGO STATE
Total Points	High	122	vs. STEPHEN F. AUSTIN	105	by STEPHEN F. AUSTIN
	Low	58	vs. Air Force	42	by SAN DIEGO STATE
Field Goals Made	High	47	vs. STEPHEN F. AUSTIN	36	by STEPHEN F. AUSTIN
	Low	21	vs. TEXAS-EL PASO	12	by SAN DIEGO STATE
Field Goals Attempted	High	77	vs. STEPHEN F. AUSTIN	80	by STEPHEN F. AUSTIN
	Low	50	vs. COLORADO STATE	40	by BRIGHAM YOUNG
Field Goal Percentage	High	.746	vs. EASTERN NEW MEXICO	.565	by WYOMING
	Low	.356	vs. TEXAS-EL PASO	.267	by SAN DIEGO STATE
3-Point Field Goals Made	High	13	vs. AIR FORCE	12	by STEPHEN F. AUSTIN
	Low	2	vs. CAL STATE NORTHRIDGE	1	by IDAHO
3-point Field Goals Attempted	High	34	vs. TEXAS-EL PASO	29	by CAL STATE NORTHRIDGE
	Low	13	vs. Wyoming	9	by Brigham Young
3-Point Field Goal Percentage	High	.550	vs. Utah	.545	by STEPHEN F. AUSTIN
	Low	.111	vs. FRESNO STATE	.059	by IDAHO
Free Throws Made	High	36	vs. CAL STATE NORTHRIDGE	30	by Colorado State
	Low	7	vs. TEXAS SOUTHERN	6	by CAL STATE NORTHRIDGE
Free Throws Attempted	High	47	vs. CAL STATE NORTHRIDGE	43	by Colorado State
	Low	10	vs. Wyoming	11	by CAL STATE NORTHRIDGE
Free Throw Percentage	High	.850	vs. AIR FORCE	.875	by BRIGHAM YOUNG
	Low	.417	vs. New Mexico State	.409	by New Mexico State
Offensive Rebounds	High	20	vs. San Diego State	22	by San Diego State
	Low	5	vs. IDAHO	8	by Hawai'i
Defensive Rebounds	High	37	vs. STEPHEN F. AUSTIN	32	by TEXAS-EL PASO
	Low	12	vs. BRIGHAM YOUNG	6	by EASTERN NEW MEXICO
Total Rebounds	High	49	vs. STEPHEN F. AUSTIN	47	by San Diego State
	Low	19	vs. BRIGHAM YOUNG	26	by EASTERN NEW MEXICO
Assists	High	29	vs. STEPHEN F. AUSTIN	19	by CAL STATE NORTHRIDGE
	Low	7	vs. Brigham Young	6	by SAN DIEGO STATE
Blocked Shots	High	9	vs. San Diego State	8	by UNC CHARLOTTE
	Low	1	vs. STEPHEN F. AUSTIN	0	by TEXAS SOUTHERN
Steals	High	15	vs. BRIGHAM YOUNG	10	by SAN FRANCISCO
	Low	3	vs. AIR FORCE	0	by SAN DIEGO STATE
Turnovers	High	18	vs. Brigham Young	23	by FRESNO STATE
	Low	7	vs. BRIGHAM YOUNG	5	by AIR FORCE
Personal Fouls	High	29	vs. Colorado State	32	by CAL STATE NORTHRIDGE
	Low	13	vs. Air Force	14	by Air Force

1994-95 STATS - MISCELLANEOUS

Top Single Game Individual Performances...

	NEW MEXICO	OPPONENT
Points:	31, Marlow White vs. Colorado State	30, Antoine Gillespie, UTEP
FG Made:	11, Smith vs. UTEP; White vs. (twice)	11, Keith Van Horn, Utah
FG Att:	21, Charles Smith (twice)	23, Gillespie, UTEP; Van Horn, Utah
FG% (5 made):	1.000 (6-6) Hayden vs. ASU; Schornstein vs. Eastern NM	1.000 (6-6) Troy Brewer, New Mexico State
3-Pt FG Made:	5, White (five times); Shields vs. UTEP	5, Randy Bolden, Texas Southern
3-Pt FG Att:	12, Marlow White vs. Utah	10, Delmonte Madison, Colorado State
FT Made:	14, Brian Hayden vs. Cal State Northridge	9, three players
FT Att:	17, Brian Hayden vs. Cal State Northridge	11, Kevin Granger, Texas Southern
FT% (7 att):	1.000 (9-9) Marlow White vs. Brigham Young	1.000 (8-8) Walker, NM State; Roberts, BYU
Rebounds:	14, Brian Hayden vs. Stephen F. Austin	16, Keith Van Horn, Utah
Assists:	10, David Gibson vs. Air Force	9, Tyrone Paul, San Francisco
Steals:	8, Marlow White vs. Brigham Young	4, four players
Blocks:	6, Shawn Simpson vs. San Diego State	6, Theo Ratliff, Wyoming

New Mexico's record when...

leading at the half:	9-5
trailing at the half:	6-10
tied at the half:	0-0
outshoot opponent:	14-4
outshot by opponent:	1-11
shooting tied:	0-0
outrebound opponent:	10-2
outrebounded by opponent:	5-12
rebounds tied:	0-1
commit fewer turnovers:	9-5
commit more turnovers:	4-8
turnovers tied:	2-2
UNM shoots 50% or better:	8-3
UNM shoots below 50%:	7-12
opponent shoots 50% or better:	1-7
opponent shoots less than 50%:	14-8
UNM out-scores opponent in second half:	12-6
opponent out-scores UNM in second half:	2-9
scoring tied in the second half:	1-0

UNM scores between:

50-59	60-69	70-79	80-89	90-99	100+
0-2	4-6	5-4	3-2	1-1	2-0

Opponent scores between:

40-59	60-69	70-79	80-89	90-99	100+
4-1	6-1	4-6	0-5	0-2	1-0

RECORDS OF UNM LINEUPS

Ausborne, Gibson, Shields, Simpson, Smith (0-1)

Gibson, Hayden, Shields, Smith, White (12-9)

Gibson, Hayden, Olney, Shields, White (0-1)

Hayden, Olney, Shields, Smith, White (0-1)

Olney, Shields, Simpson, Smith, White (0-1)

Gibson, Hayden, Schornstein, Smith, White (3-2)

UNM DUNKS: 103

Shawn Simpson 29
Marlow White 26
Charles Smith 25
Clayton Shields 12
Brian Hayden 4
David Gibson 3
Marty Cotwright 3
Greg Schornstein 1

NEW MEXICO WIN-LOSS POINT DIFFERENTIAL

	1	2	3	4	5	6	7	8	9	10	11-15	16-20	20+
WIN	1		3	1		1	1				2	3	3
LOSS	2	1	2	2	1	2	1		1		1	1	1

Lobo Miscellaneous...

FT% IN LAST 5 MINUTES-OVERTIME

Ausborne	2-2	1.000
Cotwright	0-0	---
Gibson	34-53	.642
Hayden	10-16	.625
Hopkins	2-2	1.000
Olney	27-39	.692
Schornstein	8-12	.667
Shields	14-24	.583
Simpson	7-17	.412
Smith	19-29	.655
White	11-15	.733
Willard	0-0	---
UNM	134-209	.641
Opponents	146-215	.679

GAMES SCORING IN DOUBLE FIGURES

Smith	25
White	22
Shields	17
Hayden	13
Gibson	9
Schornstein	8
Olney	5
Simpson	3
Ausborne	1

GAMES LEADING UNM IN SCORING

White	13
Smith	8
Shields	3
Hayden	2
Gibson	1
Schornstein	1
Gibson/Shields	1
Shields/Smith	1

DOUBLE-DOUBLE

Hayden	1	(Pts-Reb)
Shields	1	(Pts-Reb)
Smith	1	(Pts-Reb)

DOUBLE FIGURE REB.

Hayden	1
Shields	1
Smith	1

WIN-LOSS BY DAY

Monday:	1-2
Tuesday:	1-0
Wednesday:	3-0
Thursday:	5-4
Friday:	0-2
Saturday:	4-7
Sunday:	1-0

WIN-LOSS BY MONTH

November:	1-2
December:	4-3
January:	4-5
February:	4-3
March:	2-2

GAMES LEADING UNM IN REBOUNDS

Shields	6
Hayden	5
White	5
Smith	4
Schornstein	3
Gibson	1
Hayden/Simpson	
Smith	1
Hayden/Shields	
Smith	1
Hayden/White	1
Schornstein/Smith	1
Smith/White	1
Cotwright	
Schornstein	1

1994-95 New Mexico Basketball

ALPHABETICAL

No.	Name	Pos.	Ht.	Wt.	Age#	Birthdate	Cl-Exp.	Hometown (Last School)
3	Cornelius Ausborne	G	6-1	173	19	12-14-74	Fr-RS	DeSoto, Texas (DeSoto HS)
50	Marty Cotwright	F	6-8	220	20	9-15-74	Jr-Tr	Los Angeles, Calif. (Los Angeles City College)
32	David Gibson	G	6-2	163	19	4-30-75	Fr-RS	Albuquerque (Sandia HS)
35	Brian Hayden	C	6-9	216	22	12-6-71	Sr-3L	Albuquerque (La Cueva HS)
15	Cedric Hopkins	G	5-10	170	19	7-18-75	So-HS	Columbus, Ohio (St. Charles Prep)
25	Steve Lewis+	G	6-3	168	22	7-17-72	Jr-Tr	Baltimore, Md. (Brevard College)
30	Royce Olney	G	6-2	176	19	12-1-75	Fr-HS	Truth or Consequences, N.M. (Hot Springs HS)
45	Greg Schornstein	F	6-7	221	19	4-9-75	So-1L	Lafayette, Ind. (Jefferson HS)
22	Clayton Shields	F	6-7	185	18	3-28-76	Fr-HS	Baytown, Texas (Lee HS)
34	Shawn Simpson	C	6-8	200	19	12-20-74	Jr-Tr	New Bern, N.C. (Barton County College)
5	Charles Smith	G	6-4	179	19	8-22-75	So-1L	Fort Worth, Texas (Dunbar HS)
20	Marlow White	G	6-4	188	21	6-11-73	Sr-1L	Haskell, Okla. (Kilgore College)
21	Cody Willard	G	6-1	170	22	8-31-72	Jr-Tr	Ruidoso, N.M. (Blinn College)

+ Redshirt for 1994-95 season

Seniors (2)
Brian Hayden
Marlow White

Juniors (4)
Marty Cotwright
Steve Lewis
Shawn Simpson
Cody Willard

Sophomores (3)
Greg Schornstein
Charles Smith
Cedric Hopkins

Freshmen (4)
Cornelius Ausborne
David Gibson
Royce Olney
Clayton Shields

NUMERICAL

No.	Name	Pos.	Ht.	Wt.	Age#	Birthdate	Cl-Exp.	Hometown (Last School)
3	Cornelius Ausborne	G	6-1	173	19	12-14-74	Fr-RS	DeSoto, Texas (DeSoto HS)
5	Charles Smith	G	6-4	179	19	8-22-75	So-1L	Fort Worth, Texas (Dunbar HS)
15	Cedric Hopkins	G	5-10	170	19	7-18-75	So-HS	Columbus, Ohio (St. Charles Prep)
20	Marlow White	G	6-4	188	21	6-11-73	Sr-1L	Haskell, Okla. (Kilgore College)
21	Cody Willard	G	6-1	170	22	8-31-72	Jr-Tr	Ruidoso, N.M. (Blinn College)
22	Clayton Shields	F	6-7	185	18	3-28-76	Fr-HS	Baytown, Texas (Lee HS)
25	Steve Lewis	G	6-3	168	22	7-17-72	Jr-Tr	Baltimore, Md. (Brevard College)
30	Royce Olney	G	6-2	176	19	12-1-75	Fr-HS	Truth or Consequences, N.M. (Hot Springs HS)
32	David Gibson	G	6-2	163	19	4-30-75	Fr-RS	Albuquerque (Sandia HS)
34	Shawn Simpson	C	6-8	200	19	12-20-74	Jr-Tr	New Bern, N.C. (Barton County College)
35	Brian Hayden	C	6-9	216	22	12-6-71	Sr-3L	Albuquerque (La Cueva HS)
45	Greg Schornstein	F	6-7	221	19	4-9-75	So-1L	Lafayette, Ind. (Jefferson HS)
50	Marty Cotwright	F	6-8	220	20	9-15-74	Jr-Tr	Los Angeles, Calif. (Los Angeles City College)

ages as of Dec. 1, 1994

Note: Heights and weights taken in bare feet, shorts and T-shirt

WOMEN'S BASKETBALL...

LOBOS WRAP IT UP FOR 1994-95 -- The University of New Mexico women's basketball team completed its fourth season since the program was reinstated for the 1991-92 season. The Lobos season ended with a quarterfinal loss in the WAC Tournament to 20th-ranked San Diego State by the score of 57-39. New Mexico finished the 1994-95 campaign with a record of 5-22 overall and a mark of 2-12 in Western Athletic Conference play.

RECAPPING THE 1994-95 CAMPAIGN -- New Mexico started the season off with a trip to Hawai'i to take part in the highly competitive Rainbow Wahine Basketball Classic. There were five teams that competed in the 1994 NCAA Tournament slated to compete in the season-opening tournament in Hawai'i.

Defending national champion North Carolina headed the list along with Florida, Kansas, Tennessee Tech and Virginia. New Mexico took on host Hawai'i in one of the four opening matchups and wound up the short end of an 82-61 score. The Lobos battled Tennessee Tech in its next game and lost a 79-66 decision. It was a game the Lobos had every chance to win before losing a game that was closer than the final score indicated. New Mexico took on Pac-10 member Arizona in the finale for seventh place. The Wildcats erupted in the first half for a 42-23 halftime advantage and coasted the rest of the way to post a 77-58 victory.

The Lobos returned stateside to host the 1st Annual Borden's Lobo Classic. New Mexico earned its first victory of the season with a 66-64 victory over Montana State. UNM advanced to the championship game to face eventual NCAA Tournament participant Portland. The Pilots took a decisive 64-46 decision in the championship game of the 1st Annual Borden's Lobo Classic.

Following the Lobo Classic it was time for the first of two annual battles with intrastate rival New Mexico State. The first contest was held in Las Cruces where the Roadrunners shut down the Lobos 75-50. UNM hit only 27.9 percent (17-61) from the field in that game.

New Mexico earned its second victory of the season in its next contest with a high-scoring 89-82 decision over New Mexico Highlands. UNM reversed its fortunes from the field as they hit 46.2

percent from the field in the victory. The 89 points put on the scoreboard by the Lobos would turn out to be its highest point total in four years.

Round two of the intrastate rivalry with New Mexico State followed UNM's win over NMHU and the Roadrunners took the Lobos down once again, 73-58. UNM led at halftime 37-36, but NMSU went on a 24-2 run in the second half to take control of the game and ended up taking a 73-58 decision.

UNM earned its third victory of the season in its next outing. But it didn't come easy. New Mexico took on Loyola Marymount before the Chrtistmas break. LMU went out and took a 45-30 halftime lead and it looked like UNM was already on Christmas break. However, the second half was a whole different ball game. The Lobos took it to the Lions and turned the tables as UNM outscored LMU 41-25 to earn a 71-70 victory. It was UNM's third victory of the season.

New Mexico had three more nonconference tilts after Christmas break and two of them came against Oklahoma and Baylor. Oklahoma, a 1995 NCAA Tournament participant, took a lopsided 95-66 victory. UNM then traveled to Baylor and were blasted by the Bears 103-54. New Mexico closed out its nonconference slate against Northern Arizona and lost 75-65.

New Mexico opened up Western Athletic Conference play with a pair of home games against Colorado State and Wyoming. Colorado State escaped with a 71-63 victory in a game whose outcome was in question until the final minute. Wyoming took control of its game with New Mexico from the outset and went out to a 37-26 halftime lead. The Cowgirls also controlled the second half and went on to a 78-53 triumph.

UNM went on the road for its next two games and its road woes continued with a 85-61 loss at San Diego State and a 75-58 defeat at Fresno State. The Lobos returned home to face Utah and it was a game that started out ugly for New Mexico -- very ugly. The Utes went out and took a 24-0 lead before the Lobos scored on a free throw. Utah took a seemingly safe 42-20 halftime lead into the lockerroom. Utah was in control throughout and had a 72-47 lead with 6:12 remaining before UNM erupted. The Lobos went on a 26-6 run in a 4:39 time span and cut the Ute lead to 78-73 with 1:33 remaining. However, the Lobo comeback fell short as the Utes scored the final five points to

take an 83-73 victory.

New Mexico posted its first victory over Brigham Young since the 1986-87 season with a 63-60 decision in its next outing. It was UNM's fifth victory over BYU in 31 attempts. The Lobos faced the same two opponents (BYU & Utah) on the road the following week and dropped a pair losing to BYU 75-68 and to Utah 87-53.

New Mexico took its fifth and final victory of the season in overtime when the Lobos trimmed Fresno State 85-76. San Diego State was New Mexico's next opponent and the Aztecs proved once again why they were the class of the WAC the past two years with a 75-47 dismantling of the Lobos.

New Mexico traveled down south to take on Texas-El Paso and had trouble scoring as the Lady Miners posted a 75-45 victory. The Lobos continued WAC play on the road with a trip to Wyoming and Colorado State. New Mexico came up short on the road in both games losing to Wyoming 73-67 and to Colorado State 65-58. Those two losses ran UNM's road record to 0-51 since the program was reinstated. New Mexico ended WAC regular season play with a 52-37 loss at home to Texas-El Paso.

New Mexico closed out the 1994-95 season with San Diego State in the WAC Tournament which was held in Albuquerque. SDSU entered as the No. 1 seed and UNM came in as the No. 8 seed. The Lobos played the Aztecs close but wound up losing as the SDSU's talent prevailed over the Lobos 57-39. New Mexico shot a season-low 21.2 percent from the field and also made a season-low 12 field goals in the San Diego State contest. The loss gave New Mexico a 5-22 record overall and a 2-12 mark in WAC play as the 1994-95 campaign came to an end.

A LOOK AT THE STATS -- Individual stat leaders (all games) for New Mexico stacked up with junior Tracy Aldridge leading the way averaging 10.9 ppg. Senior Jessica Cunningham tallied 10.0 ppg and 5.3 rpg, both marks were second-best on the Lobo squad. Freshman Abby Garchek tallied a team-high 5.5 rpg.

In WAC games Aldridge led the way tallying 12.5 ppg, Cunningham averaged 11.3 ppg and a team-high 5.4 rpg, while Garchek added 10.7 ppg.

The Lobos shot 34.9 percent (557-1,598) from the field, 31.3 percent (122-390) from 3-point land and 66.6 percent (384-577) from the free throw line. The Lobos averaged 39.6 rpg and 60.0 ppg. Other notable stats for New Mexico include 10.8 assists per game, 2.2 blocks per game and 8.7 steals per game.

LOBOS IN THE WAC STATS -- Three Lobos can be found in the final regular season WAC statistics. Tracy Aldridge and Tamika Stukes head the list for the Lobos. Aldridge finished 4th in the conference in free throw percentage hitting 79.3 percent (88-111) from the charity stripe and Stukes finished 3rd in the conference in steals with 68 (2.5 spg). Abby Garchek finished tied for 7th in the WAC with 0.7 blocks per game.

In WAC games Aldridge was 9th in scoring averaging 12.5 ppg, 6th in field goal percentage at 48.2 percent and 8th in free throw percentage at 70.5 percent. Stukes was 6th in 3-point field goal percentage (34.8), 10th in assists (3.1), 3rd in steals (2.9) and 10th in 3-point field goals per game (1.1). Jessica Cunningham was 10th in 3-point field goal percentage (32.7) and 7th in 3-point field goals per game (1.3). Garchek was 6th in blocks with 0.8.

New Mexico's highest rankings as a team came in the categories of free throw percentage (66.6, 5th), rebounds (39.6, 5th) and 3-point field goals per game (4.6, 5th).

ALL-WAC HONORS -- Tracy Aldridge, a junior transfer from Moberly Junior College, was the only Lobo to be honored on the All-WAC women's baksetball team. Aldridge, from Jefferson City, Mo., earned Honorable Mention honors in her first season in the WAC.

STREAKS, PEAKS AND VALLEYS -- UNM established several school records during the course of the 1994-95 season. The first mark that was established belongs to Tracy Aldridge. Aldridge set a school record by connecting on 34 straight free throws. Jessica Cunningham established the school standard for 3-point field goals and attempts. Cunningham has 87 career 3-pointers on 294 attempts (30.0 percent). Freshman Tamika Stukes also established a freshman record for steals in a season with 68. It was the highest single-season theft total since the program was reinstated.

Heidi Harris also concluded her career by finishing in 6th place on the WAC's all-time list for total rebounds with 669, which breaks down to an average of 6.14 rebounds per game.

As a team New Mexico shattered the school record for 3-pointers in a season with 122, 3-point field goal attempts 390, and 3-point field goal percentage at 31.3 percent. The old marks were 103 made, 359 attempted and a percentage of 28.7. All of those marks were set during the 1992-93 season. UNM is also 0-51 on the road in the past four seasons.

LOOKING AHEAD TO 1995-96 -- UNM returns three starters and eight letterwinners overall. The future would appear to be somewhat bright based on the returnees. Tracy Aldridge, Bambi Bowling, Yvonne Elliott, Abby Garchek, Vanessa Hoover, Jill Schaefer, Tamika Stukes and Dee Vaske will return for the 1995-96 season. UNM will also return two medical redshirts, Miranda Serna and Maggie Smith, for next season. The Lobos lose seniors Becky Bissell, Jessica Cunningham and Heidi Harris. Bissell, Cunningham and Harris have been the core of the team the past four years and will be missed.

A CHANGE IN LEADERSHIP -- UNM head coach Maureen "Mo" Eckroth was relieved of her duties following the conclusion of the 1994-95 campaign. Eckroth compiled a record of 14-95 (.128) in four seasons. Eckroth's non-conference mark was 8-41 (.163); WAC play was 6-50 (.107); WAC Tournament (0-4); 14-37 (.274) at home; 0-51 on the road and 0-7 on neutral courts.

1994-95 NEW MEXICO ROSTER

Alphabetical

No.	Name	Pos.	Ht.	Cl./Exp.	Hometown (Last School)
42	Tracy Aldridge	C	6-0	Jr./Tr.	Jefferson City, Mo. (Moberly JC)
34	Becky Bissell	F	6-1	Sr./3L	Hayward, Calif. (Hayward HS)
40	Bambi Bowling	F	5-10	So./1L	Oakland, Calif. (Berkeley HS)
21	Jessica Cunningham	G	5-5	Sr./3L	Montrose, Colo. (Montrose HS)
31	Yvonne Elliott	F	5-11	So./1L	Spencer, Okla. (Spencer HS)
24	Abby Garchek	G/F	6-0	Fr./HS	Racine, Wis. (St. Catherine HS)
43	Heidi Harris	F/C	6-2	Sr./3L	Missoula, Mont. (Sentinel HS)
13	Vanessa Hoover	G	5-6	So./1L	Aztec, N.M. (Aztec HS)
20	Jill Schaefer	F	6-0	So./1L	Grand Junction, Colo. (Grand Junction HS)
11	Miranda Serna	G	5-6	So./Tr.	Albuquerque (Central Arizona)
10	Maggie Smith	G	5-8	Jr./1L	McAlester, Okla. (Westark CC)
14	Tamika Stukes	G	5-3	Fr./HS	Avondale, Ariz. (Agua Fria HS)
45	Dee Vaske	F	5-11	Fr./HS	Plano, Texas (Plano HS)

Numerical

No.	Player	Pos.	Ht.	Cl.Exp.	Hometown (Last School)
10	Maggie Smith	G	5-8	Jr./1L	McAlester, Okla. (Westark CC)
11	Miranda Serna	G	5-6	So./Tr.	Albuquerque (Central Arizona)
13	Vanessa Hoover	G	5-6	So./1L	Aztec, N.M. (Aztec HS)
14	Tamika Stukes	G	5-3	Fr./HS	Avondale, Ariz. (Agua Fria HS)
20	Jill Schaefer	F	6-0	So./1L	Grand Junction, Colo. (Grand Junction HS)
21	Jessica Cunningham	G	5-5	Sr./3L	Montrose, Colo. (Montrose HS)
24	Abby Garchek	G/F	6-0	Fr./HS	Racine, Wis. (St. Catherine's HS)
31	Yvonne Elliott	F	5-11	So./1L	Spencer, Okla. (Spencer HS)
34	Becky Bissell	F	6-1	Sr./3L	Hayward, Calif. (Hayward HS)
40	Bambi Bowling	F	5-10	So./1L	Oakland, Calif. (Berkeley HS)
42	Tracy Aldridge	C	6-0	Jr./Tr.	Jefferson City, Mo. (Moberly JC)
43	Heidi Harris	F/C	6-2	Sr./3L	Missoula, Mont. (Sentinel HS)
45	Dee Vaske	F	5-11	Fr./HS	Plano, Texas (Plano HS)

Head Coach: Maureen "Mo" Eckroth (Utah '79)

Assistant Coaches: Holli Omori, Susan Kubala and Sherry Peterson

1994-95 Record: 5-22 Overall, 2-12 WAC

WAC
NEW MEXICO Basketball
March 28, 1995
All Games

Record: 5-22 Home: 5- 9 Away: 0-11 Neutral: 0- 2

	Player	G-GS	Min- Avg	FG- FGA	Pct	3P-3PA	Pct	FT-FTA	Pct	Off-Def	Tot- Avg	PF-FD	AT	TO	BS	ST	Pts - Avg
42	Aldridge, T	26-19	621-23.9	91- 204	.446	13- 45	.289	88-111	.793	52- 72	124- 4.8	83- 4	22	55	5	20	283 -10.9
21	Cunningham, J	27-27	897-33.2	95- 296	.321	26- 84	.310	54- 80	.675	40-103	143- 5.3	39- 0	72	104	2	35	270 -10.0
24	Garchek, A	27-21	732-27.1	94- 288	.326	24- 84	.286	53- 81	.654	44-104	148- 5.5	59- 0	47	79	19	37	265 - 9.8
43	Harris, H	27-27	724-26.8	78- 222	.351	18- 47	.383	66- 89	.742	37- 94	131- 4.9	97- 4	16	64	9	25	240 - 8.9
14	Stukes, T	27-27	842-31.2	60- 192	.313	20- 68	.294	38- 63	.603	32- 87	119- 4.4	76- 1	81	111	4	68	178 - 6.6
11	Serna, M	5- 0	97-19.4	5- 19	.263	4- 14	.286	7- 9	.778	2- 15	17- 3.4	6- 0	6	18	1	4	21 - 4.2
45	Vaske, D	27- 8	317-11.7	33- 106	.311	0- 2	.000	37- 65	.569	16- 26	42- 1.6	43- 1	11	32	2	10	103 - 3.8
31	Elliott, Y	25- 0	260-10.4	33- 68	.485	0- 4	.000	11- 21	.524	15- 32	47- 1.9	25- 0	3	19	2	7	77 - 3.1
13	Hoover, V	27- 0	267- 9.9	24- 55	.436	16- 35	.457	7- 15	.467	6- 19	25- 0.9	26- 2	17	31	2	10	71 - 2.6
20	Schaefer, J	20- 0	190- 9.5	15- 40	.375	1- 3	.333	12- 24	.500	15- 31	46- 2.3	16- 0	5	16	8	4	43 - 2.2
40	Bowling, B	26- 6	403-15.5	22- 87	.253	0- 3	.000	9- 15	.600	22- 44	66- 2.5	32- 0	9	22	4	13	53 - 2.0
34	Bissell, B	9- 0	75- 8.3	7- 21	.333	0- 1	.000	2- 4	.500	4- 11	15- 1.7	10- 0	3	11	1	3	16 - 1.8
00	Team,	11- 0	0- 0.0	0- 0	.000	0- 0	.000	0- 0	.000	0- 0	0- 0.0	0- 0	0	16	0	0	0 - 0.0
	Team										146						
NEW MEXICO		27	5425	557-1598	.349	122-390	.313	384-577	.666	285-638	1069-39.6	512	292	578	59	236	1620 -60.0
Opponents		27	5425	743-1759	.422	130-360	.361	410-602	.681	415-810	1225-45.4	531	405	484	110	291	2026 -75.0

Score by Halves	1	2	OT	Total	Deadball Rebounds
NEW MEXICO:	755	849	16	1620	76
Opponents:	965	1054	7	2026	72

Per-Game Averages

	Player	G	FG	FGA	3P	3PA	FT	FTA	AT	TO	BS	ST
42	Aldridge, T	26	3.5	7.8	0.5	1.7	3.4	4.3	0.8	2.1	0.2	0.8
21	Cunningham, J	27	3.5	11.0	1.0	3.1	2.0	3.0	2.7	3.9	0.1	1.3
24	Garchek, A	27	3.5	10.7	0.9	3.1	2.0	3.0	1.7	2.9	0.7	1.4
43	Harris, H	27	2.9	8.2	0.7	1.7	2.4	3.3	0.6	2.4	0.3	0.9
14	Stukes, T	27	2.2	7.1	0.7	2.5	1.4	2.3	3.0	4.1	0.1	2.5
11	Serna, M	5	1.0	3.8	0.8	2.8	1.4	1.8	1.2	3.6	0.2	0.8
45	Vaske, D	27	1.2	3.9	0.0	0.1	1.4	2.4	0.4	1.2	0.1	0.4
31	Elliott, Y	25	1.3	2.7	0.0	0.2	0.4	0.8	0.1	0.8	0.1	0.3
13	Hoover, V	27	0.9	2.0	0.6	1.3	0.3	0.6	0.6	1.1	0.1	0.4
20	Schaefer, J	20	0.8	2.0	0.1	0.2	0.6	1.2	0.3	0.8	0.4	0.2
40	Bowling, B	26	0.8	3.3	0.0	0.1	0.3	0.6	0.3	0.8	0.2	0.5
34	Bissell, B	9	0.8	2.3	0.0	0.1	0.2	0.4	0.3	1.2	0.1	0.3
00	Team,	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
NEW MEXICO		27	20.6	59.2	4.5	14.4	14.2	21.4	10.8	21.4	2.2	8.7
Opponents		27	27.5	65.1	4.8	13.3	15.2	22.3	15.0	17.9	4.1	10.8

WAC
NEW MEXICO Basketball
March 28, 1995
Conference Games Only

Record: 2-12 Home: 2- 5 Away: 0- 7 Neutral: 0- 0

	Player	G-GS	Min- Avg	FG- FGA	Pct	3P-3PA	Pct	FT-FTA	Pct	Off-Def	Tot- Avg	PF-FD	AT	TO	BS	ST	Pts - Avg
42	Aldridge, T	13-13	358-27.5	55- 114	.482	9- 22	.409	43- 61	.705	23- 38	61- 4.7	40- 2	16	33	4	9	162 -12.5
21	Cunningham, J	14-14	490-35.0	60- 181	.331	18- 55	.327	20- 33	.606	14- 62	76- 5.4	21- 0	37	55	1	22	158 -11.3
24	Garchek, A	14-12	386-27.6	53- 150	.353	13- 42	.310	31- 42	.738	23- 43	66- 4.7	29- 0	23	42	13	19	150 -10.7
14	Stukes, T	14-14	484-34.6	41- 106	.387	16- 46	.348	25- 39	.641	21- 58	79- 5.6	42- 1	46	56	4	41	123 - 8.8
43	Harris, H	14-14	368-26.3	36- 101	.356	10- 25	.400	17- 25	.680	15- 50	65- 4.6	48- 1	6	34	3	12	99 - 7.1
45	Vaske, D	14- 1	135- 9.6	11- 40	.275	0- 2	.000	14- 24	.583	10- 8	18- 1.3	22- 1	8	14	0	6	36 - 2.6
13	Hoover, V	14- 0	124- 8.9	11- 28	.393	8- 20	.400	1- 6	.167	3- 9	12- 0.9	8- 0	6	14	1	4	31 - 2.2
20	Schaefer, J	10- 0	104-10.4	8- 25	.320	1- 3	.333	5- 11	.455	8- 22	30- 3.0	6- 0	2	9	4	4	22 - 2.2
34	Bissell, B	8- 0	64- 8.0	6- 15	.400	0- 0	.000	2- 4	.500	4- 8	12- 1.5	8- 0	3	7	1	3	14 - 1.8
31	Elliott, Y	13- 0	104- 8.0	9- 24	.375	0- 2	.000	2- 4	.500	7- 14	21- 1.6	11- 0	2	9	1	2	20 - 1.5
40	Bowling, B	14- 2	208-14.9	5- 33	.152	0- 3	.000	6- 8	.750	13- 19	32- 2.3	11- 0	3	10	2	9	16 - 1.1
00	Team,	6- 0	0- 0.0	0- 0	.000	0- 0	.000	0- 0	.000	0- 0	0- 0.0	0- 0	0	7	0	0	0 - 0.0
	Team										69						
NEW MEXICO		14	2825	295- 817	.361	75-220	.341	166-257	.646	141-331	541-38.6	246	152	290	34	131	831 -59.4
Opponents		14	2825	372- 879	.423	81-225	.360	205-284	.722	196-406	602-43.0	255	209	236	60	154	1030 -73.6

Score by Halves	1	2	OT	Total	Deadball Rebounds
NEW MEXICO:	383	432	16	831	31
Opponents:	476	547	7	1030	25

Per-Game Averages

	Player	G	FG	FGA	3P	3PA	FT	FTA	AT	TO	BS	ST
42	Aldridge, T	13	4.2	8.8	0.7	1.7	3.3	4.7	1.2	2.5	0.3	0.7
21	Cunningham, J	14	4.3	12.9	1.3	3.9	1.4	2.4	2.6	3.9	0.1	1.6
24	Garchek, A	14	3.8	10.7	0.9	3.0	2.2	3.0	1.6	3.0	0.9	1.4
14	Stukes, T	14	2.9	7.6	1.1	3.3	1.8	2.8	3.3	4.0	0.3	2.9
43	Harris, H	14	2.6	7.2	0.7	1.8	1.2	1.8	0.4	2.4	0.2	0.9
45	Vaske, D	14	0.8	2.9	0.0	0.1	1.0	1.7	0.6	1.0	0.0	0.4
13	Hoover, V	14	0.8	2.0	0.6	1.4	0.1	0.4	0.4	1.0	0.1	0.3
20	Schaefer, J	10	0.8	2.5	0.1	0.3	0.5	1.1	0.2	0.9	0.4	0.4
34	Bissell, B	8	0.8	1.9	0.0	0.0	0.3	0.5	0.4	0.9	0.1	0.4
31	Elliott, Y	13	0.7	1.8	0.0	0.2	0.2	0.3	0.2	0.7	0.1	0.2
40	Bowling, B	14	0.4	2.4	0.0	0.2	0.4	0.6	0.2	0.7	0.1	0.6
00	Team,	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
NEW MEXICO		14	21.1	58.4	5.4	15.7	11.9	18.4	10.9	20.7	2.4	9.4
Opponents		14	26.6	62.8	5.8	16.1	14.6	20.3	14.9	16.9	4.3	11.0

NEW MEXICO WOMEN'S BASKETBALL

(Highs & Lows)

(Final)

		NEW MEXICO			OPPONENT
Points 1st Half:	High	43	vs. New Mexico Highlands	47	by at Baylor
	Low	13	vs. Portland	24	by Fresno State
Points 2nd Half:	High	53	vs. Utah	56	by at Baylor
	Low	18	vs. Texas-El Paso	25	by Loyola Marymount
Total Points:	High	89	vs. New Mexico Highlands	103	by at Baylor
	Low	37	vs. Texas-El Paso	52	by Texas-El Paso
Field Goals Made:	High	30	vs. New Mexico Highlands	39	by at San Diego State
	Low	11	vs. San Diego State	16	by Texas-El Paso
Field Goals Attempted:	High	75	vs. at Hawai'i	78	by New Mexico State
	Low	45	vs. San Diego State	46	by Texas-El Paso
Field Goal Percentage:	High	.508	vs. Fresno State	.594	by at Baylor
	Low	.212	vs. Texas-El Paso	.333	by Northern Arizona
3-Point Field Goals:	High	9	vs. Utah	11	by Utah
	Low	1	vs. New Mexico State	0	by at New Mexico State
3-Point Field Goals Attempted:	High	22	vs. Texas-El Paso	27	by New Mexico Highlands
	Low	3	vs. Northern Arizona	1	by at New Mexico State
3-Point Field Goal Percentage:	High	.529	vs. at San Diego State	.857	by at Baylor
	Low	.071	vs. New Mexico State	.000	by at New Mexico State
Free Throws Made:	High	27	vs. at Oklahoma	26	by New Mexico Highlands
	Low	3	vs. at Fresno State	3	by Arizona (N)
Free Throws Attempted:	High	35	vs. at Oklahoma	39	by New Mexico Highlands
	Low	5	vs. at Fresno State	11	by at Wyoming
Free Throw Percentage:	High	.905	vs. New Mexico State	.900	by Utah
	Low	.440	vs. Portland	.214	by Arizona
Offensive Rebounds:	High	19	vs. New Mexico State	23	by at San Diego State
	Low	6	vs. Brigham Young	5	by at Wyoming
Defensive Rebounds:	High	34	vs. Fresno State	42	by at Hawai'i
	Low	18	vs. at Oklahoma	20	by at San Diego State
Total Rebounds:	High	52	vs. New Mexico State	56	by Montana State
	Low	29	vs. at San Diego State	33	by Fresno State
Assists:	High	17	vs. New Mexico Highlands	28	by Arizona (N)
	Low	5	vs. Portland	6	by New Mexico Highlands
Blocked Shots:	High	5	vs. at Brigham Young	12	by New Mexico State
	Low	0	vs. Portland	0	by at Hawai'i
Steals:	High	18	vs. at Wyoming	17	by at Texas-El Paso
	Low	3	vs. Tennessee Tech (N)	5	by at Utah
Turnovers:	High	32	vs. at Baylor	26	by at New Mexico State
	Low	14	vs. at Colorado State	9	by Tennessee Tech (N)
Personal Fouls:	High	29	vs. Tennessee Tech (N)	26	by at Oklahoma
	Low	11	vs. at San Diego State	9	by at Fresno State

(N) Denotes neutral site

NEW MEXICO WOMEN'S BASKETBALL

(Game-By-Game High Scorer/Rebounder/Assists)

(Final)

Date	*Opponent*	*Result/Time*	*Streak*	*Att.*	*High Scorer*	*High Rebounder*	*High Assists*
11/25	at Hawai'i §	L, 82-61	L1	527	Harris, 17	Cunningham, 8	Stukes, 4
11/26	Tennessee Tech § (N)	L, 79-66	L2	175	Garchek, 17	Garchek, 10	Stukes, 3
11/27	Arizona § (N)	L, 77-58	L3	82	Aldridge, 13	Bowling, 8	Garchek, 6
12/2	**Montana State #**	**W, 66-64**	**W1**	**338**	**Garchek, 21**	**Garchek, 12**	**Stukes, 5**
12/3	**Portland #**	**L, 64-46**	**L1**	**277**	**Cunningham, 9**	**Cunningham, 12**	**Cunningham, 2**
12/7	at New Mexico State	L, 75-50	L2	675	Aldridge, 14	Aldridge, 9	Stukes, 2
12/10	**New Mexico Highlands**	**W, 89-82**	**W1**	**317**	**Cunningham, 20**	**Harris, 9**	**Stukes, 8 ***
12/17	**New Mexico State**	**L, 73-58**	**L1**	**357**	**Aldridge, 18**	**Garchek, 12 ***	**Cunningham, 4**
12/22	**Loyola Marymount**	**W, 71-70**	**W1**	**204**	**Cunningham, 12**	**Garchek, 8**	**Cunningham, 5**
1/2	at Oklahoma	L, 95-66	L1	645	Garchek, 26	Aldridge, 9	Aldridge, 3
1/4	at Baylor	L, 103-54	L2	306	Harris, 18	Garchek, 6	Stukes, 3
1/7	**Northern Arizona**	**L, 75-65**	**L3**	**195**	**Aldridge, 15**	**Harris, 11**	**Stukes, 4**
1/12	**Colorado State $**	**L, 71-63**	**L4**	**394**	**Cunningham, 15**	**Cunningham, 10**	**Garchek, 5**
1/14	**Wyoming $**	**L, 78-53**	**L5**	**437**	**Stukes, 13**	**Stukes, 8**	**Cunningham, 4**
1/19	at San Diego State $	L, 85-61	L6	503	Aldridge, 14	4 with 4	Stukes, 4
1/21	at Fresno State $	L, 75-58	L7	1,229	Cunningham, 15	Aldridge, 7	2 with 5
1/26	**Utah $**	**L, 83-73**	**L8**	**221**	**Garchek, 27**	**Harris, 5**	**Cunningham, 6**
1/28	**Brigham Young $**	**W, 63-60**	**W1**	**453**	**Cunningham, 15**	**Harris, 10**	**Stukes, 4**
2/2	at Brigham Young $	L, 75-68	L1	384	Aldridge, 19	Stukes, 7	Stukes, 5
2/4	at Utah $	L, 87-53	L2	540	Aldridge, 17	Stukes, 7	Stukes, 3
2/9	**Fresno State $**	**W, 85-76 (OT)**	**W1**	**413**	**Aldridge, 29 ***	**Cunningham, 10**	**Cunningham, 5**
2/11	**San Diego State $**	**L, 75-47**	**L1**	**389**	**Aldridge, 18**	**Harris, 6**	**Stukes, 2**
2/18	at Texas-El Paso $	L, 75-45	L2	524	Cunningham, 12	Elliott, 8	Stukes, 2
2/23	at Wyoming $	L, 73-67	L3	302	Stukes, 22	Stukes, 10	Stukes, 4
2/25	at Colorado State $	L, 65-58	L4	382	Cunningham, 19	Garchek, 9	Stukes, 5
3/1	**Texas-El Paso $**	**L, 52-37**	**L5**	**632**	**Aldridge, 11**	**Stukes, 10**	**Stukes, 2**
3/8	**WAC Tournament**						
3/8	**San Diego State**	**L, 57-39**	**L6**	**933**	**Harris, 15**	**Garchek, 6**	**Garchek, 2**

Home Games In BOLD ALL CAPS

(N) Denotes Neutral Site Game

* Denotes Last Time Single Game High In That Category

§ Denotes Rainbow Wahine Basketball Classic Game

\# Denotes Borden's Lobo Classic Game

$ Denotes Western Athletic Conference Game

Attendance

Site	G	Total	Average
Home:	14	5,560	397
Away:	11	6,017	547
Neutral:	2	257	129
Total:	27	11,834	438

MEN'S GYMNASTICS...

Head Coach Rusty Mitchell called this year's men's gymnastics team, "the strongest and most competitive team in my 29 years at New Mexico." The prediction was accurate. The Lobos held the nation's No. 1 ranking for 10 out of 12 weeks of competition.

New Mexico began the season by defeating MPSF rival BYU 228.20 to 222.25. The mark of 228.20 vaulted the Lobos to the top spot in the nation. The Lobos continued their winning ways by claiming the title at the 16th Annual Rocky Mountain Open. In late February the Lobos once again proved they were a legitimate title contender as they defeated the defending national champion Nebraska Cornhuskers in front of the home crowd by the slimmest of margins, 231.00 to 230.125. The Lobos' most recent victory came at the Southwest Cup where they defeated the 8th-ranked Oklahoma Sooners, the UCLA Bruins and the host Arizona State Sun Devils.

The Lobos finished second in the 1995 MPSF Championships held in Albuquerque, New Mexico on March 31 and April 1. The 14th-ranked Stanford Cardinal beat the top-ranked Lobos 229.00 to 228.825. Blaz Puljic won the individual title on the pommel horse (9.85) and the high bar (9.90). Rob Kieffer finished second in the floor exercise (9.775), tied for fourth on the high bar (9.725), sixth in the vault (9.30), tied for seventh in the pommel horse (9.40) and placed ninth on the still rings (9.575). Kendall Schiess tied with Kieffer for seventh place on the pommel horse (9.40), Jeff Boulton tied for fifth on the still rings (9.625), Tim Gergen placed 11th on the parallel bars (8.85), and tied for fourth on the high bar (9.725), and Shane Evangelist finished eighth on the high bar (9.65). New Mexico head coach Rusty Mitchell was awarded the MPSF Coach of the Year honor.

The Lobos' were well represented at the 1995 NCAA Championships. New Mexico's leading man for much of the season, Blaz Puljic, once again turned in an outstanding effort. Puljic captured All-America honors in the all-around competition (58.325), in the parallel bars (9.75) and on the high bar (9.78). Only two of the other five Lobo gymnasts in Columbus qualified for Saturdays individual championships. Gary Thagard placed ninth on the parallel bars (8.95) and Kendall Schiess placed eighth on the pommel horse (9.56).

The Lobo coaches collected two awards last week. Rusty Mitchell was named Coach of the Year for the Midwest and Doug Day was named Assistant Coach of the Year along with Scott Green from Cal-Berkeley.

1995 New Mexico Gymnastics Scoreboard

Jan. 13	Brigham Young Albuquerque, NM Host School: New Mexico	**1.** 2.	**New Mexico** BYU	**228.20** 222.25
Jan. 20-21	at Rocky Mountain Open Colorado Springs, CO Host School: Air Force Academy	**1.** 2. 3. 4. 5. 6. 7.	**New Mexico** Nebraska Olympic Training Center Oklahoma Massachusetts Arizona State Air Force	**224.70** 221.75 216.80 215.65 214.40 214.00 212.10
Feb. 4	Brigham Young Provo, Utah Host School: BYU	**1.**	**New Mexico** BYU	**224.75** 224.75
Feb. 11	Oklahoma/Air Force Albuquerque, NM Host School: UNM	**1.** 2. 3.	**New Mexico** Oklahoma Air Force	**229.325** 225.90 219.60
Feb. 18	at Ohio State/Penn State Columbus,Ohio Host School: Ohio State	1. 2. **3.**	Ohio State Penn State **New Mexico**	229.85 229.20 **228.35**
Feb. 26	Nebraska Albuquerque, NM Host School: UNM	**1.** 2.	**New Mexico** Nebraska	**231.00** 230.125
March 4	Iowa/Arizona State Albuquerque, NM Host School: UNM	1. **2.** 3.	Iowa **New Mexico** Arizona State	229.925 **229.60** 218.325
March 11	Air Force Colorado Springs, CO Host School: Air Force	**1.** 2.	**New Mexico** Air Force	**228.05** 218.80
March 17	Southwest Cup Tempe, AZ Host School: Arizona State	**1.** 2. 3. 4.	**New Mexico** Oklahoma Arizona State UCLA	**229.45** 228.60 223.70 221.40
March 31-April 1	MPSF Championships Albuquerque, NM Host School: UNM	1. **2.** 3. 4. 5. 6. 7. 8. 9.	Stanford **New Mexico** Nebraska Oklahoma California Brigham Young Air Force San Jose State UC Santa Barbara	229.00 **228.825** 228.525 228.025 227.825 225.80 215.40 213.85 210.25
April 8	at NCAA West Regional Norman, Oklahoma Host School: Oklahoma	1. 2. 3. 4. **5.** 6.	Stanford Oklahoma Nebraska California **New Mexico** Brigham Young	228.75 227.32 227.12 226.72 **226.65** 224.30

1994-95 New Mexico Men's Gymnastics Roster

Name	Year	Height	Weight	Hometown
Jeff Boulton	Fr.	5-7	154	Glendale, Ariz.
John Dickey	Jr.	5-11	170	Huntington Beach, Calif.
Shane Evangelist	Jr.	5-6	148	Macedon, N.Y.
Tim Gergen	Jr.	5-8	135	Lincoln, Neb.
Erik Haverty	Fr.	5-7	150	Olive Branch, Miss.
Scott Jones	Jr.	5-7	145	Englewood, Colo.
Farshid Kamali	Sr.	5-2	105	Richardson, Texas
Chris LaMorte	Jr.	5-6	143	Ronkonkona, N.Y.
Michael Martinez	So.	5-10	150	Albuquerque, N.M.
Sean McLoughlin	Sr.	5-6	148	Portland, Ore.
Blaz Puljic	Jr.	5-11	165	Ljubljana, Slovenia
Kendall Schiess	Fr.	5-8	145	Sandy, Utah
Landon Scott	So.	6-0	165	Garland, Texas
Sandy Shafer	Sr.	5-7	145	Albuquerque, N.M.
Gary Thagard	So.	5-7	140	Tallahassee, Fla.
Robert Williams	Jr.	5-7	160	Aztec, N.M.

Head Coach: Rusty Mitchell

Assistant Coach: Doug Day

SKIING...

NEW MEXICO CONCLUDES SEASON -- The University of New Mexico ski team concluded its 1995 schedule with a seventh place finish in the 41st Annual NCAA Skiing Championships hosted by the University of New Hampshire. The seventh place finish was New Mexico's lowest since a sixth place finish in 1990.

The top-10 schools and their point totals include: 1.) Colorado (720.5), 2.) Utah (711), 3.) Vermont (567), 4.) Denver (505), 5.) Dartmouth (462), 6.) Western State (447.5), **7.) New Mexico (440)**, 8.) Alaska-Anchorage (411.5), 9.) New Hampshire (345) and 10.) Middlebury (310.5).

RECAPPING THE NCAA'S -- New Mexico skied about as well as could be expected given the circumstances. The Lobos failed to qualify a full team which put them behind the eight ball before the NCAA Championships even began. The Lobos took a total of 11 members out of a possible 16. New Mexico qualified three alpine women, four alpine men, and two nordic men and women. A team can score three individuals in each discipline.

New Mexico's best overall NCAA finisher was Agneta Hjorth. Hjorth, a senior, placed third in the women's slalom event to become a three-time All-America honoree. Hjorth was followed by Mattias Erlandsson and Jimmy Renstrom who placed fourth and fifth respectively in the men's slalom event. Erlandsson and Renstrom both earned All-America honors as well. For Erlandsson, it was his second such honor in as many years. He placed second in the slalom at last year's NCAA Championships.

On the nordic side of things Katrin Svensson became a two-time All-America honoree with a seventh place finish in the women's 15km Classical event. Svensson, a junior, also placed eighth in the 5km Freestyle to earn All-America honors in that event.

As a team New Mexico's best showing came in the alpine events includinga season-best second place in the women's slalom. The Lobos finished with 85 points in that event. In the men's slalom event the Lobos tied for third place with 86 points. Those two events scored New Mexico the most points in the 1995 NCAA Championships.

RECAPPING THE SEASON -- Head coach George Brooks knew it was probably going to be a long season even before it started. On the nordic side of things the numbers were down, especially for women's nordic team. The Lobos were consistent in the standings during the course of the season. New Mexico placed fifth in three invitationals, fourth in its own invitational and a disappointing seventh at the NCAA West Regionals. UNM had its worst day of the season in the men's slalom event when four individuals failed to finish their first run in the west regioanl. The women's alpine team also had a pair of DNF's and when that's added to the men's results, the NCAA West Regionals ended up being the worst meet of the season. UNM tallied 930.5 points to place seventh in the NCAA West Regional Championships.

Two weeks before the NCAA West Regionals, New Mexico had its best meet of the season in its own invitational. The Lobos placed fourth behind a pair of strong performances by the men's alpine squad. Erlandsson placed first in the slalom which was UNM's only individual first place tally of the season. Nicolas Zoll placed fifth in the giant slalom. Erlandsson anchored the men's team throughout the season, while Zoll provided some late-season excitement. Erlandsson also had a pair of second place finishes to his credit during the season.

Agneta Hjorth earned a pair of fourth place finishes in the women's slalom and giant slalom in the New Mexico Invitational to boost UNM to its best meet of the season. Hjorth led the way for the women's team with seven top-five finishes during the year in earning All-America honors for the third time in four years.

Isabelle Charest and Marcia Clark also provided the women's alpine squad with some solid results during the season. Charest had four top-10 finishes and Clark had a pair of top-six performances including a second place in the Colorado Invitational.

The nordic squads combined for 13 top-10 individual finishes and nine of those came from one skier -- Katrin Svensson. Svensson also possesses the best finish, men or women, with a second place in the classical event at the New Mexico Invitational. Svensson was the only member of the women's team to earn a top-10 finish.

On the men's side Kristian Johansen earned a pair top-10 finishes with fourth and eighth place

showings, Leif Larsson took a seventh and Jonas Kjellmert tallied an eighth place finish to round out UNM's top-10 individual finishes.

LOOKING TOWARD 1996 -- New Mexico coaches George Brooks and Don Christman are going to have recruit some new faces for the 1996 season, especially for the women's events. Only two members of the women's alpine team are slated to return and one of them, Andrea Krejci, will be coming off a season-ending knee injury. The women's nordic squad returns one member with All-America and All-RMISA conference member Katrin Svensson. The nordic men lose two members with Leif Larsson and Jonas Kjellmert, but still have a good core group returning. The single most positive thought is the return of the entire men's alpine squad, which was UNM's strength throughout the 1995 campaign. The other thing UNM must take care of in the off-season is recruiting depth for a full squad in 1996.

New Mexico Roster

Name	Yr./Exp.	Event	Hometown
Alpine and Nordic Women			
Isabelle Charest #	Sr./3L	Alpine	Montreal, Canada
Marcia Clark #	Sr./3L	Alpine	Banff, Alberta, Canada
Asa Emanuelsson #	Sr./3L	Nordic	Umea, Sweden
Jill Gamble	Fr./HS	Alpine	Owen Sound, Canada
Agneta Hjorth #	Sr./3L	Alpine	Taby, Sweden
Andrea Krejci	So./1L	Alpine	Enskede, Sweden
Katrin Svensson #	Jr./2L	Nordic	Mora, Sweden
Alpine and Nordic Men			
Shaylor Alley	So./HS	Nordic	Santa Fe, New Mexico
Robert Barbera Jr.	So./1L	Alpine	Springfield, Vermont
Kristoffer Enger	Fr./HS	Nordic	Drammen, Norway
Mattias Erlandsson #	So./1L	Alpine	Bollnas, Sweden
Kristian Johanson #	Fr./HS	Nordic	Narvik, Norway
Jens Karlsson #	Jr./2L	Alpine	Skelleftea, Sweden
Jonas Kjellmert #	Sr./3L	Nordic	Mora, Sweden
Christian Kollerud	Fr./HS	Alpine	Gaalum, Norway
Leif Larsson	Sr./3L	Nordic	Nalden, Sweden
Jimmy Renstrom #	So./Tr.	Alpine	Kristineberg, Sweden
Eric Wolf	So./1L	Alpine	Saalbach, Austria
Nicolas Zoll #	Fr./HS	Alpine	France

# denotes NCAA Qualifier

Head Coach: George Brooks (25th year)
Nordic Coach: Don Christman (6th year)
Assistant Coach: Mia Nilsson-Bowen (4th year)
Assistant Coach: Ida Saetersdal (1st year)

1995 New Mexico Ski Results

Team

	Utah Invitational January 6-9, 1995
1. Colorado	1,297
2. Alaska-Anchorage	1,216
3. Utah	1,211
4. Western State	1,135
5. **New Mexico**	**1,114**
6. Denver	1,102
7. Nevada-Reno	963
8. Montana State	207

Nordic

	Utah Invitational January 6-9, 1995
Women's Classical	
Asa Emanuelsson	15th
Katrin Svensson	7th
Women's Freestyle	
Asa Emanuelsson	13th
Katrin Svensson	7th
Men's Classical	
Kristoffer Enger	27th
Kristian Johansen	4th
Jonas Kjellmert	8th
Leif Larsson	19th
Men's Freestyle	
Kristoffer Enger	32nd
Kristian Johansen	8th
Jonas Kjellmert	26th
Leif Larsson	15th

Team

	Colorado Invitational January 12-13, 1995
1. Colorado	1,296
2. Utah	1,291
3. Alaska-Anchorage	1,226
4. Denver	1,078
5. **New Mexico**	**1,066.5**
6. Western State	979
7. Nevada-Reno	976.5
8. Montana State	169

Nordic

	Colorado Invitational January 12-13, 1995
Women's Classical	
Asa Emanuelsson	19th
Katrin Svensson	7th
Women's Freestyle	
Asa Emanuelsson	20th
Katrin Svensson	9th
Men's Classical	
Kristoffer Enger	25th
Kristian Johansen	DNS
Jonas Kjellmert	13th
Leif Larsson	18th
Men's Freestyle	
Kristoffer Enger	36th
Kristian Johansen	12th
Jonas Kjellmert	22nd
Leif Larsson	7th

Team

	Denver Invitational January 27-28, 1995
1. Colorado	1,330
2. Utah	1,314
3. Denver	1,210
4. Western State	1,202
5. **New Mexico**	**1,087**
6. Nevada-Reno	869
7. Montana State	260

Nordic

	Denver Invitational January 27-28, 1995
Women's Classical	
Asa Emanuelsson	DNS
Katrin Svensson	5th
Women's Freestyle	
Asa Emanuelsson	21st
Katrin Svensson	12th
Men's Classical	
Kristoffer Enger	16th
Kristian Johansen	DNF
Jonas Kjellmert	10th
Leif Larsson	18th
Men's Freestyle	
Kristoffer Enger	24th
Kristian Johansen	11th
Jonas Kjellmert	17th
Leif Larsson	16th

1995 New Mexico Ski Results

Team

New Mexico Invitational
February 10-11, 1995

1.	Colorado	1,330
2.	Utah	1,241
3.	Western State	1,215
4.	**New Mexico**	**1,143**
5.	Denver	1,115
6.	Nevada-Reno	730
7.	Montana State	257

Nordic

New Mexico Invitational
February 10-11, 1995

Women's Classical	
Asa Emanuelsson	16th
Katrin Svensson	2nd
Women's Freestyle	
Asa Emanuelsson	T16th
Katrin Svensson	5th
Men's Classical	
Shaylor Alley	DNF
Kristoffer Enger	17th
Kristian Johansen	DNS
Jonas Kjellmert	12th
Leif Larsson	13th
Men's Freestyle	
Kristoffer Enger	19th
Kristian Johansen	DNS
Jonas Kjellmert	22nd
Leif Larsson	11th

Team

NCAA West Regional
February 24-25, 1995

1.	Colorado	1,293.5
2.	Utah	1,238.5
3.	Alaska-Anchorage	1,184.5
4.	Western State	1,172
5.	Denver	1,148
6.	Nevada-Reno	945
7.	**New Mexico**	**930.5**
8.	Montana State	248

Nordic

NCAA West Regional
February 24-25, 1995

Women's Classical	
Asa Emanuelsson	T18th
Katrin Svensson	15th
Women's Freestyle	
Asa Emanuelsson	13th
Katrin Svensson	14th
Men's Classical	
Kristoffer Enger	20th
Kristian Johansen	DNS
Jonas Kjellmert	16th
Leif Larsson	24th
Men's Freestyle	
Kristoffer Enger	19th
Kristian Johansen	DNS
Jonas Kjellmert	17th
Leif Larsson	27th

Team

NCAA Championships
March 8-11, 1995

1.	Colorado	720.5
2.	Utah	711
3.	Vermont	567
4.	Denver	505
5.	Dartmouth	462
6.	Western State	447.5
7.	**New Mexico**	**440**
8.	Alaska-Anchorage	411.5
9.	New Hampshire	345
10.	Middlebury	310.5
11.	Northern Michigan	206
12.	Bates	167
13.	Williams	152
14.	Alaska-Fairbanks	124
15.	Nevada-Reno	84
16.	Wisconsin-Green Bay	36
17.	St. Lawrence	33
	Harvard	33
19.	Johnson State	17
20.	Bowdoin	11
21.	Michigan Tech	10

Nordic

NCAA Championships
March 8-11, 1995

Women's Classical	
Asa Emanuelsson	22nd
Katrin Svensson	7th
Women's Freestyle	
Asa Emanuelsson	37th
Katrin Svensson	8th
Men's Classical	
Jonas Kjellmert	12th
Leif Larsson	37th
Men's Freestyle	
Jonas Kjellmert	19th
Leif Larsson	32nd

1995 New Mexico Ski Results

Alpine

Utah Invitational
January 6-9, 1995

Women's Slalom

Isabelle Charest	10th
Marcia Clark	38th
Jill Gamble	21st
Agneta Hjorth	DNF (2)
Andrea Krejci	26th

Women's Giant Slalom

Isabelle Charest	12th
Marcia Clark	19th
Jill Gamble	DNF (2)
Agneta Hjorth	4th
Andrea Krejci	DNF (1)

Men's Slalom

Mattias Erlandsson	2nd
Jens Karlsson	11th
Christian Kollerud	DNF (2)
Jimmy Renstrom	8th
Eric Wolf	14th

Men's Giant Slalom

Mattias Erlandsson	21st
Jens Karlsson	DNF (2)
Christian Kollerud	20th
Jimmy Renstrom	4th
Eric Wolf	8th

Alpine

Colorado Invitational
January 12-13, 1995

Women's Slalom

Isabelle Charest	7th
Marcia Clark	2nd
Jill Gamble	DNF (1)
Agneta Hjorth	DQ (1)
Andrea Krejci	DNS

Women's Giant Slalom

Isabelle Charest	17th
Marcia Clark	15th
Jill Gamble	26th
Agneta Hjorth	4th
Andrea Krejci	DNS

Men's Slalom

Marcus Ericksson	4th
Mattias Erlandsson	2nd
Jens Karlsson	9th
Christian Kollerud	DNF (1)
Jimmy Renstrom	23rd
Eric Wolf	11th
Nicholas Zoll	12th

Men's Giant Slalom

Marcus Ericksson	DNF (1)
Mattias Erlandsson	13th
Jens Karlsson	19th
Christian Kollerud	10th
Jimmy Renstrom	9th
Eric Wolf	14th
Jin Yoshida	29th
Nicholas Zoll	DNF (1)

Alpine

Denver Invitational
January 27-28, 1995

Women's Slalom

Isabelle Charest	T5th
Marcia Clark	16th
Jill Gamble	DNS
Agneta Hjorth	3rd
Andrea Krejci	DNS/Injury

Women's Giant Slalom

Isabelle Charest	6th
Marcia Clark	20th
Jill Gamble	21st
Agneta Hjorth	2nd
Andrea Krejci	DNS/Injury

Men's Slalom

Marcus Ericksson	4th
Mattias Erlandsson	3rd
Jens Karlsson	6th
Christian Kollerud	DNS
Jimmy Renstrom	7th
Eric Wolf	DNF
Nicholas Zoll	14th

Men's Giant Slalom

Marcus Ericksson	18th
Mattias Erlandsson	11th
Jens Karlsson	13th
Christian Kollerud	DNF (2)
Jimmy Renstrom	DNF (1)
Eric Wolf	16th
Nicholas Zoll	5th

1995 New Mexico Ski Results

Alpine

New Mexico Invitational
February 10-11, 1995

Women's Slalom	
Isabelle Charest	12th
Marcia Clark	6th
Jill Gamble	30th
Agneta Hjorth	T4th
Andrea Krejci	DNS/Injury
Women's Giant Slalom	
Isabelle Charest	11th
Marcia Clark	17th
Jill Gamble	33rd
Agneta Hjorth	4th
Andrea Krejci	DNS/Injury
Men's Slalom	
Robert Barbera Jr.	35th
Marcus Ericksson	DNF (1)
Mattias Erlandsson	**1st**
Jens Karlsson	36th
Christian Kollerud	DNS
Jimmy Renstrom	DNF (2)
Eric Wolf	DNF (2)
Jin Yoshida	DNF (1)
Nicolas Zoll	11th
Men's Giant Slalom	
Robert Barbera Jr.	42nd
Marcus Ericksson	DNF (2)
Mattias Erlandsson	21st
Jens Karlsson	20th
Christian Kollerud	DNF (1)
Jimmy Renstrom	DQ (2)
Eric Wolf	14th
Jin Yoshida	DNF (1)
Nicolas Zoll	5th

Alpine

NCAA West Regional
February 24-25, 1995

Women's Slalom	
Isabelle Charest	9th
Marcia Clark	5th
Jill Gamble	DNS
Agneta Hjorth	DNF (1)
Andrea Krejci	DNS/Injury
Women's Giant Slalom	
Isabelle Charest	15th
Marcia Clark	DNF (1)
Jill Gamble	DNS
Agneta Hjorth	8th
Andrea Krejci	DNS/Injury
Men's Slalom	
Marcus Ericksson	DNF (1)
Mattias Erlandsson	DNF (1)
Jens Karlsson	3rd
Christian Kollerud	DNF (1)
Jimmy Renstrom	DNF (1)
Eric Wolf	DNS
Nicolas Zoll	14th
Men's Giant Slalom	
Marcus Ericksson	17th
Mattias Erlandsson	18th
Jens Karlsson	13th
Christian Kollerud	16th
Jimmy Renstrom	DNF (1)
Eric Wolf	DNS
Nicolas Zoll	2nd

Alpine

NCAA Championships
March 8-11, 1995

Women's Slalom	
Isabelle Charest	13th
Marcia Clark	16th
Agneta Hjorth	3rd
Women's Giant Slalom	
Isabelle Charest	29th
Marcia Clark	20th
Agneta Hjorth	17th
Men's Slalom	
Mattias Erlandsson	4th
Jens Karlsson	DQ (1)
Jimmy Renstrom	5th
Nicolas Zoll	23rd
Men's Giant Slalom	
Mattias Erlandsson	20th
Jens Karlsson	32nd
Jimmy Renstrom	22nd
Nicolas Zoll	11th

BASEBALL

The 1995 New Mexico baseball team had one of its most exciting seasons in recent years. Though the team did not win 30 games for the first time since 1991 (29-26), the Lobos did manage to win 10 games in a row in the WAC and finish second, one game behind BYU, with a 21-9 conference mark. It was the third consecutive season UNM has finished second.

After getting off to a slow 8-21 start, UNM ripped off 21 wins in its next 30 games. Senior center fielder Mark Wulfert, who was selected in the 11th round of the Major League Baseball Draft, was named to several all-America teams including the second team of Collegiate Baseball's squad, the Smith Award team and the Baseball America team. Wulfert was also named to the first team District 8 squad and was honored as the WAC Eastern Division Player of the Year. Head Coach Rich Alday was named WAC Eastern Division Coach of the Year.

Also named to the all-conference first team were catcher Jaime Garcia, who was selected in the 25th round of the Major League Baseball Draft, second baseman Travis Young, and righthanded pitcher Luis Gonzalez.

New Mexico played one of the toughest schedules in the nation as it took on the likes of Arizona, UNLV, Texas Tech, Alabama, Texas A&M, Nebraska, and Washington. Highlights of the season included wins over Texas A&M, Alabama, Washington, and winning two of three games against BYU in Provo.

UNM's offense, traditionally a strong point of the team, once again produced impressive numbers. As a team, the Lobos hit .333 to place them in the top 10 nationally. Wulfert also finished in the top 10 nationally in hitting with a .438 average. In addition, Wulfert swiped 40 bases to lead the WAC.

Senior Kurt Hildebrandt and junior Gonzalez led the pitching staff most of the season as each picked up seven wins. David Meng also produced some outstanding numbers after a slow start. Meng led New Mexico with a 3.83 ERA along with six victories.

The Lobos return a strong nucleus for next season. Three of its top pitchers, two outfielders, and three infielders are back to almost assure a winning season in 1996.

1995 NEW MEXICO BASEBALL ROSTER

PITCHERS

NO.	PLAYER	B/T	HT.	WT.	CL-EXP.	HOMETOWN (LAST SCHOOL)
33	Baum, Chris	R/R	6-2	215	Sr. - 3L	Aurora, Colo. (Smoky Hill HS)
19	Boulware, Brian	R/R	6-0	180	Fr.-RS	Monte Sereno, Calif. (Los Gatos HS)
36	Carino, David	L/L	5-8	180	So. - 1L	Mililani, Hawai'i (St. Louis HS)
27	Eagmin, Chris	R/R	6-4	200	Sr. - 1L	Tucson, Ariz. (Pima CC)
22	Gonzalez, Luis	R/R	6-2	175	Jr. - TR	El Paso, Texas (Cochise CC)
28	Hildebrandt, Kurt	R/R	6-1	190	Sr. - 2L	Darien, Conn. (Darien HS)
21	Kiess, Barry	R/R	6-0	175	So. - 1L	Los Alamos, N.M. (Los Alamos HS)
18	Meng, David	L/R	6-2	195	Sr. - 1L	Las Vegas, Nev. (Fresno City JC)
34	Ortiz, J.C.	L/L	6-0	170	Fr. - HS	Las Cruces, N.M. (Las Cruces HS)
35	Purse, James	R/R	6-2	200	Sr. - 1L	Reseda, Calif. (Los Angeles CC)
32	Settle, Andrew	R/R	6-4	215	Jr. - TR	La Crescente, Calif. (Los Angeles CC)
20	Strickland, Scott	R/R	5-11	170	Fr. - HS	Spring, Texas (Klein Oak HS)

CATCHERS

NO.	PLAYER	B/T	HT.	WT.	CL-EXP.	HOMETOWN (LAST SCHOOL)
5	Garcia, Jaime	R/R	5-9	185	Sr. - 1L	Tolleson, Ariz. (Phoenix CC)
17	Meng, Ronnie	R/R	5-11	180	Sr. - 3L	Albuquerque, N.M. (La Cueva HS)
8	Taylor, Adam	R/R	5-11	190	So. - RS	Chelsae, Mich. (Ferris State)

INFIELDERS

NO.	PLAYER	B/T	HT.	WT.	CL-EXP.	HOMETOWN (LAST SCHOOL)
10	Beggs, Ryan	L/R	6-0	175	Fr. - RS	Albuquerque, N.M. (Eldorado HS)
1	Burchett, Chad	L/R	5-8	165	So. - TR	San Diego, Calif. (Grossmont JC)
12	DeMore, Mike	R/R	5-10	175	Fr. - RS	Tucson, Ariz. (Salpointe Catholic HS)
16	Hosino, David	R/R	6-0	170	Jr. - TR	Yuma, Ariz. (Arizona Western JC)
24	Montano, Manuel	R/R	6-0	210	Sr. - 1L	Bernalillo, N.M. (Trinidad JC)
4	Moore, Matt	R/R	5-10	150	Sr. - 1L	Tualatim, Ore. (Mt. Hood JC)
9	Takahashi, Kevin	R/R	5-11	165	Jr. - 1L	Pearl City, Hawai'i (Mid-Pacific Institute)
15	Wright, Ryan	R/R	6-2	175	Jr. - TR	Stockton, Calif. (San Joaquin Delta CC)
6	Young, Travis	R/R	6-1	175	So. - 1L	Albuquerque, N.M. (Manzano HS)

OUTFIELDERS

NO.	PLAYER	B/T	HT.	WT.	CL-EXP.	HOMETOWN (LAST SCHOOL)
14	Bradley, Tige	R/L	5-9	180	Sr. - 2L	Clovis, N.M. (Clovis HS)
3	Clifford, B.J.	R/R	5-7	175	Jr. - TR	Tucson, Ariz. (Pima CC)
2	Smitheran, Bobby	L/R	5-7	155	Jr. - 2L	Riverside, Calif. (Polytechnic HS)
30	Sousa, Daniel	R/R	6-3	195	Jr. - TR	Ukiah, Calif. (Mendocino CC)
13	Wulfert, Mark	R/R	5-11	175	Sr. - 2L	Farmington, N.M. (Farmington HS)

NUMERICAL ROSTER

1 Chad Burchett
2 Bobby Smitheran
3 B.J. Clifford
4 Matt Moore
5 Jaime Garcia
6 Travis Young
8 Adam Taylor
9 Kevin Takahashi
10 Ryan Beggs
12 Mike DeMore
13 Mark Wulfert
14 Tige Bradley
15 Ryan Wright
16 David Hosino
17 Ronnie Meng
18 David Meng
19 Brian Boulware
20 Scott Strickland
21 Barry Kiess
22 Luis Gonzalez
24 Manuel Montano
27 Chris Eagmin
28 Kurt Hildebrandt
30 Dan Sousa
32 Andrew Settle
33 Chris Baum
34 J.C. Ortiz
35 James Purse
36 David Carino

COACHES:
26 Rich Alday
7 Mark Martinez
23 Paul Funk
Joe Coleman

UNIVERSITY OF NEW MEXICO BASEBALL STATISTICS
As of 05/15/95

ALL GAMES

Record: 29-26- 0 Home:15- 6- 0 Road:12-15- 0 Neutral: 2- 5- 0

Player	AVG	GP-GS	AB	R	H	2B	3B	HR	RBI	TB	SLG%	BB	HB	SO	OB%	SF	S	SB-SBA	PO	A	E	FLD%
WULFERT, MARK, OF	.438	49-49	201	63	88	24	4	15	80	165	.821	26	0	32	.487	7	0	40-43	115	8	9	.932
HOSINO, DAVID, IF	.424	35-23	99	31	42	8	2	2	15	60	.606	8	2	12	.477	0	4	9-9	8	11	1	.950
YOUNG, TRAVIS, IF	.364	55-55	225	62	82	12	2	0	33	98	.436	26	6	20	.440	2	6	27-36	85	136	16	.932
WRIGHT, RYAN, IF	.361	51-48	169	42	61	10	5	2	32	87	.515	20	6	19	.444	1	1	2-5	145	8	4	.975
GARCIA, JAIME, C	.358	51-51	173	44	62	13	2	13	54	118	.682	26	11	39	.467	3	1	3-3	292	42	18	.949
SOUSA, DAN, OF	.351	55-55	211	40	74	10	2	9	51	115	.545	28	6	49	.435	3	0	5-6	83	10	4	.959
MENG, RONNIE, C	.349	47-41	166	36	58	11	0	1	36	72	.434	9	1	11	.382	2	0	2-2	263	28	4	.986
TAKAHASHI, KEVIN, IF	.298	43-39	121	27	36	3	0	3	31	48	.397	21	0	27	.385	6	3	2-3	65	102	7	.960
DEMORE, MIKE, IF	.284	43-39	141	26	40	4	2	0	21	48	.340	11	2	14	.344	0	7	2-3	24	81	8	.929
MOORE, MATT, IF	.267	19-18	60	15	16	3	1	0	8	21	.350	2	2	5	.313	0	3	1-1	23	47	6	.921
MONTANO, MANUEL, IF	.257	17-9	35	3	9	3	0	0	10	12	.343	5	1	12	.366	0	0	0-0	68	4	2	.973
BEGGS, RYAN, IF	.233	18-6	30	4	7	0	0	0	2	7	.233	5	0	4	.343	0	0	0-0	69	0	1	.986
SMITHERAN, BOBBY, OF	.231	38-30	108	22	25	3	1	0	13	30	.278	22	3	17	.370	2	6	13-16	0	0	1	.000
CLIFFORD, B.J., OF	.224	27-24	85	16	19	0	0	0	4	19	.224	13	3	17	.347	0	2	0-1	50	2	2	.963
BURCHETT, CHAD, IF	.065	19-6	31	2	2	1	0	0	1	3	.097	2	1	2	.147	0	1	0-0	4	4	0	1.000
BRADLEY, TIGE, OF	.000	2-0	2	0	0	0	0	0	0	0	.000	0	0	1	.000	0	0	0-0	0	0	0	.000
TAYLOR, ADAM, C	.000	12-2	10	1	0	0	0	0	1	0	.000	2	0	9	.167	0	0	0-0	18	0	0	1.000
NEW MEXICO	.333	55	1867	434	621	105	21	45	392	903	.484	226	44	290	.417	26	34	106-128	1331	564	97	.951
Opponents	.326	55	1793	406	585	117	14	59	361	907	.506	239	49	333	.420	27	29	50-86	1333	604	95	.953

GRAND SLAM: NEW MEXICO (4) WULFERT 3,GARCIA 1, OPP (1)
CATCHER'S INTERFERENCE: NEW MEXICO (1) GARCIA 1, OPP (0)
LEFT ON BASE: NEW MEXICO (434) OPP (396), DOUBLE PLAYS: NEW MEXICO (41) OPP (52)

Player	ERA	W-L	APP	GS	CG	SH	SV	IP	H	R	ER	BB	SO	2B	3B	HR	BF	O/AVG	BK	HB	PO	A	E	FLD%
MENG, DAVID, P	3.83	6-7	22	0	0	0	1	42.1	43	22	18	22	45	8	2	4	195	.259	4	6	1	2	0	1.000
GONZALEZ, LUIS, P	5.12	7-2	22	4	0	0	1	63.1	72	40	36	27	54	20	1	3	286	.294	0	6	2	14	0	1.000
HILDEBRANDT, KURT, P	5.87	7-6	17	16	5	1	0	87.1	113	70	57	43	68	23	2	11	411	.326	0	11	4	14	2	.900
STRICKLAND, SCOTT, P	6.39	4-1	17	14	1	0	1	80.1	103	66	57	41	41	18	3	9	376	.321	3	7	5	19	2	.923
BOULWARE, BRIAN, P	6.75	0-0	2	0	0	0	0	4.0	7	8	3	6	5	1	0	0	25	.368	0	0	0	1	1	.500
KIESS, BARRY, P	7.82	4-6	15	15	0	0	0	76.0	109	84	66	38	53	23	5	9	368	.352	0	10	4	13	5	.773
CARINO, DAVID, P	7.94	0-1	12	0	0	0	0	5.2	11	10	5	7	6	2	0	1	37	.407	0	2	1	2	0	1.000
BAUM, CHRIS, P	9.00	1-3	13	4	0	0	0	31.0	50	39	31	21	18	9	0	7	166	.373	0	4	2	8	1	.909
PURSE, JAMES, P	9.49	0-0	11	2	0	0	0	24.2	37	30	26	15	16	6	1	6	125	.343	0	0	0	5	2	.714
SETTLE, ANDY, P	9.64	0-0	6	0	0	0	0	9.1	12	10	10	7	7	2	0	2	49	.316	0	2	0	1	0	1.000
EAGMIN, CHRIS, P	11.44	0-0	15	0	0	0	0	19.2	28	27	25	12	20	5	0	7	98	.333	0	1	0	2	1	.667
NEW MEXICO	6.78	29-26	152	55	6	1	3	443.2	585	406	334	239	333	117	14	59	2136	.325	7	49				
Opponents	7.09	26-29		55	6	0	4	444.1	621	434	350	226	290	105	21	45	2199	.333	4	44				

WILD PITCHES: NEW MEXICO (45) CARINO 2,SETTLE 1,EAGMIN 4,PURSE 2,KIESS 6,STRICKLAND 3,HILDEBRANDT 12,MENG 4,GONZALEZ 5,BAUM 6, OPP (4
PASSED BALLS: NEW MEXICO (7) GARCIA 5,MENG 1,TAYLOR 1, OPP (15)

CONFERENCE GAMES ONLY

Record: 21- 9- 0 Home:13- 2- 0 Road: 8- 7- 0 Neutral: 0- 0- 0

Player	AVG	GP-GS	AB	R	H	2B	3B	HR	RBI	TB	SLG%	BB	HB	SO	OB%	SF	S	SB-SBA	PO	A	E	FLD%
BEGGS, RYAN, IF	.571	4-1	7	2	4	0	0	0	1	4	.571	1	0	0	.625	0	0	0-0	9	0	1	.900
WULFERT, MARK, OF	.463	30-30	121	45	56	16	3	12	49	114	.942	16	0	17	.511	4	0	24-26	64	2	8	.892
HOSINO, DAVID, IF	.436	24-19	78	27	34	4	2	1	10	45	.577	7	2	9	.494	0	4	8-8	5	7	1	.923
GARCIA, JAIME, C	.417	29-29	96	29	40	12	0	8	33	76	.792	17	8	19	.537	1	1	2-2	177	24	10	.953
YOUNG, TRAVIS, IF	.413	30-30	121	38	50	8	2	0	20	62	.512	14	3	8	.482	1	3	16-22	49	76	3	.977
MENG, RONNIE, C	.388	26-25	98	24	38	9	0	1	25	50	.510	7	0	6	.425	1	0	1-1	193	10	2	.990
SOUSA, DAN, OF	.381	30-30	113	22	43	5	2	5	34	67	.593	15	4	20	.459	3	0	2-3	50	5	2	.965
MONTANO, MANUEL, IF	.375	5-2	8	1	3	0	0	0	0	3	.375	3	0	2	.545	0	0	0-0	14	1	0	1.000
WRIGHT, RYAN, IF	.302	29-28	106	24	32	6	4	1	22	49	.462	8	1	11	.353	1	1	1-1	68	4	2	.973
TAKAHASHI, KEVIN, IF	.299	26-24	77	15	23	1	0	2	19	30	.390	10	0	18	.363	4	1	2-3	37	63	7	.935
DEMORE, MIKE, IF	.253	27-27	91	17	23	2	2	0	15	29	.319	6	1	8	.306	0	7	1-1	13	52	8	.890
MOORE, MATT, IF	.250	6-6	16	6	4	0	1	0	3	6	.375	0	1	3	.294	0	3	0-0	8	19	4	.871
BURCHETT, CHAD, IF	.222	7-2	9	2	2	1	0	0	1	3	.333	1	1	1	.364	0	0	0-0	0	0	0	.000
SMITHERAN, BOBBY, OF	.217	16-12	46	11	10	2	0	0	7	12	.261	10	2	5	.379	0	3	5-8	0	0	0	.000
CLIFFORD, B.J., OF	.188	5-5	16	4	3	0	0	0	1	3	.188	4	1	7	.381	0	0	0-0	8	0	0	1.000
BRADLEY, TIGE, OF	.000	1-0	1	0	0	0	0	0	0	0	.000	0	0	0	.000	0	0	0-0	0	0	0	.000
TAYLOR, ADAM, C	.000	5-0	3	0	0	0	0	0	0	0	.000	0	0	3	.000	0	0	0-0	1	0	0	1.000
NEW MEXICO	.362	30	1007	267	365	66	16	30	240	553	.549	119	24	137	.442	15	23	62-75	708	301	56	.947
Opponents	.321	30	942	206	302	60	6	26	178	452	.480	117	31	174	.413	20	14	19-39	692	324	56	.948

GRAND SLAM: NEW MEXICO (1) WULFERT 1, OPP (0)
CATCHER'S INTERFERENCE: NEW MEXICO (1) GARCIA 1, OPP (0)
LEFT ON BASE: NEW MEXICO (232) OPP (205), DOUBLE PLAYS: NEW MEXICO (25) OPP (29)

Player	ERA	W-L	APP	GS	CG	SH	SV	IP	H	R	ER	BB	SO	2B	3B	HR	BF	O/AVG	BK	HB	PO	A	E	FLD%
SETTLE, ANDY, P	0.00	0-0	1	0	0	0	0	0.2	1	0	0	0	1	0	0	0	4	.333	0	0	0	0	0	.000
MENG, DAVID, P	3.48	5-1	12	0	0	0	1	20.2	18	8	8	9	22	5	1	2	91	.234	1	5	1	2	0	1.000
GONZALEZ, LUIS, P	3.55	5-0	13	2	0	0	1	38.0	38	18	15	13	38	9	1	1	164	.268	0	4	1	7	0	1.000
HILDEBRANDT, KURT, P	5.16	4-3	10	9	4	0	0	52.1	69	43	30	21	33	13	0	7	244	.330	0	7	3	7	2	.833
CARINO, DAVID, P	5.40	0-1	8	0	0	0	0	3.1	4	5	2	6	1	1	0	0	21	.308	0	1	1	2	0	1.000
STRICKLAND, SCOTT, P	6.46	3-0	10	9	1	0	0	47.1	58	41	34	24	20	10	1	6	221	.310	0	5	4	11	1	.938
KIESS, BARRY, P	7.91	3-3	8	8	0	0	0	38.2	68	49	34	20	35	13	2	4	204	.395	0	6	1	7	5	.615
EAGMIN, CHRIS, P	7.94	0-0	7	0	0	0	0	11.1	14	11	10	5	10	2	0	2	51	.311	0	1	0	0	0	.000
BAUM, CHRIS, P	9.69	1-1	5	1	0	0	0	13.0	16	14	14	9	9	3	0	2	66	.308	0	2	1	1	0	1.000
PURSE, JAMES, P	11.81	0-0	3	1	0	0	0	10.2	16	17	14	10	5	4	1	2	57	.340	0	0	0	1	0	1.000
NEW MEXICO	6.14	21-9	77	30	5	0	2	236.0	302	206	161	117	174	60	6	26	1123	.319	1	31				
Opponents	8.51	9-21		30	5	0	2	230.2	365	267	218	119	137	66	16	30	1192	.362	2	24				

WILD PITCHES: NEW MEXICO (28) PURSE 2,KIESS 6,EAGMIN 1,BAUM 4,STRICKLAND 1,MENG 3,GONZALEZ 3,HILDEBRANDT 8, OPP (27)
PASSED BALLS: NEW MEXICO (4) GARCIA 4, OPP (7)

ssi

WAC
UNIVERSITY OF NEW MEXICO BASEBALL RESULTS
As of 05/15/95

DATE	OPPONENT	W-L-T	SCORE	SITE	OVERALL RECORD	CONF RECORD	PITCHER	OPP PITCHER	LINE	OPP LINE
1/27	Arizona	L	8-7	A	0- 1-		D. MENG (0-1)	Barrington	7- 9- 3	8-12- 5
1/28	Arizona	W	10-4	A	1- 1-		HILDEBRANDT (1-0)	Frace	10-13- 0	4- 8- 2
1/29	Arizona	L	6-5	A	1- 2-		D. MENG (0-2)	Frierott	5-10- 2	6- 6- 0
2/03	UNLV	L	7- 2	A	1- 3-		HILDEBRANDT (1-1)	Yeskie (1-0)	2- 9- 0	7-13- 1
2/04	UNLV	L	6- 0	A	1- 4-		STRICKLAND (0-1)	DeMartini (1-1)	0- 7- 1	6-10- 0
2/05	UNLV	L	9- 8	A	1- 5-		MENG, D. (0-3)	Oliver (2-0)	8-13- 4	9- 8- 0
2/10	Grand Canyon (11)	L	5-4	A	1- 6-	0- 1-	D. MENG (0-4)	DesRosier	4-12- 3	5-11- 0
2/11	Grand Canyon	L	11-4	A	1- 7-	0- 2-	STRICKLAND (0-2)	Gnirk	4- 7- 2	11-12- 3
2/12	Grand Canyon	W	6-2	A	2- 7-	1- 2-	KIESS (1-0)	Huff (0-3)	6- 9- 2	2- 6- 2
2/17	Texas Tech	L	8- 1	H	2- 8-	1- 2-	HILDEBRANDT (1-2)	Smith (1-1)	1- 6- 1	8-16- 1
2/18	Texas Tech	L	23- 6	H	2- 9-	1- 2-	BAUM (0-2)	Free (R, 1-0)	6- 7- 3	23-23- 2
2/19	Texas Tech	L	9- 8	H	2-10-	1- 2-	D. MENG (R, 0-5)	Peck (R, 2-0)	8- 8- 1	9-16- 2
2/24	Texas-Arlington (10)	W	8-4	A	3-10-		L. GONZALEZ (R, 1-0)	Dixon (2-1)	8- 9- 0	4- 7- 1
2/25	Texas-Arlington	L	2-1	A	3-11-		HILDEBRANDT (1-3)	MILLER (1-1)	1- 7- 1	2- 5- 0
2/26	Texas-Arlington	W	14-7	A	4-11-		KIESS (2-0)	Glaze (0-2)	14-18- 1	7- 9- 5
3/03	Brigham Young	W	12-11	H	5-11-	2- 2-	D. MENG (1-5)	Schultz (0-1)	12-15- 0	11-13- 1
3/04	Brigham Young	L	4- 3	H	5-12-	2- 3-	HILDEBRANDT (1-4)	Haws	3- 8- 0	4- 8- 1
3/04	Brigham Young	L	23-11	H	5-13-	2- 4-	KIESS (2-1)	Nielson	11-13- 4	23-18- 2
3/10	Illinois	W	6-0	N	6-13-		HILDEBRANDT (CG,2-4)	WILLIAMS (1-2)	6- 7- 0	0- 4- 1
3/11	Alabama	L	3-1	N	6-14-		KIESS (2-2)	Schleuss (3-0)	1- 6- 0	3- 5- 0
3/11	Texas A&M	W	4-3	A	7-14-		D. MENG (R, 2-5)	Parker(1-4)	4- 8- 1	3- 7- 3
3/12	Alabama	L	15-3	N	7-15-		BAUM (0-3)	Collins (1-0)	3- 8- 4	15-16- 0
3/13	Illinois	L	4-3	N	7-16-		D. MENG (R, 2-6)	Oestreich (1-0)	3- 6- 2	4-10- 0
3/13	Texas A&M	L	14-3	A	7-17-		GONZALEZ (1-1)	Clarkson (1-0)	3- 5- 3	14-12- 0
3/16	Oral Roberts	W	11- 6	N	8-17-		HILDEBRANDT (3-4)	Dooley	11-14- 0	6-12- 2
3/17	New Mexico State	L	8- 4	N	8-18-		GONZALEZ (1-2)	Rakers	4- 8- 1	8-12- 1
3/18	New Mexico State	L	6- 2	A	8-19-		KIESS (2-3)	Ockerman	2- 6- 1	6-10- 1
3/19	Nebraska	L	16-15	N	8-20-		D. MENG (R, 2-7)	Shepherd	15-19- 5	16-18- 2
3/24	Washington	L	16-8	H	8-21-		KIESS (2-4)	Campbell (1-3)	8-11- 3	16-20- 2
3/25	Washington	W	12-8	H	9-21-		GONZALEZ (R, 2-2)	Kringen	12-16- 2	8-11- 2
3/26	Washington	W	25-8	H	10-21-		STRICKLAND (1-1)	Irvine (0-1)	25-26- 1	8-13- 6
4/02	Wyoming	W	4-3	A	11-21-	3- 4-	KIESS (3-4)	Romero	4- 6- 1	3- 6- 2
4/02	Wyoming	L	10-1	A	11-22-	3- 5-	HILDEBRANDT (3-5)	Schwitzer	1- 6- 2	10-14- 1
4/03	Wyoming	W	16-8	A	12-22-	4- 5-	STRICKLAND (2-1)	Nickason	16-20- 2	8-10- 6
4/08	Utah	W	16- 8	H	13-22-	5- 5-	BAUM (1-3)	Sagas	16-15- 3	8-13- 3
4/08	Utah	W	16- 7	H	14-22-	6- 5-	HILDEBRANDT (4-5)	Markey	16-20- 4	7- 8- 1
4/09	Utah	W	15- 9	H	15-22-	7- 5-	GONZALEZ (R, 3-2)	Bosler	15-17- 4	9-11- 2
4/15	Air Force	W	16- 6	H	16-22-	8- 5-	KIESS (4-4)	Lyons	16-19- 4	6-11- 3
4/15	Air Force	W	11-10	H	17-22-	9- 5-	GONZALEZ (4-2)	Umlauf	11-16- 2	10-12- 1
4/16	Air Force	W	6- 5	H	18-22-	10- 5-	D. MENG (3-7)	Ryan	6-13- 1	5- 9- 1
4/21	Grand Canyon	W	10-5	H	19-22-	11- 5-	GONZALEZ (R, 5-2)	Gies	10-12- 4	5-12- 0
4/22	Grand Canyon	W	10- 1	H	20-22-	12- 5-	HILDEBRANDT(CG, 5-5)	Huff (2-8)	10-13- 1	1- 6- 3
4/23	Grand Canyon	W	5- 2	H	21-22-	13- 5-	STRICKLAND (3-1)	Gnirk (2-5)	5-13- 2	2- 5- 1
4/28	Brigham Young	L	5-4	A	21-23-	13- 6-	KIESS (4-5)	Knoll	4- 7- 3	5- 6- 2
4/29	Brigham Young	W	4-3	A	22-23-	14- 6-	HILDEBRANDT (CG,6-5)	Haws	4- 4- 1	3- 7- 1
4/29	Brigham Young (8)	W	5-4	A	23-23-	15- 6-	D. MENG (R, 4-7)	Dowdell	5- 7- 0	4- 7- 4
5/01	Utah	W	8-4	A	24-23-	16- 6-	D. MENG (R, 5-7)	Taylor	8-12- 1	6-11- 2
5/01	Utah	W	12-1	A	25-23-	17- 6-	GONZALEZ (6-2)	Sagas	12-14- 0	1-11- 2
5/02	Utah	L	13-12	A	25-24-	17- 7-	CARINO (R, 0-1)	Poulton	12-10- 1	13-11- 1
5/06	Wyoming	W	12- 8	H	26-24-	18- 7-	HILDEBRANDT (7-5)	Schwitzer (2-7)	12-15- 2	8-12- 1
5/06	Wyoming	W	9- 3	H	27-24-	19- 7-	STRICKLAND (CG,4-1)	Williams (3-3)	9-10- 1	3- 6- 0
5/07	Wyoming	W	16- 6	H	28-24-	20- 7-	GONZALEZ (7-2)	Romero (3-7)	16-19- 2	6-12- 5
5/13	Air Force	L	8- 4	A	28-25-	20- 8-	HILDEBRANDT (7-6)	Lyons	4- 6- 2	8-11- 1
5/13	Air Force	W	9- 6	A	29-25-	21- 8-	D. MENG (R,6-7)	Umlauf	9-15- 1	6- 9- 1
5/14	Air Force	L	13- 6	A	29-26-	21- 9-	KIESS (4-6)	D. Allen	6-11- 1	13-14- 3

The 1994-95 season began with the usual flurry of fall tournaments with the University of New Mexico men's tennis team scattered all over the country competing in them. UNM's number one singles player, Tad Berkowitz, played in the Skytel National Clay Courts against very tough competition. Chris Brown and Javier Gutierrez competed in the Tulsa Hurricane Invitational. Gutierrez won the singles draw and doubles draw with Brown. Brandon Altman and Jeremy DeFalco participated in the UTEP Invitational with DeFalco capturing the singles victory en route to winning his first nine matches. Isaac Donkor spent a good portion of the fall competing in Davis Cup play for his native Ghana. Newcomers Pablo Fernandez and Scott Treibly finished their inaugural fall season with records of 12-5 and 13-3 respectively.

The 1995 spring season began in January with much hope and anticipation. The UNM men's tennis team displayed talent but it lacked a leader. Two senior leaders, Roy Canada and Coulter Wright, had left their impression at UNM. Both players earned All-America status in doubles then graduated. This left a large hole, somebody had to step forward.

The first dual match pitted No. 29 New Mexico against No. 37 UC-Irvine. The Lobos, playing in the friendly confines of the Randy Briggs Indoor Tennis Dome, won that match 5-2 and their next two matches. No. 23 Kansas brought the biggest challenge of the new season. The Lobos won the doubles point to take an early 1-0 lead. Half of the six singles matches were won by Kansas in straight sets. UNM managed to win only two singles matches and suffered their first loss of the season 4-3.

The match against No. 21 Fresno State was a chance for the Lobos to get back on track and to gain an early lead in the WAC race. The Lobos lost the doubles point but gave up only one more point. UNM won the all singles matches except for the number one position. Everyone on the team had their best match of the season, to that point. UNM won the match 5-2. The Lobo netters had one more match at home against Tulsa, which they won, before they embarked on a two-month road schedule.

Although no true leader emerged during the season, the Lobos played as a team and they accomplished more than any other Lobo team. The road trip began in Texas with two victories against No. 25 Texas A&M and Rice. Next was the dreaded trip to California against No. 5 UCLA and No. 4 Pepperdine. Even though both matches resulted in losses, the Lobos played better against the tennis powerhouses. Following a poor performance against No. 8 Texas, the Lobos put together their best string of four consecutive matches.

The highlight of the road schedule was a second-place finish at the Blue-Gray National Classic in Montgomery, Ala. The No. 16 UNM Lobos opened up against No. 14 Miami. UNM beat the Hurricanes 5-2. Their next match would be against No. 3 Mississippi State. The Lobos dropped the doubles point but went on to sweep singles in straight sets. Two matches were left unfinished so UNM won 4-1. This was UNM's first victory over a top-5 team. Next up for the Lobos was No. 9 Duke. Singles were split so doubles would decide the team heading to the championship. Tad Berkowitz and Jeremy DeFalco, the number two doubles team, had to come from behind to win their match and pit UNM in a re-match against No. 8 Texas for the championship. Although the Lobos played better the second time, the Longhorns were more than UNM could handle. The Lobos lost 4-2.

UNM continued the long road schedule with matches in Oklahoma and Kansas, coming away victorious. The final matches away from home took place against WAC rivals Utah, Brigham Young and finally Washington. UNM won both matches in Utah with the same score of 5-2, but it was nip-and-tuck the entire match. After playing 18 matches on the road, the Lobos slipped against Washington 5-2.

UNM had another first this season. After the victories against No. 3 Mississippi State, No. 9 Duke and No. 14 Miami, UNM cracked the top-10. On April 4, the UNM Lobos were ranked No. 6 in the country, the highest ever.

The Lobos also captured their fifth consecutive WAC title in 1995. After being down 3-1, the Lobos rallied to edge the Fresno State Bulldogs 4-3. Number one singles player, Berkowitz rallied in his match during the third set to win the last seven games and defeat Fredrik Bergh. The win by Berkowitz, coupled by the win at No. 6 singles by Pablo Fernandez gave UNM their fifth straight WAC championship.

UNM was the No. 1 seed for the Region VII Championship, but they were hosted by Fresno State. The Lobos got past Utah with no trouble 4-0 but the Bulldogs of Fresno State ended the 1995 season for UNM. FSU defeated UNM 4-1 to advance to Athens, Ga. and the NCAA Championships.

When the final season rankings came out UNM was ranked No. 15, the highest for the Lobos at season's end. The season began with the phrase "The Drive for Five" and ended with hard work and never giving up.

0070

THE UNIVERSITY OF NEW MEXICO

UNIVERSITY OF NEW MEXICO MEN'S TENNIS

NAME	CL-EXP	HGT	WGT	HOMETOWN (LAST SCHOOL)
Brandon Altman	Sr-3L	6-2	160	Winter Park, Colorado (Bradenton HS)
Tad Berkowitz	Jr-1L	5-10	155	Wesley Chapel, Florida (Kentucky)
Chris Brown	Jr-2L	6-0	168	Lake Forest, California (El Toro HS)
Jeremy DeFalco	Sr-2L	6-4	190	Palm Desert, California (Palm Desert HS)
Isaac Donkor	Sr-1L	5-11	180	Accra, Ghana (New Mexico Military)
Pablo Fernandez	So-TR	5-9	150	Lima, Peru (Kentucky)
Javier Gutierrez	So-1L	6-0	179	Tucson, Arizona (Canyon del Oro HS)
Scott Treibly	Jr-TR	6-2	180	Louisville, Kentucky (Kentucky)

Head Coach: Tim Cass (7th year)
Asst. Coach: Alan Dils (6th year)

DEPARTMENT OF INTERCOLLEGIATE ATHLETICS
Sports Information
Albuquerque, NM 87131-0041
Phone: (505) 277-2026 FAX: (505) 277-0142

1994-95 New Mexico Men's Tennis Scoreboard

Overall Record: 23-7 Home: 9-1 (5-1 indoor, 4-0 outdoor) Away: 8-5 Neutral: 6-1 Versus WAC: 8-1

DATE	RESULT	LOBO RECORD	STREAK
Nov. 21	New Mexico 7, Loyola Marymount 0 (R)	1-0	W-1
Nov. 22	New Mexico 5, Hawai'i 0 (R)	2-0	W-2
Nov. 23	New Mexico 7, Oregon 0 (R)	3-0	W-3
Jan. 20	#29 New Mexico 5, #37 UC-Irvine 2 (I)	4-0	W-4
Jan. 21	#29 New Mexico 4, #25 Minnesota 3 (I)	5-0	W-5
Jan. 27	#29 New Mexico 6, Texas Tech 1 (I)	6-0	W-6
Jan. 28	#23 Kansas 4, #29 New Mexico 3 (I)	6-1	L-1
Feb. 8	#29 New Mexico 5, #21 Fresno State 2 (I)	7-1	W-1
Feb. 15	#29 New Mexico 6, Tulsa 1 (I)	8-1	W-2
Feb. 24	#29 New Mexico 4, #25 Texas A&M 3 (R)	9-1	W-3
Feb. 26	#29 New Mexico 5, Rice 2 (R)	10-1	W-4
Mar. 7	#5 UCLA 7, #16 New Mexico 0 (R)	10-2	L-1
Mar. 8	#4 Pepperdine 5, #16 New Mexico 2 (R)	10-3	L-2
Mar. 13	#8 Texas 6, #16 New Mexico 1 (R)	10-4	L-3
Mar. 16	#16 New Mexico 5, #14 Miami (Fla.) 2 (*)	11-4	W-1
Mar. 17	#16 New Mexico 4, #3 Mississippi State 1 (*)	12-4	W-2
Mar. 18	#16 New Mexico 4, #9 Duke 3 (*)	13-4	W-3
Mar. 19	#8 Texas 4, #16 New Mexico 2 (*)	13-5	L-1
Mar. 25	#14 New Mexico 7, Oklahoma 0 (R)	14-5	W-1
Mar. 26	#14 New Mexico 5, Wichita State 2 (R)	15-5	W-2
Mar. 28	#14 New Mexico 5, #12 Kansas 0 (R)	16-5	W-3
Apr. 6	#6 New Mexico 5, #49 Utah 2 (R)	17-5	W-4
Apr. 7	#6 New Mexico 5, Brigham Young 2 (R)	18-5	W-5
Apr. 9	Washington 5, #6 New Mexico 2 (R)	18-6	L-1
Apr. 15	#6 New Mexico 5, Texas-El Paso 2 (O)	19-6	W-1
Apr. 27	#12 New Mexico 7, Hawai'i 0 (#)	20-6	W-2
Apr. 28	#12 New Mexico 6, UTEP 1 (#)	21-6	W-3
Apr. 29	#12 New Mexico 4, #30 Fresno State 3 (#)	22-6	W-4
May 6	#13 New Mexico 4, #50 Utah 0 (^)	23-6	W-5
May 7	#26 Fresno State 4, #13 New Mexico 1 (^)	23-7	L-1

(I) denotes a match played at the Randy Briggs Indoor Tennis Dome at the Lobo Tennis Club
(O) denotes a match played outdoors at the Lobo Tennis Club
(R) denotes a match played on the road
(*) denotes a match played at the Blue-Gray Classic, Montgomery, Ala.
(#) denotes a match played at the Western Athletic Conference Championship, Albuquerque, N.M.
(^) denotes a match played at the Region VII Championship, Fresno Calif.

INDIVIDUAL RESULTS...

PLAYER	#1	#2	#3	#4	#5	#6	FALL	SPRING	TOTALS
Brandon Altman	0-0	0-0	0-0	0-0	1-0	6-2	8-5	7-2	15-7
Tad Berkowitz	18-10	0-0	0-0	0-0	0-0	0-0	8-4	18-11	26-15
Chris Brown	0-0	10-7	4-7	0-0	0-0	0-0	9-4	17-14	26-18
Jeremy DeFalco	0-0	0-0	1-0	4-0	8-2	3-1	13-3	17-3	30-6
Isaac Donkor	0-0	0-0	0-0	0-0	5-1	1-3	6-3	6-4	12-7
Pablo Fernandez	0-0	0-0	0-0	0-2	9-1	9-2	12-5	20-5	33-10
Javier Gutierrez	1-0	5-6	10-4	0-0	0-0	0-0	7-3	16-12	23-15
Scott Treibly	0-0	0-0	3-0	10-9	0-0	0-0	13-3	18-9	30-13

DOUBLES RESULTS...	#1	#2	#3	FALL	SPRING	TOTALS
Brandon Altman/Jeremy DeFalco	0-0	0-0	1-0	5-0	1-0	6-0
Brandon Altman/Scott Treibly	0-0	1-1	13-7	2-1	14-8	16-9
Tad Berkowitz/Jeremy DeFalco	5-3	11-5	0-0	2-1	16-7	18-9
Tad Berkowitz/Javier Gutierrez	0-0	3-0	0-0	2-1	3-0	5-1
Tad Berkowitz/Scott Treibly	1-0	0-1	0-0	0-0	1-1	1-1
Chris Brown/Jeremy DeFalco	2-2	0-0	0-0	0-0	2-2	2-2
Chris Brown/Isaac Donkor	0-0	0-0	1-1	0-0	1-1	1-1
Chris Brown/Javier Gutierrez	10-6	2-2	0-0	7-1	14-9	21-10
Isaac Donkor/Pablo Fernandez	0-0	0-0	1-0	4-1	1-0	5-1

WOMEN'S TENNIS

New Mexico women's tennis finished the season with a 13-9 record overall and 3-4 against WAC teams. The Lobos completed their season at the WAC Tournament where they finished in fourth place following a hard-fought match with Fresno State.

The Lobos achieved one of the goals set at the beginning of the season by breaking into the national polls. UNM entered the polls at No. 42 and topped out at No. 39. The Lobos had a tough schedule competing against several top-ranked teams including No. 17 BYU, No. 19 San Diego, No. 29 San Diego State, No. 33 Rice, No. 36 Oklahoma State and No. 49 Washington State. In the Central Region of the Intercollegiate Tennis Association New Mexico had quality wins over OSU, Kansas St., Nebraska, Colorado and Weber State.

Individually for New Mexico freshman sensation Claudia Gutierrez defeated ranked regional opponents while playing the No. 1 singles position. Gutierrez was named to the WAC All-Conference team and captured WAC Player of the Week honors this season. Gutierrez finished the season with a 12-10 record.

Junior Angela Skrbic finished with the most wins with 23 while tallying 11 losses. Junior Sanggeetha Vijayakumar had the best record with 14 wins against five losses at the No. 5 singles position. Overall the Lobos fought hard and played tough. Junior Alicia Meraz was given the 1995 Sportsmanship Award for the Western Athletic Conference. The award was voted on by WAC coaches.

For the season UNM captured four WAC Player of the Week honors. Sophomore Nat Klavora was the first Lobo this season to capture the honor followed by Gutierrez, juniors Jane Legge and Sanggeetha Vijayakumar. New Mexico returns all its players from this year's squad as there were no seniors on the team.

1995 NEW MEXICO WOMEN'S TENNIS SCOREBOARD

Overall Record:13-9 **Home:** 6-3 (3-3 indoor) **Away:**6-4 **Neutral:**1-2 **Versus WAC:** 3-4

DATE	RESULT	LOBO RECORD	STREAK
2/3	New Mexico 9, Long Beach State 0 (R-Long Beach, CA)	1-0	W 1
2/4	San Diego 9, New Mexico 0 (R-San Diego, CA)	1-1	L 1
2/5	San Diego State 9, New Mexico 0 (R-San Diego, CA)	1-2	L 2
2/9	New Mexico 5, Oklahoma State 1 (I-Albuquerque, NM)	2-2	W 1
2/10	Washington State 5, New Mexico 4 (I-Albuquerque, NM)	2-3	L 1
2/11	Rice 6, New Mexico 3 (I-Albuquerque, NM)	2-4	L 2
2/24	Wichita State 5, New Mexico 4 (R-Wichita, KS)	2-5	L 3
2/25	New Mexico 6, Kansas State 3 (R-Manhattan, KS)	3-5	W 1
2/26	New Mexico 6, Nebraska 3 (R-Manhattan, KS)	4-5	W 2
3/3	New Mexico 9, Nevada-Reno 0 (I-Albuquerque, NM)	5-5	W 3
3/4	Oklahoma 6, New Mexico 3 (I-Albuquerque, NM)	5-6	L 1
3/5	New Mexico 5, Colorado 4 (I-Albuquerque, NM)	6-6	W 1
3/26	New Mexico 8, Texas Tech 1 (R-Lubbock, TX)	7-6	W 2
3/31	New Mexico 9, Utah State 0 (R-Logan, UT)	8-6	W 3
4/1	New Mexico 5, Weber State 4 (R-Ogden, UT)	9-6	W 4
4/2	Utah 7, New Mexico 2 (R-Salt Lake City, UT)	9-7	L 1
4/7	New Mexico 6, Fresno State 3 (O-Albuquerque, NM)	10-7	W 1
4/8	New Mexico 6, Texas-El Paso 3 (O-Albuquerque, NM)	11-7	W 2
4/9	New Mexico 8, New Mexico State 1 (O-Albuquerque, NM)	12-7	W 3
4/27	New Mexico 5, Texas-El Paso 1 (#-El Paso, TX)	13-7	W 4
4/28	Brigham Young 7, New Mexico 2 (#-El Paso, TX)	13-8	L 1
4/29	Fresno State 5, New Mexico 4 (#-El Paso, TX)	13-9	L 2

(I) denotes a match played at the Randy Briggs Indoor Tennis Dome at the Lobo Tennis Club
(O) denotes a match played outdoors at the Lobo Tennis Club
(R) denotes a match played on the road
(#) denotes a match played at the WAC Championships

WAC PLAYER OF THE WEEK:
Nat Klavora • Feb. 20
Claudia Gutierrez • Feb. 27
Jane Legge • Mar. 6
Sanggeetha Vijayakumar • Apr. 3

INDIVIDUAL RESULTS...

PLAYER	#1	#2	#3	#4	#5	#6	FALL	SPRING	TOTALS
Claudia Gutierrez	6-6	3-1	3-3				DNP	12-10	12-10
Aimee Hites							3-1	INJ	3-1
Natasha Jones					1-1	7-3	7-3	8-4	15-7
Nat Klavora	0-1	4-3	1-1	1-3	1-0		4-4	7-8	11-12
Jane Legge				7-1	1-6	6-0	4-4	14-7	18-11
Alicia Meraz	2-7	5-6	0-1				4-2	7-14	11-16
Angela Skrbic			10-3	6-3			7-5	16-6	23-11
Ann Trondson							4-2	0-0	4-2
Sanggeetha Vijayakumar				1-0	9-2	4-1	0-2	14-3	14-5

DOUBLES RESULTS...

PLAYER	#1	#2	#3	FALL	SPRING	TOTALS
Meraz/Bergman				6-0		6-0
Meraz/Vijayakumar	1-6			0-0	1-6	1-4
Meraz/Legge	6-7			0-0	6-7	6-7
Skrbic/Hites				1-1		1-1
Skrbic/Vijayakumar				3-1		3-1
Skrbic/Legge			2-3	0-0	2-3	2-3
Skrbic/Gutierrez		9-3		0-0	9-3	9-3
Skrbic/Jones			0-1	0-0	0-1	0-1
Skrbic/Klavora		1-1		0-0	1-1	1-1
Klavora/Legge				3-3		3-3
Klavora/Gutierrez		2-3		0-0	2-3	2-3
Klavora/Vijayakumar			3-3	0-0	3-3	3-3
Klavora/Jones			1-0	0-0	1-0	1-0
Gutierrez/Legge		0-1		0-0	0-1	0-1
Jones/Vijayakumar			3-3	0-0	3-3	3-3
Jones/Trondson				0-2		0-2
Jones/Legge			1-0	0-0	1-0	1-0
Vijayakumar/Hites				0-1		0-1

0074

THE UNIVERSITY OF NEW MEXICO

1994-95 New Mexico Women's Tennis Roster

NAME	*CL.*	*HOMETOWN*
Claudia Gutierrez	Fr.	Tucson, Arizona
Aimee Hites	Fr.	Prairie Village, Kansas
Natasha Jones	So.	Redlands, California
Nat Klavora	So.	Toronto, Ontario
Jane Legge	Jr.	Wellington, New Zealand
Alicia Meraz	Jr.	Queretaro, Mexico
Angela Skrbic	Jr.	Zagreb, Croatia
Ann Trondson	Fr.	Arden Hills, Minnesota
Sanggeetha Vijayakumar	Jr.	Madras , India

Head Coach: Kathy Kolankiewicz, 9 years - Record: 133-110 (.547)
Assistant Coach: Jack Griffin, 2nd year

DEPARTMENT OF INTERCOLLEGIATE ATHLETICS
Sports Information
Albuquerque, NM 87131-0041
Phone: (505) 277-2026 FAX: (505) 277-0142

MEN'S GOLF

The University of New Mexico men's golf team finished the season with its best NCAA Championships placing since 1992 when the Lobos took 10th. The 1994-95 UNM team claimed 12th place at the championships in Columbus, Ohio. Freshman Rob McMillan led the Lobos as he tied for 21st place and was named all-American, the first UNM golfer to earn that honor since 1993. McMillan's finish tied for ninth best in school history.

Head coach John Fields' young squad - he played most of the year with a lineup of a true freshman, a redshirt freshman, two sophomores, and a junior - closed the season with a flourish. On the heels of junior Mike Sauer's NCAA West Regional victory, the team followed suit and shot well enough on its home course to take second place behind Arizona State. From there, the Lobos went on to the NCAA Championships where the team made the cut for the first time since 1992.

The Lobos had 12 top-10 finishes during the season along with eight tournaments in the top-5. UNM took second three times (Herb Wimberly/Coca Cola Classic, John Burns Intercollegiate, and the NCAA West Regional), and won the BYU Cougar Classic just before finishing third at the WAC Championships.

The majority of the season, New Mexico was led by freshman McMillan and junior Sauer. McMillan, in addition to his outstanding play at the NCAA Championships, had six top-20 finishes, led by a tie for second at the BYU Cougar Classic. Sauer played the most consistent golf of his career at UNM as he had seven top-20 finishes highlighted by medalist honors at the West Regional. Sauer also tied for second at the weather-shortened John Burns Intercollegiate, and took third at the WAC Championships. Redshirt freshman Doug LaBelle and sophomores Ryan Murphy and Brad Sharp rounded out the New Mexico lineup for most the season.

At the 40th Annual William H. Tucker hosted by the Lobos at the Championship Golf Course, UNM placed 13th of 20 teams. The tournament featured eventual national champion Oklahoma State (which won the Tucker), 1994 national champion Stanford, and the likes of Texas, Arizona State, and Southern California. The Tucker is one of the feature events of the fall and obviously is a preview for the NCAA Championships each season.

At the 1995 NCAA Championships, the Lobos overcame an opening-round 298 to close to within one stroke of then-leader Stanford after two rounds. Round three proved to be the downfall, however, as New Mexico ballooned to a 305 to fall out of contention. A fourth round 295 rallied UNM to its final 12th-place finish. With the starters returning for at least one more season, UNM's golf future should bring nothing but continued success.

1994-95 TEAM SCOREBOARD

DATE	TOURNAMENT	NEW MEXICO FINISH/SCORE
Sept. 15-17	40th Annual William H. Tucker The Championship Golf Course Albuquerque, N.M.	T13th of 20 (314-296-298=908)
Oct. 9-11	Taylor Made/Red River Classic Dallas Athletic Club Dallas, Texas	3rd of 14 (288-286-288=862)
Oct. 13-15	Herb Wimberly/Coca Cola Classic New Mexico State University Golf Course Las Cruces, N.M.	2nd of 20 (314-315-303=932)
Oct. 27-29	Fresno/Lexus Classic San Joaquin Country Club Fresno, Calif.	T8th of 19 (303-301-296=900)
Nov. 28-30	UNLV/Rebel Classic Spanish Trail Country Club Las Vegas, Nev.	9th of 15 (308-302-302=912)
Feb. 6-7	PING Arizona Intercollegiate Randolph North Golf Course Tucson, Ariz.	7th of 16 (293-287-290=870)
Feb. 18-20	Taylor Made/Big Island Intercollegiate Waikoloa Kings Course Kona, Hawai'i	10th of 26 (290-294-298=882)
Feb. 22-24	John Burns Intercollegiate Kaneohe Clipper Golf Course Honolulu, Hawai'i	T2nd of 16 (294-282=576)
March 6-7	University of Central Florida Classic Eastwood Country Club Orlando, Florida	5th of 21 (293-289-286=868)
March 27-28	Southwestern Intercollegiate North Ranch Country Club Westlake Village, Calif.	3rd of 16 (296-304-298=898)
April 14-15	Sun Devil Intercollegiate Karsten Golf Course Tempe, Ariz.	T10th of 18 (295-297-301=893)
April 28-29	Cougar Classic Riverside Country Club Provo, Utah	1st of 16 (281-291-290=862)
May 1-3	WAC Championships Wingpointe Golf Course Salt Lake City, Utah	3rd of 10 (289-292-290=871)
May 18-20	NCAA West Regional The Championship Golf Course Albuquerque, NM	2nd of 18 teams (288-275-289=852)
May 31-June 3	NCAA Championships Scarlet Golf Course Columbus, Ohio	12th of 30 teams (298-284-305-295=1182)

1994-95 TOURNAMENT BY TOURNAMENT

40th William H. Tucker
Sept. 15-17, 1994
The Championship Golf Course
Albuquerque, N.M.
Par 72 • 7,246 yards

- TEAM STANDINGS -

1.	Oklahoma St.	864
2.	Texas	874
3.	Arizona St.	879
4.	UNLV	881
5.	Oklahoma	883
6.	Southern California	889
7.	TCU	894
8.	Stanford	899
9.	Arizona	900
10.	UTEP	903
11.	Colorado	906
	Fresno St.	906
13.	**New Mexico**	**908**
	New Mexico St.	908
15.	San Jose St.	915
16.	BYU	916
17.	Oregon	919
18.	UT-Arlington	927
19.	Weber St.	929
20.	Hawai'i	946

- LOBOS INDIVIDUALS -

Sharp	74-72-75=221	T14th
Millican-I	76-76-74=226	T42nd
Kersting	78-76-73=227	T48th
LaBelle	84-72-73=229	T55th
Sauer-I	79-74-82=235	T83rd
Dinkel	82-76-80=238	T91st
Murphy	80-83-77=240	T95th
Barnett-I	86-79-78=243	T102nd

Taylor Made/Red River Classic
October 9-11, 1994
Dallas Athletic Club
Dallas, Texas
Par 72 • 6,766 yards

- TEAM STANDINGS -

1.	Oklahoma St.	846
2.	Houston	850
3.	New Mexico	862
4.	Oklahoma	872
5.	TCU	874
6.	Tulsa	875
7.	Arizona	877
8.	Southwestern Louisiana	880
9.	Texas	883
10.	SMU	892
11.	Wake Forest	896
12.	Alabama	902
13.	North Texas	910
14.	Hawai'i	915

- LOBOS INDIVIDUALS -

Dinkel	72-68-72=212	T4th
Millican	74-71-69=214	T7th
Murphy-I	74-72-73=219	T25th
Sauer	68-80-73=221	T33rd
Kersting	74-73-74=221	T33rd
Sharp	74-74-78=226	T55th

Herb Wimberly/Coca Cola Classic
October 13-15, 1994
New Mexico St. University Golf Course
Las Cruces, N.M.
Par 72 • 7,040 yards

- TEAM STANDINGS -

1.	New Mexico St. #2	930
2.	New Mexico	932
3.	San Diego St.	943
	UC-Irvine	943
5.	UTEP	944
6.	Arizona	945
7.	Colorado St.	946
8.	New Mexico St. #1	951
9.	Weber St.	954
10.	San Francisco	962
11.	Utah St.	963
12.	Washington St.	971
	UC-Santa Barbara	971
14.	San Diego	975
15.	Long Beach St.	977
16.	Nevada	978
17.	Portland	981
	Southern Utah	981
19.	Idaho	1001
20.	Santa Clara	1021

- LOBOS INDIVIDUALS -

Kersting	73-76-77=226	2nd
Sauer	77-78-80=235	T15th
Dinkel	81-79-75=235	T15th
McMillan	83-83-74=240	T32nd
Millican	83-82-77=242	T39th

Fresno/Lexus Classic
October 27-29, 1994
San Joaquin Country Club
Fresno, Calif.

- TEAM STANDINGS -

1.	Fresno St.	881
2.	Oklahoma	884
3.	Pepperdine	886
4.	Houston	888
5.	Cal	890
6.	Pacific	896
7.	New Mexico St.	897
8.	Oregon St.	900
	New Mexico	**900**
10.	UTEP	906
11.	UCLA	907
12.	USC	910
13.	San Diego St.	917
14.	Boise St.	918
15.	UC Santa Barbara	919
	San Jose St.	919
17.	Colorado	923
18.	Hawai'i	927
19.	Fresno St. #2	945

- LOBOS INDIVIDUALS -

McMillan	73-72-73=218	T4th
Dinkel	79-73-75=227	T27th
Millican	76-78-74=228	T33rd
Murphy	76-79-74=229	T39th
Kersting	78-78-76=232	T59th
Sauer	81-80-90=251	110th

UNLV Rebel Classic
November 28-30, 1994
Spanish Trail Country Club
Las Vegas, Nev.
Par 72 • 7,107 yards

- TEAM STANDINGS -

1.	UNLV #1	882
2.	TCU	883
3.	UCLA	887
4.	UTEP	894
5.	LSU	896
6.	Pepperdine	902
	Texas A&M	902
8.	Tennessee	905
9.	New Mexico	912
10.	SMU	916
11.	BYU	918
12.	Florida St.	920
13.	UNLV #2	925
14.	Hawai'i	929
15.	Augusta College	933

- LOBOS INDIVIDUALS -

Millican	77-75-72=224	19th
McMillan	74-75-81=230	T33rd
Kersting	75-80-78=233	T46th
Sharp	82-77-74=233	T46th
Dinkel	82-75-78=235	T51st

PING Arizona Intercollegiate
February 6-7, 1995
Randolph North Golf Course
Tucson, Ariz.
Par 71 • 6,828 yards

- TEAM STANDINGS -

1.	Oklahoma St.	841
2.	Texas	843
3.	Arizona (Red)	847
4.	Arizona St.	855
5.	Florida	858
6.	Houston	865
7.	New Mexico	870
8.	Tulsa	871
9.	Pacific	878
10.	UCLA	880
	Georgia	880
12.	Fresono St.	881
13.	Arizona (Blue)	882
14.	Pepperdine	891
15.	Colorado	906
16.	Arizona (White)	908

- LOBOS INDIVIDUALS -

Murphy	71-70-75=216	T28th
LaBelle	74-70-74=218	T36th
McMillan	73-74-71=218	T36th
Sauer	75-73-70=218	T36th
Sharp-I	74-75-73=222	T48th
Millican	77-81-78=236	T83rd

1994-95 TOURNAMENT BY TOURNAMENT

5th Annual Taylor Made/Big Island Intercollegiate
Feb. 18-20, 1995
The Kings' Golf Club
Waikoloa, Hawai'i
Par 72 • 7,074 yards

- TEAM STANDINGS -

1.	Oklahoma St.	855
2.	TCU	856
3.	Stanford	859
4.	Arizona St.	863
5.	Houston	867
	UNLV	867
7.	Arizona	872
8.	Pacific	878
9.	UCLA	879
10.	**New Mexico**	**882**
11.	UCSB	887
12.	Fresno St.	890
13.	Washington	893
14.	Texas A&M	897
15.	UTEP	898
16.	Arkansas	899
	Colorado	899
	Oregon St.	899
19.	Oregon	900
	Pepperdine	900
21.	Southern Cal	910
22.	Nagoya	912
23.	Rica	913
24.	UH-Manoa	914
25.	San Francisco	926
26.	UH-Hilo	929

- LOBOS INDIVIDUALS -

McMillan	75-73-70=218	T24th
Murphy	68-76-74=218	T24th
Sharp	71-75-77=223	T48th
LaBelle	76-71-77=224	T53rd
Sauer	77-75-77=229	T87th

19th Annual John Burns Intercollegiate
Feb. 22-24, 1995
Marine Corps Base
Kaneohe, Hawai'i
Par 72 • 6,700 yards

- TEAM STANDINGS -

1.	Oklahoma St.	573
2.	Arizona	576
	New Mexico	**576**
	Stanford	576
5.	Auburn	580
	UNLV	580
7.	BYU	588
	Fresno St.	588
9.	SMU	591
10.	Oklahoma	593
11.	UTEP	594
12.	UCLA	597
13.	San Diego St.	605
14.	Colorado St.	608
15.	Hawai'i	619
16.	Utah	620

- LOBOS INDIVIDUALS -

Sauer	72-69=141	T2nd
Sharp	74-70=144	T13th
McMillan	74-71=145	T16th
LaBelle	74-72=146	T19th
Murphy	76-72=148	T33rd

15th Annual BellSouth Mobility Golf Classic
March 6-7, 1995
Tuscawilla Country Club
Orlando, Florida
Par 72 • 6,700 yards

- TEAM STANDINGS -

1.	North Carolina	856
2.	Florida	859
3.	Central Florida	863
4.	South Alabama	865
5.	**New Mexico**	**868**
6.	South Florida	876
7.	Troy St.	877
8.	Mississippi	879
9.	Alabama-Birmingham	883
10.	Minnesota	884
11.	East Tennessee St.	888
12.	South Carolina	896
13.	College of Charleston	897
14.	Kansas	898
15.	Northwestern	899
16.	Vanderbilt	902
	Southeastern Louisiana	902
18.	Tennessee-Chattanooga	907
19.	Florida International	916
20.	Indiana	929
21.	Northern Illinois	935

- LOBOS INDIVIDUALS -

McMillan	76-72-68=216	T11th
Sauer	74-72-71=217	T14th
LaBelle	70-72-75=217	T14th
Murphy	73-73-72=218	T19th
Sharp	79-75-77=231	T77th

Southwestern Intercollegiate
March 27-28, 1995
North Ranch Country Club
Westlake Village, Calif.
Par 71 • 6,797 yards

- TEAM STANDINGS -

1.	Stanford	890
2.	Oklahoma	891
3.	**New Mexico**	**898**
4.	San Jose St.	902
5.	Fresno St.	904
	California	904
7.	Southern Cal	906
8.	Arizona St.	907
9.	BYU	910
10.	Houston	912
11.	UCLA	922
	Arizona	922
13.	Oregon St.	923
14.	Oregon	925
15.	Pepperdine	927
16.	Colorado	944

- LOBOS INDIVIDUALS -

McMillan	77-74-74=225	T18th
Murphy	72-75-78=225	T18th
Sauer	76-80-70=226	T21st
Sharp	81-75-76=232	T45th
LaBelle	71-81-81=233	T50th

Sun Devil Intercollegiate
April 15-16, 1995
Karsten Golf Course
Tempe, Arizona
Par 72 • 6,700 yards

- TEAM STANDINGS -

1.	Arkansas	867
2.	Arizona St.	871
3.	Oklahoma St.	877
4.	Auburn	879
5.	UNLV	880
6.	Stanford	886
7.	Ohio St.	888
8.	Oklahoma	892
	Arizona	892
10.	**New Mexico**	**893**
	Texas	893
12.	UCLA	903
	Fresno St.	903
14.	Southern Cal	905
15.	TCU	906
16.	Cal	907
17.	Oregon	914
18.	Oregon St.	915

- LOBOS INDIVIDUALS -

Sauer	69-75-76=220	T12th
LaBelle	73-75-74=222	T25th
Murphy	76-73-77=226	T49th
McMillan	77-76-74=227	T52nd
Sharp	81-74-79=234	T85th

Cougar Classic
April 28-29, 1995
Riverside Country Club
Provo, Utah
Par 72 • 6,950 yards

- TEAM STANDINGS -

1.	**New Mexico**	**862**
2.	BYU	875
3.	UTEP	876
4.	Weber St.	884
	Colorado St.	884
6.	Campbell	892
7.	Air Force	896
8.	Utah St.	897
9.	Utah	898
10.	Wyoming	901
11.	San Diego St.	905
12.	Boise St.	907
	Southern Utah	907
14.	Hawai'i	912
15.	Utah Valley St.	913
16.	British Colombia	915

- LOBOS INDIVIDUALS -

McMillan	71-69-73=213	T2nd
LaBelle	67-73-73=213	T2nd
Sauer	71-76-74=221	T16th
Sharp	72-74-76=222	18th
Kersting	79-75-70=224	T23rd
Murphy	75-75-75=225	T27th

1994-95 TOURNAMENT BY TOURNAMENT

1995 WAC Championships
May 1-3, 1995
Wingpointe Golf Course
Salt Lake City, Utah
Par 72 • 7,074 yards

- TEAM STANDINGS -

1.	BYU	862
2.	Colorado St.	866
3.	New Mexico	871
4.	UTEP	874
5.	San Diego St.	877
6.	Utah	881
7.	Wyoming	883
8.	Fresno St.	886
9.	Hawai'i	901
10.	Air Force	917

- LOBOS INDIVIDUALS -

Sauer	70-71-72=213	3rd
Murphy	70-75-71=216	T6th
McMillan	73-75-75=223	T22nd
LaBelle	76-71-78=225	T30th
Sharp	76-77-72=225	T30th

1995 NCAA West Regional
May 18-20, 1995
The Championship Golf Course
Albuquerque, New Mexico
Par 72 • 7,250 yards

- TEAM STANDINGS -

1.	Arizona St.	844
2.	New Mexico	852
3.	New Mexico St.	865
4.	Arizona	866
5.	UNLV	869
6.	Stanford	870
7.	UTEP	871
8.	California	873
9.	Southern California	883
10.	Pepperdine	886
	San Jose St.	886
12.	Fresno St.	889
	Weber St.	889
14.	UC Irvine	890
15.	Pacific	891
	BYU	891
17.	UCLA	900
18.	San Diego St.	912

- LOBOS INDIVIDUALS -

Sauer	68-69-71=208	1st
LaBelle	72-69-72=213	T6th
McMillan	78-66-70=214	T12th
Murphy	75-71-76=222	T41st
Sharp	73-74-77=224	T49th

1995 NCAA Championships
May 31 - June 3, 1995
Ohio State Scarlet
Columbus, Ohio
Par 72 • 7,109 yards

- TEAM STANDINGS -

1.	Oklahoma State	1156
2.	Stanford	1156
3.	Texas	1157
4.	Arizona State	1164
5.	Southern California	1165
6.	California	1166
7.	Florida State	1168
8.	North Carolina State	1170
	Ohio State	1170
10.	Arizona	1171
11.	Tulsa	1176
12.	New Mexico	1182
13.	Florida	1184
14.	Houston	1186
15.	UNLV	1187

- LOBOS INDIVIDUALS -

McMillan	74-70-74-73=291	T21st
Sauer	75-66-78-76=295	T39th
Sharp	78-74-79-72=300	T58th
LaBelle	76-78-77-74=305	T70th
Murphy	73-77-76-81=307	73rd

0880

1994-95 New Mexico Men's Golf Roster

Name	Hgt.	Wgt.	Class	Hometown (Last School)
Paul Baack	6-3	175	Fr.	Lincoln, Neb. (Lincoln Southeast HS)
Wade Barnett	6-1	183	So.	Alamorgordo, N.M. (Alamogordo HS)
David Brigman	6-4	175	Fr.	Bedford, Texas (Trinity HS)
Brad Dinkel	5-11	145	Sr.	Golden Colo. (Golden HS)
Brent Freeze	6-1	170	Jr.	Albuquerque, N.M. (Cibola HS)
Jay Jones	6-1	175	So.	Albuquerque, N.M. (Albuquerque HS)
Hans Kersting	5-11	165	Sr.	Las Cruces, N.M. (Las Cruces HS)
Doug LaBelle	5-10	150	So.	Mt. Pleasant, Mich. (Mt. Pleasant HS)
Rob McMillan	5-6	130	Fr.	Winnipeg, Canada (Mennonite Brethren Collegiate Institute)
Glen Millican	5-9	130	Fr.-RS	Garland, Texas (North Garland HS)
Ryan Murphy	5-7	140	So.	Lovington, Texas (Lovington HS)
Antonio Ortega	5-8	137	Fr.	Albuquerque, N.M. (Manzano HS)
Chris Parra	5-8	132	Fr.	Irving, Texas (MacArthur HS)
Aaron Salars	6-0	160	Fr.	Silver City, N.M. (Silver HS)
Mike Sauer	6-0	175	Jr.	Walker, Minn. (Walker HS)
Brad Sharp	5-8	155	So.	Waco, Texas (Waco HS)
Chris Wall	5-11	130	Fr.	Dallas, Texas (Highland Pary HS)

Head Coach: John Fields (1981, New Mexico) • Eighth season
Assistant Coach: Brett Peterson (1994, New Mexico) • First season

WOMEN'S GOLF

The University of New Mexico women's golf team completed their season by finishing in 15th place at the 1995 NCAA Women's Golf Championships held in Wilmington, N.C. May 24-27, 1995.

One of the goals set by the team at the beginning of the season was to repeat as Western Athletic Conference champions (making it their third in a row) and compete in the national championships. UNM achieved both goals with a young team. New Mexico competed with three freshmen, a sophomore and a senior at nationals. The future of Lobo women's golf is bright. This young team competed on the same level as several dominating teams from the far west and east regions at the NCAA's. "We know we can play at the same level as the top schools across the country" said head coach Sarah Hindi. "This was a learning experience for us. The freshman had never been exposed to the experience of the National Championships. Now they know what it takes to get there, work hard and achieve their goals. We hope to continue this throughout their collegiate career." Top finisher for New Mexico was freshman Angie Hopkins who finished tied for 38th place.

There were various honors throughout the season for the New Mexico women's golf program. The Lobos garnered five WAC Player of the Week honors, tops in the conference. Sophomore Joellyn Erdmann (twice), senior Tracy May, and freshman J.J. McCormick and Jennifer Kern made an impact on WAC women's golf. May was named WAC Player of the Year and freshman McCormick was named WAC Freshman of the Year making it the second year in a row that New Mexico captured both honors. May, McCormick and Erdmann were named to the All-WAC team and WAC Championships All-Tournament teams.

Individual medalist honors this season went to May who captured the 16th Annual Dick McGuire Tournament title hosted by UNM. May finished with a three-round total of 217, two under par. Erdmann earned her title by one stroke over teammates May and McCormick, 154-155 at the 1995 WAC Championships in Cheyenne, WY.

Scholastically for the women's golf team Joellyn Erdmann was named a All-WAC Academic for maintaining a 3.30 grade point average in management. The team maintained a 2.91 GPA for the season (3.11 - fall '94, 2.71 - spring '95).

Coaching accolades continue pouring in for fifth-year head coach Sarah Hindi. In December of 1994, Hindi was named Ladies Professional Golf Association (LPGA) Coach of the Year. The award, selected by the LPGA Teaching and Club Professional (T&CP) Division, recognized the LPGA member who actively engaged in teaching and coaching golf at the high school or collegiate level. The award specifically focuses on areas of coaching, recruiting, program development, instruction, tournament organization and professional involvement in governing athletics. UNM's first national coach of the year in any sport, Hindi has produced five All-American Scholar Athletes and 15 all-conference performers while at New Mexico.

In February of this year Hindi was named Albuquerque Sports Hall of Fame Coach of the Year for her continuing success of the women's golf program. A former Lobo herself, Hindi has built a solid foundation for the women's golf program over the past years.

INDIVIDUAL SCOREBOARD

NAME	TOURNAMENT	SCORE	PLACE	AVERAGES
Joellyn Erdmann	Roadrunner Invitational	74-72-73=219	3rd	
	Dick McGuire Invitational	72-77-80=229	T21st	
	Edean Ihlanfeldt Invitational	80-77-83=240	T22nd	
	Fall Preview	77-73-80=230	T7th	
	Chris Johnson Invitational	79-81-76=236	T40th	
	Stanford Invitational	81-80-83=244	T62nd	
	ASU Invitational	83-78-76=237	T51st	
	WAC Championships	80-74=154	1st	
	NCAA West Regional	74-76-79=229	T42nd	
	NCAA Championships	80-79-78-76=313	T73rd	*30 rounds...2331 strokes...77.7 avg.*
J.J. McCormick	Roadrunner Invitational	81-77-77=235	T15th	
	Dick McGuire Invitational	73-79-78=230	T25th	
	Fall Preview	88-83-81=252	T80th	
	Chris Johnson Invitational	74-78-74=226	T12th	
	Stanford Invitational	75-79-85=239	T43rd	
	ASU Invitational	81-74-79=234	T42nd	
	WAC Championships	78-77=155	T2nd	
	NCAA West Regional	75-70-83=228	T37th	
	NCAA Championships	73-81-76-DQ	DQ	*23 rounds...1799 strokes...78.22 avg.*
Tracy May	Roadrunner Invitational	78-75-76=229	T7th	
	Dick McGuire Invitational	72-74-71=217	1st	
	Edean Ihlanfeldt Invitational	72-78-88=238	T17th	
	Fall Preview	82-84-75=241	T36th	
	Chris Johnson Invitational	90-83-81=254	T92nd	
	ASU Invitational	86-82-73=241	T61st	
	WAC Championships	73-82=155	T2nd	
	NCAA West Regional	77-78-76=231	T50th	
	NCAA Championships	80-78-77-83=318	T86th	*27rounds...2124 strokes...78.66 avg.*
Jennifer Kern	Roadrunner Invitational	80-81-79=240	T32nd	
	Dick McGuire Invitational	81-85-73=239	T50th	
	Edean Ihlanfeldt Invitational	83-83-84=250	T45th	
	Chris Johnson Invitational	78-79-83=240	T58th	
	Stanford Invitational	77-74-80=231	T26th	
	ASU Invitational	86-77-76=239	T57th	
	NCAA West Regional	74-77-80=231	T50th	
	NCAA Championships	80-75-81-73=309	T60th	*25 rounds...1979 strokes...79.16 avg.*
Angie Hopkins	Roadrunner Invitational	83-78-78=239	T28th	
	Dick McGuire Invitational	72-80-75=227	T15th	
	Edean Ihlanfeldt Invitational	80-76-82=238	T17th	
	Fall Preview	90-86-86=262	92nd	
	Stanford Invitational	74-80-90=244	T62nd	
	ASU Invitational	77-80-80=237	T51st	
	WAC Championships	80-80=160	T11th	
	NCAA West Regional	83-81-79=243	T89th	
	NCAA Championships	78-76-75-75=304	T38th	*27 rounds...2154 strokes...79.77 avg.*
Megan Benn	Roadrunner Invitational	78-77-84=239	T28th	
	Dick McGuire Invitational	82-80-78=240	T53rd	
	Edean Ihlanfeldt Invitational	81-78-81=240	T22nd	
	Fall Preview	88-83-81=252	T74th	
	Chris Johnson Invitational	76-86-89=251	T89th	
	Stanford Invitational	81-80-79=240	T48th	
	WAC Championships	87-76=163	T18th	*20 rounds...1625 strokes...81.25 avg.*
Mollie Gibson	Roadrunner Invitational-ind	85-86-84=255	T62nd	
	Dick McGuire Invitational	78-82-WD		
	Chris Johnson Invitational-ind	84-85-82=251	T89th	*6 rounds...506 strokes...84.33 avg.*

1994-95 TEAM SCOREBOARD

FALL 1994

Sept. 9-11	*Diet Coke-NMSU Roadrunner Invitational* University Golf Course Las Cruces, New Mexico	310-301-305=916 (3rd of 17 teams)
Sept. 26-28	*Dick McGuire Invitational* Championship Golf Course Albuquerque, New Mexico	289-310-302=901 (3rd of 18 teams)
Oct. 10-12	*Edean Ihlanfeldt Invitational* Sahalee Golf Course Redmond, Washington	313-309-330=952 (6th of 15 teams)
Nov. 11-13	*Fall Preview* Pete Dye Course Wilmington, North Carolina	335-323-319=977 (13th of 22 teams)

SPRING 1995

Feb. 20-22	*Chris Johnson Invitational* Randolph Park North Golf Course Tucson, Arizona	307-321-314=942 (14th of 19 teams)
Mar. 3-5	*Stanford Invitational* Stanford University Golf Course Palo Alto, California	307-313-327=947 (10th of 15 teams)
Mar. 31-Apr. 2	*ASU/Ping Invitational* Karsten Golf Course Tempe, Arizona	327-309-304=940 (11th of 16 teams)
Apr. 10-11	*Firethorn Collegiate Invitational* Firethorn Golf Course Lincoln, Nebraska	Canceled-Inclement Weather
Apr. 24-26	*WAC Championships* Cheyenne Country Club Cheyenne, Wyoming	311-307=618 (1st of 6 teams)
May 11-13	*NCAA Division I West Regional* Randolph Park North Golf Course University of Arizona Tucson, Arizona	300-301-314=915 (11th of 20 teams)
May 24-27	*NCAA Division I Women's Golf Championships* Landfall Club-Pete Dye Course University of North Carolina-Wilmington Wilmington, North Carolina	311-308-306-307=1232 (15th of 18 teams)

1994-95 New Mexico Women's Golf Roster

Name	*Ht.*	*Cl.-Ex.*	*Hometown (Last School)*
Megan Benn	5-3	So.-1L	Tulsa, Okla. (Jenks HS)
Joellyn Erdmann	5-3	So.-1L	Little Chute, Wisc. (Xavier HS)
Mollie Gibson	5-6	So.-1L	Casper, Wyo. (Natrona Co. HS)
Elizabeth Hammock	5-3	Fr-HS	Plano, Texas (Plano HS)
Angie Hopkins	5-3	Fr.-HS	Stillwater, Okla. (Stillwater HS)
Jennifer Kern	5-3	Fr.-HS	Durango, Colo. (Durango HS)
Tracy May	5-4	Sr.-3L	Troy, NH (Monadnock Regional HS)
Jennifer McCormick	5-8	Fr.-HS	Denver, Colo. (Columbine HS)

Head Coach: Sarah Hindi

SOFTBALL

The University of New Mexico softball team ended its 1995 season with its first losing record in seven years. The final record for UNM was 12-36 overall and 6-22 in WAC play. Of the 36 losses, 11 were by only one-run. The Lobos continue to compete in the most difficult softball conference in the country. At the conclusion of the season, four teams from the WAC advanced to NCAA Regional play. Three of those teams were ranked among the top-15 in the country most of the season.

The Lobos primarily struggled in 1995 due to a young pitching staff. Three freshmen hurlers threw in 47 of the 48 games in 1995. Two pitchers hailed from Albuquerque, Jodi Baldwin and Holly Huibregtse, and one is from Tucson, Ariz. Kristy Byrge. With inexperience on the mound, the Lobos opponents were able to hit .321 against UNM while the ERA for the pitching staff was 4.37. Another pitching statistic that was inflated in 1995 was wild pitches. UNM's pitchers threw 51 wild pitches, equal to the previous four years combined.

Three players that wrapped up their playing career in a Lobos uniform are Michelle Cash, Terri Laguna and Heather Medearis. Medearis played all four years at UNM and began her career named Freshman of the Year in 1992. Medearis is also at the top or within the top-5 of all major offensive categories. She led the team in batting average in 1992 and 1995. On the all-time career list, Medearis scored 93 runs, drove in 97 runs, collected 181 hits, including 19 homeruns, over her four years at UNM. On the single-season record list, she had the third highest batting average of .383, most runs scored, 34, most hits, 59 and most homeruns with nine. All of these records occurred in 1994. Medearis and her bat will be missed when the 1996 season begins. Laguna earned a spot on the GTE CoSIDA District VI All-America Academic team. Cash closed out her career by earning Second Team All-WAC honors.

A positive aspect of having a young team is that most of the team returns in 1996 with a year of experience in a very tough conference. Losing only three players to graduation, UNM has a solid core to build on. One of the newcomers had a good year in 1995. Sophomore Jackie Van Hooydonk batted .292 with 18 RBI and 17 runs scored. Van Hooydonk collected 35 hits, including five homeruns, tops for the Lobos.

Three players will return for their senior seasons in 1996, Renee Bergeron, Casey Coffman and Marnie Hill. Bergeron had her season shortened this year due to an injury. Six games into the WAC season, Bergeron tore the ulnar collateral ligament in her right thumb during practice and was lost for most of the remainder of the season. Prior to the injury, Bergeron was leading the team in batting and began to develop into a power hitter from her former role as a slapper/bunter. Coffman hit .299 with 50 hits and 19 runs scored last year. Coffman was also second on the team in doubles with nine. Coffman was recognized by the league's coaches and earned First Team All-WAC honors in 1995. Hill hit .283 with 11 RBI and 20 runs scored. Hill pitched the final game of the year and it was the best performance by a Lobo pitcher in 1995. Hill threw a complete game shutout allowing only six hits in seven innings with three strikeouts. With a performance like that, expect Hill to receive more time on the mound in 1996. Van Hooydonk stepped in at shortstop, Hill's primary position, and did not allow an error. With a senior and one or possibly two seasoned sophomores on the mound, 1996 will be a good year for the Lobo softball program.

UNIV OF NEW MEXICO SOFTBALL STATISTICS
As of 06/02/95

ALL GAMES

Record: 12-36- 0 Home: 8-12- 0 Road: 3-20- 0 Neutral: 1- 4- 0

Player	AVG	GP-GS	AB	R	H	2B	3B	HR	RBI	TB	SLG%	BB	HB	SO	OB%	SF	S	SB-SBA	PO	A	E	FLD%
MEDEARIS, HEATHER, 1	.307	48-48	137	24	42	10	1	4	20	66	.482	17	1	24	.385	1	1	4-5	315	43	6	.984
BERGERON, RENEE, 2B	.303	25-23	66	10	20	4	0	0	9	24	.364	3	0	7	.333	0	0	2-3	91	59	5	.968
COFFMAN, CASEY, OF	.299	48-48	167	19	50	9	1	0	8	61	.365	5	0	13	.320	0	0	5-7	85	4	6	.937
VAN HOOYDONK, JACKIE	.292	45-45	120	17	35	3	0	5	18	53	.442	5	0	25	.320	0	2	8-9	55	30	6	.934
HILL, MARNIE, SS	.283	48-48	145	20	41	6	0	1	11	50	.345	11	1	8	.333	2	8	2-4	83	108	13	.936
CASH, MICHELLE, C	.272	48-48	136	18	37	8	1	1	17	50	.368	9	0	23	.313	2	9	6-8	74	13	3	.967
SAAVEDRA, TANYA, INF	.250	11-5	12	1	3	0	0	0	1	3	.250	1	0	5	.308	0	0	1-1	0	0	0	.000
LAGUNA, TERRI, 3B	.221	40-40	113	6	25	3	0	2	19	34	.301	9	0	24	.279	0	5	0-0	33	95	11	.921
STEVENS, HEATHER, IN	.200	6-1	5	2	1	0	0	0	0	1	.200	4	0	1	.556	0	0	2-2	3	0	0	1.000
BYRGE, KRISTY, P	.200	3-2	5	1	1	0	0	0	1	1	.200	0	0	3	.200	0	1	0-0	1	50	2	.962
DOW, SUZANNE, UTL	.179	38-36	95	11	17	0	1	0	8	19	.200	6	0	18	.228	0	2	8-10	24	3	3	.900
BALDWIN, JODI, P	.176	8-6	17	1	3	1	0	0	2	4	.235	2	1	6	.300	0	0	0-0	4	29	5	.868
GARRISON, CHRISTY, I	.155	28-25	58	2	9	0	0	0	8	9	.155	6	0	14	.234	0	5	1-1	95	37	9	.936
HANNIFIN, JOY, C	.136	43-41	110	7	15	3	0	0	7	18	.164	4	0	20	.167	0	2	2-2	59	16	2	.974
SHROPSHIRE, AMBER, O	.083	28-7	24	3	2	1	0	0	0	3	.125	5	0	8	.241	0	2	2-2	3	1	1	.800
HUIBRETGSE, HOLLY, O	.083	13-9	24	1	2	1	0	0	1	3	.125	0	0	8	.083	0	1	0-0	6	18	1	.960
NEW MEXICO	.246	48	1234	143	303	49	4	13	130	399	.323	87	3	207	.297	5	38	43-54	931	506	73	.952
Opponents	.321	48	1262	265	405	46	13	21	219	540	.428	176	9	83	.408	6	78	61-73	969	458	58	.961

GRAND SLAM: NEW MEXICO (0) OPP (0)
CATCHER'S INTERFERENCE: NEW MEXICO (0) OPP (0)
LEFT ON BASE: NEW MEXICO (259) OPP (339), DOUBLE PLAYS: NEW MEXICO (16) OPP (8)

Player	ERA	W-L	APP	GS	CG	SH	SV	IP	H	R	ER	BB	SO	2B	3B	HR	BF	O/AVG	BK	HB	PO	A	E	FLD%
HILL, MARNIE, SS	0.00	1-0	1	1	1	1	0	7.0	6	0	0	1	3	1	1	0	27	.240	0	0	83	108	13	.936
HUIBRETGSE, HOLLY, O	3.20	3-6	23	2	1	1	0	65.2	84	44	30	16	15	5	2	6	306	.307	0	1	6	18	1	.960
BYRGE, KRISTY, P	4.62	3-17	34	24	5	0	1	121.1	144	105	80	110	36	20	5	9	630	.292	0	3	1	50	2	.962
BALDWIN, JODI, P	5.03	5-13	29	21	8	1	1	117.0	172	116	84	49	31	20	5	6	570	.347	0	6	4	29	5	.868
NEW MEXICO	4.37	12-36	87	48	15	3	2	311.0	406	265	194	176	85	46	13	21	1533	.315	0	10				
Opponents	2.49	36-12		48	29	10	2	323.0	301	143	115	85	207	49	4	13	1361	.245	0	3				

WILD PITCHES: NEW MEXICO (51) BYRGE 38,BALDWIN 11,HUIBRETGSE 2, OPP (10)
PASSED BALLS: NEW MEXICO (15) CASH 7,HANNIFIN 8, OPP (6)

CONFERENCE GAMES ONLY

Record: 6-22- 0 Home: 4-10- 0 Road: 2-12- 0 Neutral: 0- 0- 0

Player	AVG	GP-GS	AB	R	H	2B	3B	HR	RBI	TB	SLG%	BB	HB	SO	OB%	SF	S	SB-SBA	PO	A	E	FLD%
SAAVEDRA, TANYA, INF	.333	8-4	9	1	3	0	0	0	1	3	.333	0	0	4	.333	0	0	1-1	0	0	0	.000
HEDEARIS, HEATHER, 1	.317	28-28	82	9	26	5	0	2	8	37	.451	8	0	14	.374	1	0	4-4	164	36	4	.980
COFFMAN, CASEY, OF	.306	28-28	98	13	30	5	1	0	5	37	.378	3	0	7	.327	0	0	2-2	62	3	5	.929
CASH, MICHELLE, C	.286	28-28	84	11	24	5	0	1	11	32	.381	2	0	13	.299	1	5	4-4	39	3	2	.955
HILL, MARNIE, SS	.268	28-28	82	10	22	3	0	0	4	25	.305	6	1	6	.319	2	5	0-1	50	53	8	.928
BERGERON, RENEE, 2B	.250	8-6	16	2	4	1	0	0	4	5	.313	0	0	2	.250	0	0	0-1	25	15	1	.976
VAN HOOYDONK, JACKIE	.242	27-27	66	8	16	3	0	2	7	25	.379	2	0	16	.265	0	1	4-4	35	29	4	.941
BALDWIN, JODI, P	.176	8-6	17	1	3	1	0	0	2	4	.235	2	1	6	.300	0	0	0-0	3	12	3	.833
LAGUNA, TERRI, 3B	.169	20-20	59	2	10	2	0	1	8	15	.254	6	0	12	.246	0	0	0-0	17	46	7	.900
DOW, SUZANNE, UTL	.164	23-22	55	6	9	0	1	0	3	11	.200	4	0	8	.220	0	1	4-6	13	2	2	.882
GARRISON, CHRISTY, I	.163	22-22	49	2	8	0	0	0	8	8	.163	5	0	12	.241	0	5	1-1	87	34	8	.938
HANNIFIN, JOY, C	.130	27-25	69	4	9	1	0	0	4	10	.145	2	0	14	.155	0	2	2-2	46	13	2	.967
SHROPSHIRE, AMBER, O	.105	16-6	19	1	2	1	0	0	0	3	.158	5	0	8	.292	0	1	1-1	3	1	1	.800
BYRGE, KRISTY, P	.000	2-1	1	1	0	0	0	0	0	0	.000	0	0	1	.000	0	1	0-0	0	28	2	.933
HUIBRETGSE, HOLLY, O	.000	4-2	6	0	0	0	0	0	0	0	.000	0	0	3	.000	0	0	0-0	3	10	0	1.000
NEW MEXICO	.233	28	712	71	166	27	2	6	65	215	.302	45	2	126	.281	4	21	23-27	547	285	49	.944
Opponents	.350	28	761	165	266	32	8	13	137	353	.464	86	5	50	.419	4	53	41-49	567	262	33	.962

GRAND SLAM: NEW MEXICO (0) OPP (0)
CATCHER'S INTERFERENCE: NEW MEXICO (0) OPP (0)
LEFT ON BASE: NEW MEXICO (147) OPP (199), DOUBLE PLAYS: NEW MEXICO (8) OPP (5)

Player	ERA	W-L	APP	GS	CG	SH	SV	IP	H	R	ER	BB	SO	2B	3B	HR	BF	O/AVG	BK	HB	PO	A	E	FLD%
HILL, MARNIE, SS	0.00	1-0	1	1	1	1	0	7.0	6	0	0	1	3	1	1	0	27	.240	0	0	50	53	8	.928
HUIBRETGSE, HOLLY, O	3.30	3-4	17	2	1	1	0	53.0	67	34	25	10	13	4	2	6	243	.309	0	1	3	10	0	1.000
BYRGE, KRISTY, P	3.86	1-9	21	14	2	0	1	70.2	86	54	39	56	19	12	3	4	361	.296	0	1	0	28	2	.933
BALDWIN, JODI, P	7.18	1-9	16	11	2	0	0	51.2	107	77	53	19	17	15	2	3	278	.431	0	3	3	12	3	.833
NEW MEXICO	4.49	6-22	55	28	6	2	1	182.1	266	165	117	86	52	32	8	13	909	.341	0	5				
Opponents	2.19	22-6		28	23	8	1	189.0	164	71	59	44	126	27	2	6	781	.233	0	2				

WILD PITCHES: NEW MEXICO (24) BALDWIN 6,BYRGE 18, OPP (3)
PASSED BALLS: NEW MEXICO (9) CASH 2,HANNIFIN 7, OPP (4)

ssi

WAC 0088
UNIV OF NEW MEXICO SOFTBALL RESULTS
As of 06/02/95

DATE	OPPONENT	W-L-T	SCORE	SITE	OVERALL RECORD	CONF RECORD	PITCHER	OPP PITCHER	LINE	OPP LINE
2/23	MINNESOTA@	L	9- 1	H	0- 1-		KRISTY BYRGE	WENDY LOGUE	1- 5- 3	9- 9- 1
2/23	MINNESOTA@	W	6- 5	H	1- 1-		JODI BALDWIN	WENDY LOGUE	6- 8- 1	5- 8- 3
2/25	DEPAUL@	W	6- 0	H	2- 1-		JODI BALDWIN	MARIE O'BECK	6- 8- 0	0- 2- 1
2/25	DEPAUL@	L	8- 5	H	2- 2-		KRISTY BYRGE	KIMBERLEE BLACKMORE	5- 9- 1	8- 8- 0
2/26	NEW MEXICO STATE@	W	4- 2	H	3- 2-		JODI BALDWIN	LYNN SHEEHEY	4- 7- 0	2- 5- 0
2/26	NEW MEXICO STATE@	W	8- 3	H	4- 2-		KRISTY BYRGE	KRISTINE ATCHLEY	8-11- 0	3- 6- 2
3/04	Pacific#	L	1- 0	N	4- 3-		JODI BALDWIN	RODGERS	0- 4- 1	1- 5- 3
3/04	Arizona#	L	11- 0	A	4- 4-		KRISTY BYRGE	CARRIE DOLAN	0- 0- 0	11-10- 1
3/05	Pacific#	W	3- 1	N	5- 4-		JODI BALDWIN	RODGERS	3- 7- 0	1- 3- 0
3/05	Arizona#	L	8- 0	A	5- 5-		KRISTY BYRGE	NANCY EVANS	0- 0- 0	8- 5- 0
3/15	Cal State Fullerton	L	7- 2	A	5- 6-		KRISTY BYRGE	ISGAR	2- 6- 2	7-13- 0
3/15	Cal State Fullerton	L	3- 0	A	5- 7-		JODI BALDWIN	G. GUERRERO	0- 4- 0	3- 7- 0
3/17	Cal State Sacramento	L	3- 0	A	5- 8-	0- 1-	JODI BALDWIN	S. BUGLIARELLO	0- 0- 2	3- 4- 2
3/17	Cal State Sacramento	L	11- 5	A	5- 9-	0- 2-	JODI BALDWIN	TAMI BLUNT	5-12- 5	11-17- 0
3/18	Fresno State	L	10- 0	A	5-10-	0- 3-	JODI BALDWIN	MAUREEN BRADY	0- 5- 2	10- 5- 0
3/18	Fresno State	L	4- 3	A	5-11-	0- 4-	KRISTY BYRGE	JENNIFER CLARK	3- 4- 0	4-11- 1
3/24	Western Michigan$	L	4- 3	N	5-12-	0- 4-	KRISTY BYRGE	CANNAVINO	3- 4- 1	4- 7- 2
3/24	Virginia$	L	7- 6	N	5-13-	0- 4-	JODI BALDWIN	COLLINS	6-12- 2	7- 6- 2
3/25	Arizona State$	W	7- 5	A	6-13-	0- 4-	KRISTY BYRGE	NIEBUHR	7-10- 3	5- 9- 2
3/25	San Diego State$	L	7- 6	N	6-14-	0- 4-	JODI BALDWIN	PENROD	6-11- 4	7- 7- 3
3/26	Arizona State$	L	4- 3	A	6-15-	0- 4-	HOLLY HUIBREGTSE	CARRIE BREEDLOVE	3- 8- 0	4- 7- 1
3/31	CAL STATE NORTHRIDGE	L	2- 0	H	6-16-	0- 5-	KRISTY BYRGE	JENNIFER RICHARDSON	0- 1- 1	2- 7- 0
3/31	CAL STATE NORTHRIDGE	L	7- 3	H	6-17-	0- 6-	KRISTY BYRGE	KATHY BLAKE-SMALL	3- 8- 4	7- 9- 0
4/01	SAN DIEGO STATE	L	2- 1	H	6-18-	0- 7-	HOLLY HUIBREGTSE	MARQUESSA PENROD	1- 2- 1	2- 9- 2
4/01	SAN DIEGO STATE	W	7- 5	H	7-18-	1- 7-	JODI BALDWIN	LISA GONZALEZ	7-15- 1	5-15- 3
4/04	New Mexico State	L	4- 3	A	7-19-	1- 7-	KRISTY BYRGE	LYNN SHEEHEY	3- 6- 2	4- 8- 1
4/04	New Mexico State	L	5- 4	A	7-20-	1- 7-	HOLLY HUIBREGTSE	DANIEL DUNN	4- 8- 3	5- 7- 2
4/07	Southern Utah	W	6- 3	A	8-20-	2- 7-	KRISTY BYRGE	JANET JENSEN	6-12- 1	3- 5- 1
4/07	Southern Utah	L	8- 4	A	8-21-	2- 8-	KRISTY BYRGE	HEIDI MILLER	4- 9- 3	8-10- 2
4/15	Colorado State	L	4- 0	A	8-22-	2- 9-	KRISTY BYRGE	KIM PECK	0- 4- 0	4- 4- 0
4/15	Colorado State	L	10- 0	A	8-23-	2-10-	JODI BALDWIN	NIKKI JOHNSON	0- 2- 3	10-10- 1
4/16	Colorado State	L	6- 5	A	8-24-	2-10-	KRISTY BYRGE	NIKKI JOHNSON	5- 8- 1	6- 8- 1
4/21	FRESNO STATE	L	11- 2	H	8-25-	2-11-	KRISTY BYRGE	MAUREEN BRADY	2- 3- 3	11-16- 0
4/21	FRESNO STATE	L	7- 4	H	8-26-	2-12-	JODI BALDWIN	JENNIFER CLARK	4- 6-	7-18- 1
4/22	CAL STATE SACRAMENTO	L	5- 1	H	8-27-	2-13-	JODI BALDWIN	SUSIE BUGLIARELLO	1- 6- 0	5-11- 0
4/22	CAL STATE SACRAMENTO	L	7- 1	H	8-28-	2-14-	KRISTY BYRGE	ROBIN JURY	1- 7- 1	7-10- 0
4/28	San Diego State	L	2- 0	A	8-29-	2-15-	KRISTY BYRGE	MARQUESSA PENROD	0- 3- 1	2- 4- 1
4/28	San Diego State	L	1- 0	A	8-30-	2-16-	JODI BALDWIN	GONZALES	0- 5- 0	1- 2- 2
4/29	Cal State Northridge	L	6- 0	A	8-31-	2-17-	KRISTY BYRGE	KATHY BLAKE-SMALL	0- 3- 2	6- 7- 0
4/29	Cal State Northridge	L	7- 0	A	8-32-	2-18-	JODI BALDWIN	JENNIFER RICHARDON	0- 4- 4	7-11- 1
5/05	UTAH	L	7- 5	H	8-33-	2-19-	HOLLY HUIBREGTSE	ALI ANDRUS	5- 9- 3	7- 9- 1
5/05	UTAH	L	14- 5	H	8-34-	2-20-	JODI BALDWIN	MONICA JIMENEZ	5- 6- 4	14-17- 3
5/06	Utah	W	4- 3	A	9-34-	3-21-	HOLLY HUIBREGTSE	ALI ANDRUS	4-10- 0	3- 7- 2
5/06	Utah	L	17- 7	A	9-35-	3-21-	HOLLY HUIBREGTSE	MONICA JIMENEZ	7- 9- 4	17-20- 3
5/07	SOUTHERN UTAH	W	1- 0	H	10-35-	4-21-	HOLLY HUIBREGTSE	MICHAEL ANN SPENCER	1- 2- 0	0- 5- 0
5/07	SOUTHERN UTAH	W	6- 4	H	11-35-	5-21-	HOLLY HUIBREGTSE	JANET JENSEN	6-13- 1	4- 9- 1
5/12	COLORADO STATE	L	5- 3	H	11-36-	5-22-	HOLLY HUIBREGTSE	NIKKI JOHNSON	5- 8- 4	3- 6- 3
5/12	COLORADO STATE	W	3- 0	H	12-36-	6-22-	MARNIE HILL	KIM PECK	3- 5- 0	0- 6- 2

$-DIAMOND DEVIL CLASIC,#-HILLENBRAND INVITE,@-SUNWEST BANK

ssi [Ver: 4.3b]

THE UNIVERSITY OF NEW MEXICO

1995 New Mexico Softball Roster

NO.	NAME	POSITION	BATS/THROWS	YEAR	HT.	HOMETOWN (LAST SCHOOL)
00	Terri Laguna	Third Base	Right/Right	Jr-2L	5-8	Glendale, Ariz. (Apollo HS)
1	Tanya Saavedra	Infield	Right/Right	Fr-HS	5-3	Albuquerque, N. M. (Valley HS)
2	Renee Bergeron	Second Base	Left/Right	Jr-2L	5-6	Los Alamitos, Calif. (Los Alamitos HS) - injured
3	Casey Coffman	Outfield	Left/Left	Jr-2L	5-7	Napa, Calif. (Vintage HS)
4	Holly Huibretgse	Outfield	Right/Right	Fr-HS	5-10	Albuquerque, N.M. (Sandia HS)
5	Suzanne Dow	Utility	Right/Right	Fr-HS	5-6	Joliet, Ill. (Joliet Catholic Academy)
6	Joy Hannifin	Catcher	Right/Right	Fr-HS	5-6	Cypress, Calif. (Kennedy HS)
7	Michelle Cash	Outfield/Catcher	Right/Right	Sr-3L	5-8	Garden Grove, Calif. (Garden Grove HS)
8	Kristy Byrge	Pitcher	Right/Right	Fr-HS	5-6	Tucson, Ariz. (Sabino HS)
9	Marnie Hill	Shortstop	Right/Right	Jr-2L	5-8	Campbell River, BC, Canada(Princess Margaret HS)
12	Christy Garrison	Infield	Right/Right	Fr-HS	5-3	Colorado Springs, Colo. (William J. Palmer HS)
13	Jackie Van Hooydonk	Utility	Right/Right	So-TR	5-3	Delta, BC, Canada (Crowder College)
16	Jodi Baldwin	Pitcher	Right/Right	Fr-HS	5-9	Albuquerque, N.M. (Cibola HS)
22	Amber Shropshire	Outfield	Switch/Right	Fr-HS	5-4	Farmington, N.M. (Farmington HS)
23	Heather Medearis	First Base	Right/Right	Sr-3L	5-8	Valencia, Calif. (Hart HS)

Coaches: Co-Head Susan Craig
Co-Head Ken Johnson

DEPARTMENT OF INTERCOLLEGIATE ATHLETICS
Sports Information
Albuquerque, NM 87131-0041
Phone: (505) 277-2026 FAX: (505) 277-0142

MEN'S AND WOMEN'S INDOOR TRACK AND FIELD

The UNM Track and Field team struggled this season in both the indoor and outdoor seasons, but they did show promise for the future. With only four athletes graduating, and 46 returning, the Lobos will be a team featuring youth, and experience, next season.

About midway through the indoor season the Lobos started to come together as a team. UNM Track did not lack in the talent department this season, but it was more the depth that caused problems. In team competition, the Lobos were swept in the two meets before the WAC Championships at Air Force, coming in last in both of them. At the WAC Indoor Championships, the Lobos again came in last in both men's and women's. This was definitely the low point of the season.

MEN'S AND WOMEN'S OUTDOOR TRACK AND FIELD

The Lobos began to show potential, in scoring meets in the spring season. At the first scoring meet of the season. The men had a difficult time, but the women came in first out of five teams participating. The men, however, did resurface later on in the season at the Don Kirby Invitational, in which UNM played host to Colorado, Oklahoma and Texas-San Antonio. The men won a pair of dual meets against Colorado (59-57) and UTSA (69-18). The women beat UTSA 79-56. This helped the Lobos to finish out the season knowing they beat some quality teams. At the WAC Outdoor Championships in Provo (BYU host) the Lobos had trouble putting up points. The men finished seventh out of eight and the women finished seventh out of nine. Again, it was depth which hurt the Lobos. In order to do well in these scoring meets, you need to saturate each event. The Lobos were unable to do that this season. With the new recruits for next year, and the fact that the men's team is no longer on NCAA probation, the Lobos will be able to start building for the future.

Individually, the Lobos had some notable performances in 1995. Sophomore Tony Evers became a Texas Relays champion in the 1,500m in April. He was the only Lobo to win at Austin. For the women, it was sophomore Sara Nicholsen leading the way with an NCAA qualifying throw in the javelin. Her toss of 161-1, in March, broke the UNM school record set by her coach Darcy Ahner-Knop. For this throw, Nicholsen was also named WAC Athlete of the Week.

With 46 athletes returning next season the Lobos should have something to build on, and also begin to move to the next level in the WAC.

· Meet the Lobos ·

TRACK AND FIELD ROSTER 1994-95

MEN

NAME	YEAR	EVENT	HOMETOWN	LAST SCHOOL
Ian Alexander	Freshman	Distance	Los Alamos, N.M.	Los Alamos
Ryan Bartell	Freshman	Distance	Santee, Calif.	West Hills
Todd Baxter	Senior	Long jump	Albuquerque, N.M.	La Cueva
Charles Bishop	Freshman	Jumps	Fellows, Calif.	Taft Union
Lee Bitting	Freshman	Sprints	Albuquerque, N.M.	Rio Grande
Jason Bousliman	Sophomore	Jumps	Carlisle, Pa.	Boiling Springs
Sean Clute	Freshman	High jump	Plattsburgh, N.Y.	Piru Central
Detric Cofield	Freshman	Jumps	San Diego, Calif.	Helix
Tom Denslow	Freshman	Sprints	Albuquerque, N.M.	Highland
Matt Dix	Freshman	Distance	Albuquerque, N.M.	La Cueva
Karl Dreyer	Freshman	Distance	Woodstock, Ill.	Woodstock
Nils Eng	Junior	Dist., Cross country	Silver City, N.M.	Silver City
Tony Evers	Sophomore	Mid-distance	Sydney, Australia	Pittwater
Michael Kedda	Freshman	Jumps	Penticton, B.C., Canada	Penticton Sec.
Carl King	Freshman	Sprints	Albuquerque, N.M.	Highland
Mike Lang	Freshman	Distance	San Diego, Calif.	West Hills
Amery Martinez	Junior	Distance	Chimayo, N.M.	Pojoaque
Giles McDonald	Freshman	Jumps	Albuquerque, N.M.	West Mesa
Richard Mendoza	Freshman	Sprints	Santa Fe, N.M.	Capital
Joe Patrick	Sophomore	Distance	Albuquerque, N.M.	N.M. Highlands
Paul Ratnage	Junior	Dist., Cross country	Kings Lynn, England	Kings School
Joshua Rider	Sophomore	Mid-distance	Albuquerque, N.M.	La Cueva
Keith Rieger	Senior	Distance	Ontario, Canada	Queensway
Gilbert Salazar	Junior	Distance	Long Beach, Calif.	Whittier JC
Jeremy Vehar	Freshman	Distance	Albuquerque, N.M.	Sandia
Branden Young	Junior	Jumps	Tempe, Ariz.	Corona del Sol

WOMEN

NAME	YEAR	EVENT	HOMETOWN	LAST SCHOOL
Danielle Carpenter	Junior	Distance	Farmington, N.M.	Farmington
Emily Compton	Freshman	Hept./High jump	Taos, N.M.	Taos
Stacey Cox	Freshman	Distance	Truth or Consequences, N.M.	Hot Springs
Monica Crittenden	Junior	HH, Sprints	Annandale, Va.	Annandale
Moss DeWindt	Sophomore	Distance	Santa Fe, N.M.	Principia, MO
Joni Dobbins	Sophomore	Hurdles	Denver City, Texas	Denver City
Tangi Galloway	Freshman	Distance	Atwater, Calif.	Atwater
Jill Gamble	Freshman	Distance	Owen Sound, Ontario	O.S. Collegiate
Porchia Graham	Freshman	Jumps	Cedar Hill, Texas	Cedar Hill
Amber Griswold	Sophomore	Hurdles	Silver City, N.M.	Silver City
Stephanie Haas	Freshman	Distance	Ruidoso, N.M.	Ruidoso
Monique Harris	Freshman	Sprints	Clovis, N.M.	Clovis
Amber Kotlarczyk	Freshman	Heptathlon	Tempe, Ariz.	Corona del Sol
Tara McDowell	Freshman	Distance	Dove Canyon, Calif.	Santa Margarita
Karla Melendez	Junior	Distance	Pojoaque, N.M.	Pojoaque
Nichelle Milner	Junior	Sprints	San Diego, Calif.	Morse
Sara Nicholsen	Sophomore	Heptathlon	Springfield, Ore.	Eugene
Lisa Oliver	Freshman	Sprints	San Antonio, Texas	Highlands
Tammy Jo Perea	Freshman	Sprints	Cleveland, N.M.	Mora
Susan Prentice	Freshman	Distance	Albuquerque, N.M.	Sandia
Julie Pruett	Senior	Javelin	Carbondale, Kan.	Santa Fe Trail
Myra Smith	Senior	Throws	La Puente, Calif.	W. Workman
Chelsea Stephens	Sophomore	Throws	Atwater, Calif.	Atwater
Kristi Wolfe	Freshman	Distance	Los Lunas, N.M.	Los Lunas

1995 NEW MEXICO TRACK & FIELD RESULTS (5/31) p.1

INDOOR

DATE	OPPONENT (MEET)	RESULTS
Feb. 4	Northern Arizona, Cal State-Northridge	Women: L- to NAU 88-32 & CSUN 83-37 Men: L- to NAU 59-37 & CSUN 73-34
Feb. 11	Texas Tech Invitational	Men: L- Texas Tech 83-34; Women: L-Tri. Tex.Tech, NMSU- 76, 73, 65 L- dual to Tech 54-51, L- dual to NMSU 57-49
Feb. 24-25	WAC Championship	Men: 8/8, 3 points; Women: 8/8, 14 points
Mar. 10-11	NCAA Championship	

OUTDOOR

DATE	OPPONENT (MEET)	RESULTS
Mar. 4	Aztec Invitational	Individual (non-scoring)
MAR. 18	NEW MEXICO STATE,ADAMS STATE, NORTHERN COLORADO, WESTERN STATE	Men- 5th out of 5 (129.5 pts); Women 1st out of 5 (210 pts.) Dual: Women W- to NMSU 107-48, Men L- to NMSU 80-68
Mar. 23-24	Arizona State Heptathlon	
Mar. 24-25	Arizona State Invitational	Individual (non-scoring)
APR. 1	ADAMS STATE, WESTERN STATE	Individual (non-scoring)
Apr. 5-8	Texas Relays	Individual (non-scoring)
Apr. 13-14	California Invitational Heptathlon	Indiv. (non-scoring)
Apr. 13-15	Mt. SAC Relays	Indiv. (non-scoring)
Apr. 15	Texas-El Paso Invitational	Indiv. (non-scoring)
APR. 22	DON KIRBY MEMORIAL INVITATIONAL OU, CU, TEXAS-SAN ANTONIO	Women- 3 duals: OU 69, UNM 68; CU 90, UNM 64; UNM 79, UTSA 56 Men- 3 duals: OU 86, UNM 48; UNM 59, CU 57; UNM 69, UTSA 18
Apr. 28-29	Drake Relays	Indiv. (non-scoring)
Apr. 28-29	Jack Christiansen Invitational (CSU host)	Women- 5th out of 10 (48 pts.); Men- 8th out of 10 (24 pts.)
May 17-20	WAC Championship	Women- 7th out of 9 (30.5 pts.); Men- 7th out of 8 (31 pts.)
May 31-June 3	NCAA Championship	

CAPS INDICATE HOME COMPETITION

1995 OUTDOOR SEASON BESTS

MEN

NAME	EVENT	RESULTS	PLACE	DATE/MEET
Charles Bishop	100m	11.11	6th	5/19- WAC Ch.
Josh Rider	200m	22.40	3rd	3/4- SDSU
Michael Kedda	400m	48.91	9th	5/19- WAC Ch.
Josh Rider	400m H	53.97	1st	3/4- SDSU
TEAM	4x100m R	41.87	6th	5/19- WAC Ch.
Tony Evers	800m	1:54.21	3rd	3/25- ASU
TEAM	4x400m R	3:16.36	6th	5/19- WAC Ch.
Tony Evers	1,500m	3:50.12	1st	4/7- UT
Keith Rieger	3,000m SC	9:07.82	11th	5/1- Drake
TEAM	Dist. MR	10:05.03	11th	5/1- Drake
Paul Ratnage	5,000m	14:39.64	14th	4/13- Mt. SAC
Branden Young	High jump	6-4.75	3rd	4/1- UNM
Detric Cofield	Long jump	24-5	2nd	5/19- WAC Ch.
Charles Bishop	Triple jump	49-7.75	1st	4/15- USAFA

WOMEN

NAME	EVENT	RESULTS	PLACE	DATE/MEET
Nichelle Milner	100m	12.40	1st	4/1- UNM
Monica Crittenden	100m HH	14.11	3rd	5/19- WAC Ch.
Monica Crittenden	200m	25.44	2nd	4/1- UNM
Monique Harris	400m	58.40	5th	5/19- WAC Ch.
Joni Dobbins	400m IH	1:04.00	2nd	3/18- UNM
TEAM	4x100m R	47.64	1st	4/1- UNM
Tangi Galloway	800m	2:22.99	3rd	4/22- UNM
TEAM	4x400m R	3:52.94	6th	5/20- WAC Ch.
TEAM	1,600m SM	4:18.19	28th	4/7- UT
Tangi Galloway	1,500m	4:47.55	8th	4/7- UT
Susan Prentice	3,000m	10:28.56	28th	4/13- Mt. SAC
Tangi Galloway	5,000m	17:27.34	9th	4/13- Mt. SAC
Monica Crittenden	Triple jump	37-3.25	2nd	3/18- UNM
Amber Kotlarczyk	High jump	5-5.5	4th	5/20- WAC Ch.
Joni Dobbins	Long jump	17-5	3rd	3/18- UNM
Myra Smith	Discus	136-10	2nd	4/22- UNM
Myra Smith	Shot put	47-0.25	3rd	5/19- WAC Ch.
Sara Nicholsen	Javelin	161-1	1st	3/18- UNM
Chelsea Stephens	Hammer	127-9	4th	4/29- CSU

NEW MEXICO TRACK & FIELD OUTDOOR RESULTS (5/31) p.2

MEN

NAME	EVENT	RESULTS	PLACE	DATE/MEET
Charles Bishop	100m	11.11	6th	5/19- WAC Ch.
Michael Kedda	"	11.28	4th	4/1- UNM
Todd Baxter	"	11.44	8th	3/18- UNM
Thomas Denslow	"	12.50	9th	4/1- UNM
Thomas Denslow	"	12.64	5th	4/22- UNM
Josh Rider	200m	22.40	3rd	3/4- SDSU
Michael Kedda	"	22.82	5th	3/18- UNM
Detric Cofield	"	22.86	6th	3/4- SDSU
Richard Mendoza	"	23.62	4th	3/4- SDSU
Thomas Denslow	"	25.04	3rd	4/22- UNM
Thomas Denslow	"	25.24	11th	4/1- UNM
Thomas Denslow	"	25.41	14th	3/18- UNM
Lee Bitting	"	25.74	4th	4/22- UNM
Lee Bitting	"	25.74	12th	4/1- UNM
Michael Kedda	400m	48.91	9th	5/19- WAC Ch.
Michael Kedda	"	48.95	6th	5/19- WAC Ch.
Michael Kedda	"	49.01	6th	4/22- UNM
Joshua Rider	"	49.58	7th	4/22- UNM
Tony Evers	"	49.94	3rd	4/1- UNM
Joshua Rider	"	50.34	4th	4/1- UNM
Michael Kedda	"	50.51	2nd	4/15- USAFA
Richard Mendoza	"	51.40	3rd	3/4- SDSU
Richard Mendosa	"	51.51	5th	3/18- UNM
Tony Evers	"	51.68	7th	3/4- SDSU
Lee Bitting	"	57.99	10th	3/18- UNM
Lee Bitting	"	58.14	8th	4/1- UNM
Lee Bitting	"	58.21	10th	4/22- UNM
Josh Rider	400m IH	53.97	1st	3/4- SDSU
Josh Rider	"	54.12	2nd	3/18- UNM
Josh Rider	"	54.72	15th	4/7- UT
TEAM	4x100m R	41.87	6th	5/19- WAC Ch.
TEAM	"	41.94	1st	4/1- UNM
TEAM	"	42.46	2nd	4/22- UNM
TEAM	"	42.70	6th	4/7- UT
Tony Evers	800m	1:54.21	3rd	3/25- ASU
Richard Mendoza	"	1:55.44	7th	5/19- WAC Ch.
Tony Evers	"	1:56.82	7th	3/4- SDSU
Richard Mendoza	"	1:57.44	5th	4/29- CSU
Richard Mendoza	"	1:57.69	5th	4/22- UNM
Richard Mendoza	"	1:58.24	3rd	4/1- UNM
Paul Ratnage	"	1:59.24	4th	3/18- UNM
Richard Mendoza	"	1:59.61	10th	4/15- UTEP
Tony Evers	"	2:01.60	16th	4/13- Mt. SAC
Ian Alexander	"	2:15.54	24th	4/29- CSU
TEAM	4x400m R	3:16.36	6th	5/19- WAC Ch.
TEAM	"	3:17.84	2nd	4/22- UNM
TEAM	"	3:19.14	3rd	4/1- UNM
TEAM	"	3:20.41	2nd	3/18- UNM
TEAM	"	3:21.09	24th	4/7- UT
TEAM	"	3:38.79	7th	4/28- Drake
Tony Evers	1,500m	3:50.12	1st	4/7- UT
Paul Ratnage	"	3:52.32	11th	4/1- ASU
Paul Ratnage	"	3:55.85	4th	4/7- UT
Paul Ratnage	"	3:57.14	2nd	3/18- UNM
Paul Ratnage	"	4:00.66	8th	3/25- ASU
Jeremy Vehar	"	4:04.74	4th	4/1- UNM
Joseph Patrick	"	4:05.14	3rd	3/18- UNM
Jeremy Vehar	"	4:11.14	6th	3/18- UNM
Joseph Patrick	"	4:12.44	5th	4/1- UNM
Keith Rieger	"	4:14.00	6th	4/22- UNM
Joseph Patrick	"	4:21.36	7th	4/22- UNM
Ian Alexander	"	4:23.74	16th	4/29- CSU
Paul Ratnage	3,000m	8:41.04	1st	4/22- UNM
Jeremy Vehar	"	9:17.84	2nd	4/22- UNM
Ian Alexander	"	9:30.04	3rd	4/22- UNM
Gilbert Salazar	"	9:45.84	4th	4/22- UNM

WOMEN

NAME	EVENT	RESULTS	PLACE	DATE/MEET
Nichelle Milner	100m	12.40	1st	4/1- UNM
Nichelle Milner	"	12.56	1st	3/18- UNM
Nichelle Milner	"	12.61	2nd	3/4- SDSU
Porchia Graham	"	12.88	5th	4/1- UNM
Nichelle Milner	"	12.93	5th	4/22- UNM
Amber Griswold	"	12.96	6th	3/18- UNM
Tara McDowell	"	13.07	7th	4/1- UNM
Porchia Graham	"	13.09	7th	3/18- UNM
Porchia Graham	"	13.74*	5th	4/29- CSU
Monica Crittenden	100m HH	14.11	3rd	5/19- WAC Ch.
Monica Crittenden	"	14.24	1st	3/18- UNM
Monica Crittenden	"	14.30	11th	4/7- UT
Monica Crittenden	"	14.32	4th	4/22- UNM
Monica Crittenden	"	14.50	3rd	5/1- Drake
Monica Crittenden	"	14.72	4th	3/4- SDSU
Monica Crittenden	"	14.78	4th	5/19- WAC Ch.
Joni Dobbins	"	15.07	2nd	3/18- UNM
Amber Griswold	"	15.14	8th	4/22- UNM
Joni Dobbins	"	15.19	1st	4/1- UNM
Amber Griswold	"	15.22	6th	5/19- WAC Ch.
Amber Griswold	"	15.29	2nd	4/1- UNM
Joni Dobbins	"	15.59	7th	3/4- SDSU
Joni Dobbins	"	15.86	4th	3/25- ASU
Amber Griswold	"	15.94	6th	4/29- CSU
Amber Kotlarczyk	"	16.05	4th	4/1- UNM
Monica Crittenden	200m	25.44	2nd	4/1- UNM
Lisa Oliver	"	25.51	5th	5/19- WAC Ch.
Lisa Oliver	"	25.54	6th	4/22- UNM
Monica Crittenden	"	25.77	7th	5/19- WAC Ch.
Tara McDowell	"	25.89	1st	3/18- UNM
Monica Crittenden	"	26.04	7th	4/22- UNM
Lisa Oliver	"	26.18	4th	3/25- ASU
Lisa Oliver	"	26.21	3rd	3/18- UNM
Amber Griswold	"	26.24	5th	4/1- UNM
Tara McDowell	"	26.42	8th	5/19- WAC Ch.
Tara McDowell	"	26.54	9th	4/22- UNM
Tara McDowell	"	26.67	2nd	3/4- SDSU
Lisa Oliver	"	26.71	4th	3/4- SDSU
Lisa Oliver	"	26.83	1st	4/15- USAFA
Porchia Graham	"	27.24	8th	4/1- UNM
Amber Kotlarczyk	"	27.44	6th	3/18- UNM
Tara McDowell	"	27.55	5th	4/15- USAFA
Monique Harris	"	27.59	5th	3/4- SDSU
Porchia Graham	"	27.94	8th	3/18- UNM
Monique Harris	"	28.30	6th	4/15- USAFA
Monique Harris	400m	58.40	5th	5/19- WAC Ch.
Monique Harris	"	58.45	8th	5/20- WAC Ch.
Monique Harris	"	58.57	1st	4/15- USAFA
Tara McDowell	"	58.64	1st	4/1- UNM
Tara McDowell	"	58.69	1st	3/18- UNM
Monique Harris	"	58.84	2nd	4/1- UNM
Monique Harris	"	59.44	5th	4/29- CSU
Monique Harris	"	59.44	2nd	3/18- UNM
Monique Harris	"	59.95	4th	3/25- ASU
Tara McDowell	"	1:00.44	8th	4/29- CSU
Tara McDowell	"	1:00.61	8th	3/25- ASU
Monique Harris	"	1:01.19	3rd	4/22- UNM
Tara McDowell	"	1:01.61	5th	3/4- SDSU
Joni Dobbins	400m IH	1:04.00	2nd	3/18- UNM
Joni Dobbins	"	1:04.31	1st	4/1- UNM
Amber Griswold	"	1:04.50	5th	5/19- WAC Ch.
Joni Dobbins	"	1:05.33	6th	5/19- WAC Ch.
Amber Griswold	"	1:05.36	2nd	4/1- UNM
Joni Dobbins	"	1:05.53	26th	4/7- UT
Joni Dobbins	"	1:05.65	3rd	3/4- SDSU
Amber Griswold	"	1:06.54	4th	3/18- UNM

NEW MEXICO TRACK & FIELD OUTDOOR RESULTS (5/31) p.3

MEN (Cont.)

NAME	EVENT	RESULTS	PLACE	DATE/MEET
Ryan Bartell	"	9:45.84	4th	4/22- UNM
Mike Lang	"	10:25.64	6th	4/22- UNM
Keith Rieger	3,000m SC	9:07.82	11th	5/1- Drake
Keith Rieger	"	9:09.95	2nd	3/4- SDSU
Keith Rieger	"	9:25.25	5th	3/25- ASU
Keith Rieger	"	9:51.40	8th	5/19- WAC Ch.
Mike Lang	"	9:52.85	9th	3/25- ASU
Mike Lang	"	9:58.08	3rd	3/4- SDSU
Ryan Bartell	"	10:08.67	4th	3/4- SDSU
TEAM	Dist. MR	10:05.03	11th	5/1- Drake
Paul Ratnage	5,000m	14:39.64	14th	4/13- Mt. SAC
Paul Ratnage	"	15:04.60	6th	5/19- WAC Ch.
Jeremy Vehar	"	15:24.98	2nd	3/4- SDSU
Joe Patrick	"	15:30.68	9th	3/25- ASU
Joe Patrick	"	15:32.13	3rd	3/4- SDSU
Jeremy Vehar	"	15:34.87	14th	5/19- WAC Ch.
Jeremy Vehar	"	15:40.04	11th	3/25- ASU
Keith Rieger	"	15:41.02	3rd	3/18- UNM
Joe Patrick	"	15:57.60	22nd	5/19- WAC Ch.
Mike Lang	"	16:05.06	6th	3/18- UNM
Ian Alexander	"	16:13.12	5th	3/4- SDSU
Ian Alexander	"	16:14.65	15th	3/25- ASU
Gilbert Salazar	"	16:18.03	6th	3/4- SDSU
Gilbert Salazar	"	16:43.24	4th	4/15- UTEP
Mike Lang	"	16:46.72	27th	5/19- WAC Ch.
Ian Alexander	"	16:49.03	28th	5/19- WAC Ch.
Gilbert Salazar	"	16:49.84	10th	3/18- UNM
Ian Alexander	"	16:51.94	11th	3/18- UNM
Ryan Bartell	"	17:17.44	5th	4/1- UNM
Branden Young	High jump	6-4.75	3rd	4/1- UNM
Branden Young	"	6-4.25	12th	3/25- ASU
Branden Young	"	6-4	3rd	3/4- SDSU
Branden Young	"	6-2.75	1st	4/22- UNM
Jason Bousliman	"	6-2.75	6th	4/15- USAFA
Sean Clute	"	6-2.75	4th	4/1- UNM
Jason Bousliman	"	6-2.75	5th	4/1- UNM
Branden Young	"	6-2.75	2nd	3/18- UNM
Jason Bousliman	"	6-2.75	4th	3/18- UNM
Jason Bousliman	"	6-2	4th	3/4- SDSU
Sean Clute	"	6-0.75	7th	4/15- USAFA
Jason Bousliman	"	6-0	2nd	4/22- UNM
Sean Clute	"	6-0	2nd	4/22- UNM
Detric Cofield	Long jump	24-5	2nd	5/19- WAC Ch.
Charles Bishop	"	24-3	1st	3/18- UNM
Detric Cofield	"	24-1	1st	4/15- USAFA
Detric Cofield	"	23-10.25	2nd	4/22- UNM
Detric Cofield	"	23-5.25	1st	4/1- UNM
Detric Cofield	"	23-5.25	2nd	3/18- UNM
Charles Bishop	"	23-4.5	3rd	4/15- USAFA
Brandon Young	"	23-3.25	4th	5/19- WAC Ch.
Detric Cofield	"	23-0	1st	3/4- SDSU
Todd Baxter	"	22-11.75	3rd	4/22- UNM
Todd Baxter	"	22-11.25	3rd	3/18- UNM
Branden Young	"	22-11.25	8th	3/25- ASU
Branden Young	"	22-11*	3rd	4/29- CSU
Detric Cofield	"	22-10	10th	3/25- ASU
Todd Baxter	"	22-9.25	2nd	4/1- UNM
Charles Bishop	"	22-8	6th	5/19- WAC Ch.
Branden Young	"	22-6.25	6th	3/18- UNM
Branden Young	"	22-5.75	5th	4/15- USAFA
Branden Young	"	22-4.5	4th	4/22- UNM
Charles Bishop	"	22-2.5	5th	4/22- UNM
Michael Kedda	"	21-11	7th	3/18- UNM
Todd Baxter	"	21-5.25*	9th	4/29- CSU
Todd Baxter	"	21-1.5	4th	3/4- SDSU
Michael Kedda	"	13-8.25	8th	4/22- UNM

WOMEN (Cont.)

NAME	EVENT	RESULTS	PLACE	DATE/MEET
Amber Griswold	"	1:06.58	1st	4/15- USAFA
Amber Griswold	"	1:06.74	9th	5/20- WAC Ch.
Amber Griswold	"	1:06.74	7th	4/29- CSU
Amber Griwold	"	1:06.93	5th	4/22- UNM
Amber Griswold	"	1:07.11	6th	3/4- SDSU
Amber Griswold	"	1:07.68	6th	3/25- ASU
TEAM	4x100m R	47.64	1st	4/1- UNM
TEAM	"	47.84	1st	3/18- UNM
TEAM	"	48.03	6th	5/19- WAC Ch.
TEAM	"	48.09	21st	4/7- UT
TEAM	"	48.64	2nd	3/4- SDSU
TEAM	"	48.97	1st	4/15- USAFA
Tangi Galloway	800m	2:22.99	3rd	4/22- UNM
Tara McDowell	"	2:24.14	4th	4/1- UNM
Susan Prentice	"	2:26.00	5th	4/22- UNM
Tangi Galloway	"	2:26.14	6th	4/1- UNM
Danielle Carpenter	"	2:26.89	2nd	3/18- UNM
Susan Prentice	"	2:28.58	4th	3/18- UNM
Susan Prentice	"	2:29.04	8th	4/1- UNM
Tangi Galloway	"	2:29.54	5th	3/18- UNM
Jill Gamble	"	2:35.88	11th	4/22- UNM
Jill Gamble	"	2:37.55	6th	3/4- SDSU
TEAM	4x400m R	3:52.94	6th	5/20- WAC Ch.
TEAM	"	3:56.88	25th	4/7- UT
TEAM	"	3:58.79	1st	3/18- UNM
TEAM	"	4:00.24	1st	4/1- UNM
TEAM	"	4:02.31	2nd	4/22- UNM
TEAM	"	4:05.10	9th	3/25- ASU
TEAM	1,600m SM	4:18.19	28th	4/7- UT
Tangi Galloway	1,500m	4:47.55	8th	4/7- UT
Susan Prentice	"	4:58.14	10th	3/18- UNM
Tangi Galloway	"	4:58.14	10th	3/18- UNM
Susan Prentice	"	4:58.44	8th	4/29- CSU
Tangi Galloway	"	4:59.94	10th	4/29- CSU
Susan Prentice	"	5:00.21	11th	4/7- UT
Danielle Carpenter	"	5:07.14	13th	3/18- UNM
Jill Gamble	"	5:16.14	16th	3/18- UNM
Susan Prentice	3,000m	10:28.56	28th	4/13- Mt. SAC
Susan Prentice	"	10:39.90	11th	5/19- WAC Ch.
Susan Prentice	"	10:40.84	8th	3/25- ASU
Danielle Carpenter	"	10:41.79	2nd	3/4- SDSU
Susan Prentice	"	10:58.31	4th	3/4- SDSU
Karla Melendez	"	11:37.64	4th	4/1- UNM
Stephanie Haas	"	12:24.44	19th	3/18- UNM
Stephanie Haas	"	12:27.94	7th	4/1- UNM
Karla Melendez	"	12:31.84	20th	3/18- UNM
Karla Melendez	"	12:39.94	3rd	4/22- UNM
Tangi Galloway	5,000m	17:27.34	9th	4/13- Mt. SAC
Tangi Galloway	"	18:01.20	9th	3/25- ASU
Tangi Galloway	"	18:04.48	4th	5/20- WAC Ch.
Tangi Galloway	"	18:11.67	1st	3/4- SDSU
Karla Melendez	"	20:37.50	3rd	3/4- SDSU
Amber Kotlarczyk	High jump	5-5.5	4th	5/20- WAC Ch.
Amber Kotlarczyk	"	5-5	1st	4/15- USAFA
Amber Kotlarczyk	"	5-4.25	2nd	3/18- UNM
Amber Kotlarczyk	"	5-3.75	2nd	4/1- UNM
Amber Kotlarczyk	"	5-3.25	8th	3/25- ASU
Emily Compton	"	5-2.25	3rd	3/18- UNM
Amber Kotlarczyk	"	5-2	7th	4/29- CSU
Emily Compton	"	5-1.5	10th	5/20- WAC Ch.
Emily Compton	"	5-1.25	4th	4/1- UNM
Emily Compton	"	5-0	3rd	3/4- SDSU
Emily Compton	"	4-10	9th	4/29- CSU
Emily Compton	"	4-9.75	5th	4/22- UNM
Joni Dobbins	Long jump	17-5	3rd	3/18- UNM
Porchia Graham	"	17-0*	5th	4/29- CSU

NEW MEXICO TRACK & FIELD OUTDOOR RESULTS (5/31) p.4

MEN (Cont.)

NAME	EVENT	RESULTS	PLACE	DATE/MEET
Charles Bishop	Triple jump	49-7.75	1st	4/15- USAFA
Charles Bishop	"	49-0.25	1st	3/18- UNM
Detric Cofield	"	48-2.25	4th	5/19- WAC Ch.
Charles Bishop	"	47-9	10th	5/1- Drake
Detric Cofield	"	47-5.75	17th	4/7- UT
Detric Cofield	"	47-5.25	5th	3/25- ASU
Charles Bishop	"	47-4.25	6th	3/25- ASU
Detric Cofield	"	46-1.5	1st	3/4- SDSU
Charles Bishop	"	45-11.25	20th	4/7- UT
Jason Bousliman	"	45-5.25	3rd	4/22- UNM
Detric Cofield	"	45-2.25	4th	4/15- USAFA
Detric Cofield	"	45-1	3rd	3/18- UNM
Jason Bousliman	"	44-6*	3rd	4/29- CSU
Jason Bousliman	"	44-6	2nd	4/1- UNM
Charles Bishop	"	44-4	11th	5/19- WAC Ch.
Jason Bousliman	"	44-0.25	4th	3/4- SDSU
Jason Bousliman	"	43-8	5th	3/18- UNM
Jason Bousliman	"	43-7	8th	4/15- USAFA

* Wind aided

WOMEN (Cont.)

NAME	EVENT	RESULTS	PLACE	DATE/MEET
Porchia Graham	"	17-0	3rd	3/4- SDSU
Porchia Graham	"	16-5.25	3rd	4/1- UNM
Joni Dobbins	"	16-3.5	4th	4/1- UNM
Joni Dobbins	"	16-2	4th	3/4- SDSU
Porchia Graham	"	15-11	6th	4/15- USAFA
Porchia Graham	"	15-9.75	7th	3/18- UNM
Monica Crittenden	Triple jump	37-3.25	2nd	3/18- UNM
Lisa Oliver	"	36-8.25	3rd	4/22- UNM
Monica Crittenden	"	36-7.75	2nd	3/4- SDSU
Lisa Oliver	"	36-5	3rd	4/15- USAFA
Porchia Graham	"	34-1.5	4th	4/22- UNM
Myra Smith	Discus	136-10	2nd	4/22- UNM
Myra Smith	"	136-2	1st	3/4- SDSU
Myra Smith	"	132-3	13th	4/15- UTEP
Myra Smith	"	131-9	11th	4/1- ASU
Chelsea Stephens	"	130-8	2nd	4/1- UNM
Myra Smith	"	129-8	24th	5/1- Drake
Chelsea Stephens	"	127-0	7th	3/25- ASU
Chelsea Stephens	"	123-11	3rd	4/29- CSU
Chelsea Stephens	"	122-11	5th	4/22- UNM
Chelsea Stephens	"	119-3	4th	3/4- SDSU
Chelsea Stephens	"	115-7	5th	3/18- UNM
Chelsea Stephens	"	108-8	6th	4/15- USAFA
Myra Smith	Shot put	47-0.25	3rd	5/19- WAC Ch.
Myra Smith	"	46-7.50	7th	4/15- UTEP
Myra Smith	"	45-0.25	6th	4/1- ASU
Myra Smith	"	44-10.75	2nd	3/4- SDSU
Myra Smith	"	44-4.0	1st	4/22- UNM
Myra Smith	"	43-10.75	17th	4/7- UT
Myra Smith	"	43-2.25	1st	3/18- UNM
Chelsea Stephens	"	40-5.5	5th	4/29- CSU
Chelsea Stephens	"	39-1	3rd	3/4- SDSU
Chelsea Stephens	"	38-9.75	5th	4/22- UNM
Chelsea Stephens	"	37-10.75	5th	3/18- UNM
Chelsea Stephens	"	37-4	3rd	4/1- UNM
Chelsea Stephens	"	36-8.25	10th	3/25- ASU
Chelsea Stephens	"	36-6.75	3rd	4/15- USAFA
Sara Nicholsen	Javelin	161-1	1st	3/18- UNM
Sara Nicholsen	"	154-1	4th	5/19- WAC Ch.
Sara Nicholsen	"	150-11	5th	3/25- ASU
Sara Nicholsen	"	147-10	1st	4/15- USAFA
Sara Nicholsen	"	146-9	12th	4/7- UT
Sara Nicholsen	"	143-0	1st	4/22- UNM
Sara Nicholsen	"	142-11	8th	5/1- Drake
Sara Nicholsen	"	142-7	18th	5/31- NCAA's
Sara Nicholsen	"	139-7	8th	4/1- ASU
Sara Nicholsen	"	133-5	1st	3/4- SDSU
Julie Pruett	"	124-7	9th	4/1- ASU
Julie Pruett	"	124-6	3rd	3/18- UNM
Julie Pruett	"	117-9	1st	4/22- UNM
Julie Pruett	"	116-4	2nd	3/4- SDSU
Julie Pruett	"	116-2	5th	4/29- CSU
Julie Pruett	"	115-10	4th	4/15- USAFA
Chelsea Stephens	Hammer	127-9	4th	4/29- CSU
Chelsea Stephens	"	122-1	1st	4/15- USAFA
Chelsea Stephens	"	121-6	2nd	4/22- UNM
Chelsea Stephens	"	115-11	1st	4/1- UNM
Chelsea Stephens	"	89-7	1st	3/18- UNM

* Wind aided

ALUMNI RELATIONS OFFICE/ALUMNI ASSOCIATION

July 1, 1994 - June 30, 1995

Karen Abraham, Director/Executive Director

The alumni of a university significantly affect its present vitality and future strength. As part of the University's overall advancement effort, the alumni relations program is critical. It needs the support of alumni volunteers who, together with the staff, help the institution achieve its goals and maintain positive relations with the alumni population.

The University of New Mexico Alumni Relations Office has two complementary missions: to provide a means for the University to communicate with and serve alumni, and to provide a means for alumni to communicate with and serve the University. The underlying intent of this partnership is to insure the University of New Mexico's continued excellence and to communicate that excellence to others.

To implement these goals, the UNM Alumni Relations Office, in concert with the UNM Alumni Association, has developed a comprehensive alumni program. The following report describes the highlights of the alumni program over the 1994-95 academic year.

PROGRAMS & SERVICES

Chapter Activities

UNM Alumni Association chapters are still in their infancy. Unlike many universities whose alumni chapters have existed for decades, UNM's chapters have evolved only over the past ten to fifteen years. Many of the chapters have become consistent in their offerings, usually two events a year. Some chapters elect officers and hold organized meetings, while others meet at chapter events, normally organized by Alumni Relations Office staff.

Chapters sponsor scholarships, help recruit students, provide updates about UNM, and gather socially, for tail-gate parties, for Lobo Day events, or to hear a University speaker. Chapters create ongoing, personal ties between alumni and their alma mater. A list of 1994-95 chapter events is appended to this report.

Awards

The Alumni Association recognizes outstanding alumni and New Mexico citizens with four annual awards: the James F. Zimmerman Award, the Bernard S. Rodey Award, the Erna S. Fergusson Award, and the Zia Award. In 1994-95, the recipients were:

Zimmerman - Frank C. Hibben, Professor emeritus of Anthropology, Director Emeritus of the Maxwell Museum of Anthropology

Rodey - David A. Sanchez, Vice Chancellor for Academic Affairs, Texas A&M University System

Fergusson - Marvin "Swede" Johnson, Vice President for Public Relations, Coors Distributors, and former UNM Administrative Vice President

Zia - Adrian Bustamante, Tom Cooper, Cleta Downey, Pete Gibson, John Heaton, Rick Johnson

The Zia Award was introduced this year in order to recognize outstanding alumni who live in New Mexico. The description of the award reads as follows:

> "The Zia Award is made to New Mexico alumni with a UNM degree who have distinguished themselves in any one or more of the following categories: philanthropic endeavors, public office, service to the University, community and volunteer activities, business or professional fields, or who have made a contribution to education."

The recipient of the 1995 Alumni Association Faculty Teaching Award was Margaret Werner-Washburne. A $1000 stipend goes with the award.

Scholarship Programs

The Alumni Association awards a variety of scholarships, funds for which are either raised on an annual basis or are provided by endowed gifts. The following scholarship programs are in place:

- An Alumni Community Scholarship Program awards $1,000 plus an amount raised by in-state alumni for a student in their community. In 1994-95, ten New Mexico communities participated.

- Amigo Scholarships, sponsored by out-of-state alumni chapters, cover the difference between in-state and out-of-state tuition. Four chapters participated in 1994-95.

The Alumni Association offers five endowed scholarships: the Arthur J. Harvey, the Gwinn "Bub" Henry, the Harry F. Lee Memorial the Class of '42 Memorial, and the Jean Mullins Macey Scholarships. From a pool of 67 applicants for 1994-95 scholarships, the following were selected:

Harvey - Sara Leah Martinez ($900)
Henry - Pat Hafner ($430)
Lee - Robert Trujillo, Miguel Santistevan ($1200 each)
Macey - Stella Saindon ($800)
Class of '42 - Seth Chernoff, Tien Duy Bui ($1200 each)

An additional endowed scholarship was established under the Alumni Association by Lawrence and Wadette Abraham. This scholarship will be activated in 1996.

Student Affairs

The Alumni Association and the Alumni Relations Office try to acquaint current students with programs and services offered both now and to inform them of their future responsibilities and benefits as alumni. Many of the alumni activities are sponsored in conjunction with the Student Affairs Division of the University.

Involvement begins with Welcome Back Days in August. On Alumni Days, volunteers serve hot dogs to students and staff on both the main and north campuses. More than 90 alumni volunteers served hot dogs, ice cream and sodas to a total of approximately 5,500 students.

An Association goal is to "create ways for alumni to advise current students with regard to career options." The Anderson Schools of Management once again participated in the Professional Guidance Program in the fall semester. Twenty-two students were matched with 17 alumni volunteers. In the spring, 25 students and 18 alumni participated. The students were from a variety of academic colleges, including Anderson Schools of Management, Education, Arts and Sciences, and Architecture. Evaluations were sent to all participants, and responses were very positive.

Annually, the Alumni Association participates in the Student Recognition Program honoring students for their leadership and service to the University community. The 1994-95 recipients of the Association's Citizenship Award were Chenoa Stillwell, Trish Dvorak, Stoney Case, Keith Rieger, and Penny Burton. The Outstanding Trailblazer Award went to Traci Edwards.

The annual Senior Open House, honoring UNM's 1994-95 graduates, was held at Hodgin Hall on December 12-16, 1994, and May 8-13, 1995. Refreshments were served and materials about the Association were available.

During the winter Commencement celebration, the Alumni Relations Office had a table in the SUB ballroom and in May had a tent on the lawn of University House as part of the President's reception for graduates. Miniature diplomas, alumni pins and ribbons, registration material, and informa-tion on Alumni offerings and programs were part of the activities. A total of 825 graduates registered with the Association during these two events.

Student Recruitment

One of the Alumni Relations Office's goals is to involve alumni in recruiting well-qualified students for their alma mater. Last fall, alumni participated in college fairs in the following cities:

Alaska: Juneau
California: San Francisco, San Ramon, San Diego, Los Angeles, Long Beach
Illinois: Chicago, Skokie, Glen Ellyn
Oregon: Portland
Tennessee: Nashville
Texas: Dallas, Houston, Plano
Washington: Seattle
Germany: Frankfurt

In 1992, the Star Scholar Program was established to recognize New Mexico high school juniors who rank in the top 10% of their class. The program is a joint effort between the UNM Alumni Association and the Office of Student Outreach Services. All students who meet this requirement receive a "Star Scholar" certificate from the Alumni Association. In conjunction with this program, Star Scholar recognition receptions were held in seven communities (up from the three previous) across the state. The figures in parenthesis indicate the attendance of students, parents, and other guests of this year's programs. Total attendance was 1,676.

Albuquerque, May 3, Holiday Inn Pyramid: (759)
Gallup, May 4, Gallup Holiday Inn: (195)
Las Cruces, April 20, Las Cruces Hilton: (385)
Roswell, April 18, Sally Port Inn: (94)
Santa Fe, April 26, La Fonda: (203)
Taos, April 27, Kachina Lodge: (40)

Students in high schools within a 50-60 mile radius of each community were invited to attend the programs. Students from 73 New Mexico high schools were invited to their area's reception. Framed Star Scholar certificates were mailed to all other high school juniors not attending a reception.

In an effort to enhance in 1994-95 the Alumni student recruitment program, a student recruitment alumni volunteer handbook ("AIM for UNM) was developed. The handbook explains the general admissions process, admissions requirements, general UNM information, referral resources, and the purpose of the alumni/admissions program. It includes information on how to prepare for college fairs, phoning prospective students, and send-off receptions. The expectation of alumni volunteers in this program is not to be recruitment experts, but rather their role is to give interested prospective students the resources to make an informed choice regarding their post-secondary education. Four communities served as pilot projects for the AIM training program: Albuquerque, Farmington, San Diego, and San Francisco.

Community Outreach

During the fall of 1994 and the spring of 1995, the Alumni Relations Office joined forces with the Community Outreach Office to co-sponsor town meetings. The President of the University set the tone for the meeting which included an interchange with community leaders and alumni and focused on topics and issues important to each community. The communities visited were Gallup, Tucumcari, Santa Rosa, Taos, Los Alamos, Espanola, Santa Fe, and the South Valley of Albuquerque. The Alumni Association had receptions after each program.

Seven individuals were identified as community outreach liaisons for the University in a new program launched by the Association to develop avenues of greater awareness between the University and seven New Mexico communities. The seven alumni who agreed to serve the University in this capacity are:

Richard Rowley, Clovis
Lawrence Johns, Las Vegas
Jim Brandenburg, Taos
Paul McCollum, Gallup
Charley Smith, Hobbs
John Dean, Farmington
Don Fedric, Roswell

A day-long orientation session, preceded by a dinner at University House, began the program. A special resource notebook was designed for the liaisons. The

University president and all the vice presidents made presentations and participated in the session.

Legislative Relations

It is imperative that alumni speak on behalf of their alma mater to members of the New Mexico State Legislature. Accordingly, The Association designed an annual function to conjoin legislators, UNM administrators, and alumni. The Legislator Appreciation Reception was held on February 13 at La Fonda in Santa Fe. Approximately 260 guests, including 54 legislators, and Governor Johnson attended the event. Legislators were presented with a UNM Press book, En Divina Luz, The Penitente Brotherhood of New Mexico, as a token of appreciation on behalf of the University and the Alumni Association.

Homecoming

Many alumni look forward to Homecoming, the opportunity to return to campus, see old friends and professors, and to display a bit of school spirit. UNM's 1994 homecoming included reunions (1934, 1944 and 1969), a pre-game fiesta, a silent auction, a Lobo football game with a special half-time show, and a post-game party. New this year was the Golf Tournament and Friday Night Live. The Alumni College, in its fifth year, was very successful. Eight courses and five special tours were in this year's offerings.

Alumni Lettermen's Association

There are approximately 2,000 Lettermen, more than 350 of whom are dues-paying members of the Lettermen's Association. Money raised through dues supports the group's fifth-year scholarship program for athletes, the Student Lettermen's Association, and other activities and projects. This year six fifth-year scholarships were awarded (Heidi Harris, Tonya Gooley, Sandy Shafer, Noel Meredith, Myra Smith, and Brad Klein). The Lettermen also awarded two $500 scholarships to Katrin Svenson and Mike Strait.

Each year the Lettermen sponsor the Athletic Hall of Honor Banquet. This year's dinner was held on October 13 at the Hyatt Regency Hotel. The event, which drew 400 attendees, saw the induction of Walt Arnold, Sue Vigil Belger, Mickey Miller, Iggy Mulcahy (posthumous), and Ron Nelson. A special community service award was given to Charles Russell, Sr., while volleyball standout Laurel Luman was

named Female Athlete of the Year and basketball player Greg Brown and football quarterback Stoney Case were named Co-Male Athletes of the Year.

Lettermen also hosted receptions for coaches and for graduating senior athletes, and the annual Cherry/Silver game. Officers for 1994-95 were Larry Harrison, president; Jim Hensley, president-elect, Gary McAlister, treasurer; and Sue Vigil-Belger, secretary. Immediate past president was Greg Frost.

Student Lettermen's Association

The Student Lettermen's Association completed a successful year highlighted by their receiving the National Saturn Award for teamwork and service to the community. The award carries a $5000 stipend which will be used to help fund the group's many service projects. These include work with the YMCA sports clinics ("Train with the Lobos") and the Albuquerque Public Schools ("Read with the Lobos") programs. Officers for 1994-95 were Rod Ludingston, president; Pat Donnelly, vice president; Noel Meredith, secretary; and Sandy Schaffer, treasurer.

Trailblazers

The Trailblazers are the student alumni organization. In addition to their normal activities (Welcome Back Days, Homecoming, Hanging of the Greens, Lobo Week, and UNM Fiestas), the group assisted in hosting numerous special events and activities, including VIPs at Lobo Football and basketball games, the Legislators Reception in Santa Fe, the UNM Presidential Scholarship dinner, Hall of Honor dinner, UNM Commencement, and other University House events. The officers for 1994-95 were Traci Edwards, president; Trish Dvorak, vice president; and Nechol Allen, secretary/treasurer.

Mirage

Mirage is the University's primary mode of communicating with approximately 75,000 alumni and friends on a regular basis. The fall 1994 issue carried the first newsletter/wrapper, "El Espejo," sent to in-state alumni.

Avenues for selling advertisements and sponsorships for Mirage were explored this year, resulting in a contract with Julian Spalding of Artwork to handle sales. A marketing and sponsorship packet was developed.

Alumni Travel Program

The 1995 alumni travel program was a success. For the first time, the year's program was finalized at a date early enough to put together a comprehensive brochure to mail to a targeted group of potential travelers. Response to the mailer, "Passport to Adventure," was high. The trips offered in 1995 were:

March 1-15	Panama Canal Cruise
May 9-23	The Art of France
June 13-26	Greek Islands and Turquoise Coast
July 4-17	Changing Tides of History
July 10-22	Danube River Adventure
Sept. 19-25	Coastal Waterways of the Pacific Northwest
Sept. 29-Oct. 12	Romance of the Rivieras

Staff Separations

Staff changes are as follows: Frieda Stewart replaced Barbara Glas as Administrative Secretary;Gina Watts replaced Doris Dolzadelli as Facilities Manager; and Donna Morrow replaced Rebecca Maestas as receptionist.

Professional Activities

Under professional activities, I served as Program Chair for the CAAE Winter Institute. I am in my second year on the board of CAAE (Council of Alumni Association Executives). I served on a panel at the Summer Institute of CAAE on the topic of entrepreneurealship and association fundraising. I was elected to the Commission for Alumni Relations for CASE National. I was appointed to the planning committee for the CASE National Assembly for 1996-97.

Input from Program Recipients

Our Board of Directors and committees are made up of alumni who set and affirm the direction of our services and programs which we offer to alumni and the services and programs which alumni give back to the University. Other mechanisms for communication are our 1-800 telephone number, E-mail, and letters to the editor in Mirage. Chapter programs provide a form of communication for alumni through their chapter leadership.

Staff Development Activities

Individual staff members are always encouraged to take classes and to attend conferences. The majority participated in staff development activities offered through Human Resources. Annette Hazen attended a conference sponsored by Stanford University on lifelong learning. Vince Baca attended the conference on legislative relations sponsored by CASE. Vince and Annette attended the CASE Summer Institute held here on campus, and I attended both the Summer and Winter CAAE Institutes.

Cultural Diversity/Affirmative Action

As a staff, individuals participate in various activities around campus, but as a whole, we did not participate in any common program. Our office prides itself on the diversity of our staff and of our Board of Directors in ethnicity, sex, and age. Mirage, of all the official publications produced by the University, reflects the University's true cultural diversity. Verbalizing it is one thing, counting numbers is another. Weaving it pictorially and in written word into the main communication piece to the University's larger community is, we feel, the true statement and representation of the goal of cultural diversity.

0105

GOALS
1994-95

1. To increase community outreach programs and enhance visibility and activities within New Mexico.

This has been the overall theme for the year. This goal was met to our fullest expectations in the following ways.

- The Zia Award was established to recognize UNM alumni with UNM degrees who have distinguished themselves in any one or more of the following categories: philanthropic endeavors, public office, service to the University, community and volunteer activities, business or professional fields, or who have made a contribution to education. The first Zia Awards were presented at Homecoming '94.
- The Alumni Association coordinated and assisted with Town Meetings around New Mexico. The Association sponsored receptions following the Town Meetings.
- The development of "El Espejo," a newsletter geared toward New Mexico alumni. It first appeared in the fall 1994 issue of Mirage.
- The Alumni Association effectively raised funds ($40,000) and organized the campaign passage of the '94 GO Bond. The University's stake in the Bond was $13 million.
- The Community Outreach Program was developed and inaugurated. Seven individuals were identified around the State to serve in a community liaison capacity for the University. A resource notebook and orientation session was developed and presented.

2. To develop and implement various means for alumni to assist in new student recruitment for UNM.

- The number of Star Scholar receptions in New Mexico was increased from three to eight.
- The "AIM for UNM" resource manual was developed. The manual is geared toward increasing alumni effectiveness in student recruitment. Training sessions for alumni were developed and presented.

3. To continue a concerted effort to seek ways of getting additional funding for the various alumni programs serving the University.

- An advertising and sponsorship program has been established for Mirage to generate additional funds for the publication.

- Two sponsorship programs were added to Homecoming '94. Homecoming 100 solicits sponsorships of $100. The Friend of Homecoming designation carries with it a $1000 sponsorship/donation.

4. To try to establish more endowed scholarships under the aegis of the Alumni Association.

- In 1994-95, we received endowments for two additional student scholarships, making a total of six available to students.

5. To review and evaluate our programs and services as we enter the third and final year of our current strategic plan with a view to beginning a new strategic planning process.

- A consultant, Dan Heinlen from Ohio State University, was contracted to review our programs. Additionally, a day in June was spent with our Board of Directors discussing their vision for the Alumni Association.

6. To continue to improve our Alumni database.

- The Alumni Directory project was instituted. This will give us additional and updated information on alumni such as employment, biographical information, etc.
- The database conversion to Heritage was completed.
- New computers and updated software were obtained.
- A luncheon for the Deans' Council was held to let the colleges know what is available to them on our database and to inform them how we can integrate our efforts more effectively with their respective college. A resource notebook was developed for their use.

0107

GOALS
1995-96

1. To increase community outreach programs and enhance the visibility and activities of the Alumni Association/Alumni Relations Office in New Mexico.

2. To increase the opportunities for alumni to support, serve and use positive influence on behalf of the University.

3. To begin to plan and structure the celebration of the Alumni Association's 100th birthday in 1997.

4. To continue to find ways of increasing resources for the Alumni Association and its various programs.

5. To find additional ways to be more effective in combining program efforts in order to approach Association and advancement programing in a more integrated and holistic manner.

New Iniatives for 1995-96

In addition to our regular programs, for 1995-96 we will undertake three new initiatives.

1. We have plans to start a grassroots legislative program in New Mexico which involves the identification of alumni by their legislative districts, identifying a core of alumni who wish to serve as a legislative liaison network for the University and coordinating community receptions around the state for alumni and their local legislators.

2. Increasing the Community Liaison Program from seven to fourteen individuals. This will entail identifying the individuals, setting up an orientation/training session, and continuing our structure for communication with them.

3. We will begin organizing a more integrated program plan for the State of New Mexico with regard to alumni contacts and events.

APPENDIX I

1994-95
ALUMNI CHAPTER/COMMUNITY ACTIVITIES

1994

July 11	Taos Lobo Caravan
July 17	Austin Chapter Ice Cream Social
July 17	Denver Chapter Tailgate/Rockies Game
July 23	San Diego Chapter Potluck
July 23	Seattle Chapter Cook-off
July 30-31	Los Angeles Chapter Campout
August 6	Normal Chapter "Evening by the Bay"
August 6	Chicago Chapter "Day at the Races"
August 6	San Diego Chapter Meeting
August 10	Los Angeles "Jazz at the Bowl"
August 20	Las Vegas Chapter Baseball Tailgate
August 21	Denver Chapter Annual Picnic
Sept. 1	Albuquerque Chapter Meeting
Sept. 3	Lubbock - Tailgate
Sept. 11	Washington, D.C. Taco Picnic
Sept. 11	Albuquerque Chapter Tailgate
Sept. 17	NE Texas Chapter Tailgate
Sept. 26	Los Angeles Chapter Chili Roast

Oct. 1	Albuquerque Chapter Tailgate
Oct. 4	Albuquerque Chapter Meeting
Oct. 15	Albuquerque Chapter Tailgate
Oct. 15	San Diego Chapter Chili Social
Oct. 17	Gallup Town Meeting/Alumni Reception
Oct. 22	Las Cruces Tailgate
Oct. 24	Tucumcari Town Meeting/Alumni Reception
Oct. 25	Santa Rosa Town Meeting/Alumni Reception
Oct. 27	Albuquerque Chapter Meeting
Oct. 29	Fresno Tailgate
Nov. 5	Houston Chapter "Homecoming in Houston"
Nov. 5	San Diego Chapter Meeting
Nov. 19	Albuquerque Chapter Tailgate
Nov. 29	Albuquerque Chapter Meeting
Dec. 3	Seattle Chapter Holiday Event
Dec. 4	Las Vegas Chapter Holiday Event
Dec. 4	Austin Chapter Holiday Event
Dec. 6	Albuquerque Chapter/Fine Arts Chapter Holiday Event
Dec. 10	Chicago Chapter Holiday Event
Dec. 18	Portland Chapter Holiday Event

1995

Jan. 7	San Diego Chapter Dinner for President Peck
Jan. 9	San Diego Chapter Basketball Get-together
Feb. 16	Denver Chapter - Lobos vs. CSU mini-trip
Feb. 25	Houston Chapter Lobo Day
Feb. 25	Seattle Chapter Lobo Day
Feb. 25	Normal Chapter Lobo Day
Feb. 25	NE Texas Chapter Lobo Day
Feb. 26	Austin Chapter Lobo Day
March 2	Albuquerque Chapter Lobo Day
March 4	Denver Chapter Lobo Day
March 5	Chicago Chapter Lobo Day
March 20	Los Alamos Town Meeting
March 20	Santa Fe Town Meeting
March 21	Espanola Town Meeting
March 25	Las Vegas Chapter Lobo Day
April 1	Los Angeles Chapter Lobo Day
April 22	Atlanta Chapter Lobo Day
April 24	South Valley Town Meeting
April 26	Albuquerque Chapter Meeting
April 30	San Diego Chapter Lobo Day
May 7	Washington, D.C. Chapter Lobo Day

0111

May 21	New York Chapter Lobo Day
June 6	Rio Rancho Lobo Caravan
June 8	Chapter/Council Meeting
June 17	Santa Fe Lobo Caravan
June 22	Belen Lobo Caravan
June 25	Gallup Lobo Caravan
June 29	Taos Lobo Caravan

University of New Mexico
Office of Development
Academic Year: July 1, 1994-June 30, 1995
The Annual Report
Karen Stone, Director

UNM Development Office Mission Statement

The UNM Development Office is the primary fund-raising arm of the University of New Mexico. Its mission is to support UNM research, academic excellence, and community service by identifying and developing new sources of philanthropic support, providing stewardship for current and past benefactors, supervising an active investment program, and receiving and managing private funds for the University.

UNM Development Office Goals

1. To identify cultivate and solicit gifts from individuals, corporations and foundations for UNM.

2. To boost public awareness of outstanding programs, as well as awareness of how UNM serves the community, the state and the nation.

3. To coordinate campus-wide solicitation strategies and provide fund-raising expertise and support services for campus entities in all aspects of fund raising.

4. To increase revenue by planning and executing annual giving, major giving and planned giving programs.

5. To maintain accurate records on all private support to UNM.

6. To service UNM Foundation account holders by receipting and acknowledging gifts and providing departments and administrators with timely reports on donations received by the UNM Foundation.

7. To provide stewardship to current donors through positive communication and personal interaction with administrators, faculty and students.

8. To actively involve UNM Foundation board members in the solicitation of gifts and the management of funds.

UNM Development Office Priority Goals and Accomplishments

I. UNM Centennial Campaign

A top priority for the campus-wide Development Program for the fiscal year just ended was the successful completion and gala celebration of the UNM Centennial Campaign. The Campaign raised a total of $104,711,119. A breakdown of the total funds raised follows;

Academic Divisions	$18,969,557
Student Financial Aid	$19,960,488
Faculty & Staff Support	$ 5,988,779
Research	$14,250,105
Library	$ 1,223,871
Public Service	$15,057,683
Property, Building, Equipment	$ 7,445,700
Other Restricted	$19,896,554
Unrestricted	$ 1,918,382
Total Campaign	$104,711,119

In response to the compelling need to raise funds from private sources, the campaign was officially launched in 1989, the University's centennial year, with a goal of $65 million over five years. The first truly major capital campaign undertaken by UNM, it was a co-operative endeavor that united staff, faculty, and volunteers in the pursuit of clear objectives: to raise funds for faculty development, student scholarships, program enhancement and campus expansion---while maintaining existing program support.

In July 1990, then-incoming President Richard E. Peck enthusiastically embraced the undertaking. In celebration of his arrival and in recognition of the campaign's success, the goal was increased to $100 million over seven years. Thanks to the unstinting generosity of alumni and friends, corporations and foundations, that increased goal was met and surpassed well before the campaign's target date of July 1995.

Further campaign gift highlights follow:

A. Scholarships

More than $19.9 million in scholarships from private sources, with $3.9 million designated for endowed scholarships.

B. Endowments

Permanent endowment increased from $50 million to $96 million by combining UNM and UNM Foundation endowments with additional gifts received during campaign.

C. Planned Gifts

More than $13 million in planned gifts are included in the Centennial Campaign total:

D. Million Dollar Endowed Chairs:

Burlington Resources - Established chair in General Honors Program in honor of former Governor Garrey Carruthers

Nunzio & Sherolyn De Santis - Established chair in pharmacy administration

Frank D. & Marie K. Gorham Trust - Established chair in oil and gas law in honor of retired Judge Leon Karelitz

E. Other Million-Dollar Gifts:

Frank & the late Eleanor Hibben - Established endowment to fund Hibben Research Center in Anthropology and donated ethnological collections to the Maxwell Museum.

Agnes Martin - Donated seven original paintings to the Harwood Foundation in Taos

Martian Marietta Corporation/Sandia National Laboratories - Established Math and Science Teachers Academy for Professional Development in the College of Education.

Pepsi-Cola - Provided funding for faculty enhancements, library acquisitions, academic and athletic scholarships, the President's Club and the stadium expansion.

II. Development Program Budget

Three months into the 1994-95 fiscal year, the newly appointed Director of Development quickly assessed the severity of the budget shortfall for the program, making the issue of finding additional revenue a critically important objective. A great deal of time and effort went into working closely with Wayne Davenport, Chairman of the UNM Foundation, together with an Ad Hoc Committee of the Board to both review and determine what additional revenue producing mechanisms we might adopt. The Director and staff worked very closely with the academic and administrative leadership of the campus as well as with a consultant from UCLA.

As a result of these efforts, the Foundation Board voted its final approval in late April of this year to: (1) increase the basis points from 25 to 50 from the Consolidated Investment Fund which in turn will generate an estimated $244,000 in additional revenue for the 1995-96 budget;

(2) change the interest allocation policy for the unendowed accountholders which, in turn, will raise an estimated $80,000 in additional revenue for the 1995-96 budget; and finally (3) lobbied for and received a $100,000 commitment from Vice President, David Mc Kinney to fund critically important "one-time" expenditures for the Foundation and the program in this next budget cycle.

III. Operating Plans

This past year for the first time all Constituent Development Officers and central development program managers participated in a detailed process of producing a comprehensive written operating plan for the 1995-96 fiscal year. The guidelines provided asked all development officers and managers to articulate goals and objectives (both qualitative and quantitative), work in close collaboration with their respective deans, and request budgets which, in turn, were designed to meet those objectives. Finally, the operating plans will be used throughout the 1995-96 fiscal year as guideposts against which to evaluate progress and assess performance against specified goals and objectives. The operating plans were also designed to achieve greater collaboration with academic deans to assure that the various development programs across campus are a reflection of the most important academic fund raising priorities of the President, Provost, Vice Presidents and academic deans.

IV. Technical Support for Staff

The new Director of Development quickly determined that the computer support for the entire development staff was woefully inadequate and needed immediate attention. She lobbied for and obtained increased funding to purchase new personal computer equipment and software for the entire staff in order to increase productivity, improve inter-office communications through the use of E mail as the network, improve the quality of all external relations correspondence and documents with the purchase of higher speed and better quality printers for the office and to provide staff training for all new software applications. Staff also established a new, weekly means of communicating to the entire development staff across campus with the launching of a newsletter sent via E mail called "HEADS UP"; this communication vehicle is also sent to all Vice Presidents, the President, the Provost, the Alumni Association, and to the UNM Foundation Board Chairman.

UNM Development Office and New Programs 1995-96

Because of the success of our efforts last fiscal year to generate more program support, we are now able to:

(1) plan, implement and conduct an aggressive and comprehensive telemarketing effort targeted to reach all alumni and friends of record for whom we have accurate telephone numbers to raise more unrestricted revenue for the President's discretionary use to allocate wherever the need is greatest;

(2) raise critically needed discretionary funds for the use of the academic deans on campus for their respective schools and colleges;

(3) significantly increase the funds raised to support student scholarships (both undergraduate and graduate support) including the PSP Program (Presidential Scholarship Program in its 20th anniversary year);

(4) increase our marketing and outreach efforts in the planned giving arena (i.e. trusts, bequests, pooled income funds, gift annuities, life insurance, bargain sales or gifts of real estate) in order to secure a greater number of major gifts for the campus to meet our highest academic fund raising priorities;

(5) intensify, coordinate and better concentrate our development efforts in the central office and together with the network of Constituent Development officers in the schools, colleges, libraries and athletic department, on major donor prospecting (i.e. focusing on managing a "Top 100 Major Donor Prospect List" in order to secure a greater number of gifts of $100,000 and up from individuals, corporations and foundations for the top academic objectives of the campus);
organize strategy teams for a select number of qualified major donor prospects for the purpose of devising both short and long term strategies designed to secure more and larger gifts to the University;

(6) continue to upgrade and maintain our critically important alumni/donor database (Heritage) with the special goal this year of adding critically important demographic information to our file that will give us indications of wealth. This information will help us better target segments of our database for increased gifts to the University, both in our annual giving efforts and in our individual major gift efforts;

(7) design and produce a comprehensive portfolio of development promotional materials which will incorporate the integrity of a unified and common graphic design and will include (a) a new development communication vehicle -- a semi-annual development newsletter, called "Developments", to be sent to all donors to UNM of $100 and up; (b) new planned giving materials; (c) new UNM Annual Fund materials (stationery, brochures, volunteer fund raising training materials); (d) new major gift and endowment brochures; (e) new scholarship and fellowship fund raising materials (including those specifically designed for the Presidential Scholarship Program); and a new Development Office Handbook;

(8) continue to improve, upgrade and acquire new research materials required of the full-time researcher dedicated to development research to enable the development office to provide the service required by the entire network of campus-wide development officers.

(9) provide on going fund raising consultation with the Constituent Development Officers together with their deans to assist them in their fund-raising efforts for their individual colleges and schools. Special emphasis will go to: the College of Pharmacy in its 50th

anniversary year in planning and implementing a major campaign to raise endowment support; the College of Arts and Sciences which has just completed a major strategic planning process and has identified fund-raising priorities to accomplish in the context of a "mini campaign" over the next several years; the libraries as they launch a major campaign to raise $1 million, and as they seek to match a Regents' Challenge Gift of $100,000 by the end of this fiscal year; the Health Sciences as a unit, as they seek to recruit and fill key development staff positions in the Cancer Research and Treatment Center, in University Hospital, and in overseeing the entire marketing and development operations; additionally, the Cancer Research and Treatment Center is positioned to launch a campaign to raise $5 million and is seeking special development counsel and advice as they go forward this year.

(10) launch a comprehensive donor relations and stewardship program for our current special and major gift donors, and for our newly targeted Top 100 Major Donor Prospects, which will include a new program, "The Best of UNM", designed to promote and showcase UNM's top faculty , students and programs to our very best friends and prospective major donors. In addition to a Best of UNM Program, other cultivation events will be planned to thank donors for their gifts to support scholarships, fellowships, and endowed chairs. The role of the Popejoy Society will be evaluated and clarified to make this giving distinction better understood in the overall program.

(11) conduct development research with seasoned philanthropists to UNM in order to learn more about their motivations for giving and their decision making process through a series of focus groups to be held in Albuquerque, Santa Fe, Taos, Roswell, Las Cruces, California, the Washington, D.C. area, and possibly Arizona, Colorado and Washington. This focus group activity will also serve as important cultivation of our top donors to the University as we will be looking to them in the future for larger and increased gifts.

UNM Development Office Program Recipients and Feedback

Two of our main constituencies are donors and the UNM programs which receive private support. Each of these constituencies have the opportunity to provide feedback to our office regarding our programs and services.

For the colleges, departments and programs which receive private support, the college development officer provides the main communication link. Deans and department chairs convey their needs to the development officer who in turn helps them explore ways to solicit funds for that particular project or department.

The President's Council also determines overall campus fundraising priorities. These are conveyed to the central development office through the VP for Advancement and our office then creates the fundraising programs needed to support those priorities.

Communication from our donors falls into three broad categories. Each time UNM receives a major gift, the department, development office and the donor work together to craft award or administrative guidelines for the gift. This process provides the donor with direct input regarding the use and restrictions of their gift.

Many donors use the business reply envelope or our annual fund calls to tell us about their preferences. In the past, alumni have used both of these mechanisms to ask for additional information about UNM programs, request to be eliminated from our calling program, or help update their demographic and occupational information on our database. Before we remove an alum from our mailing list, our office sends a request verification letter asking if they wish to be eliminated from future solicitations but still wish to receive general news about UNM or if they wish to be eliminated from all UNM related mailings and calls. This program seems to have worked well and people appreciate our taking the time to respond to their request.

One of the main sources of program recipient feedback is through the UNM Foundation Board of Directors. These individuals are community leaders who donate their time and expertise to serve on our board. In the past, before UNM restructures one of our fundraising programs, or launches a major capital campaign, we have solicited input and fund-raising leadership from our board members.

UNM Development Office Staff Development

During the 1994-1995 year, a number of staff development activities took place, providing evidence that on-going training is welcomed and sought by both professional and support staff:

1) Periodic professional staff round table discussions of fund-raising topics including special event development and fund-raising ethics.

2) required individual computer training for all central staff.

3) conferences for professional staff on case-by-case basis, including CASE conferences, planned giving software updates, telemarketing seminars and individual school/college retreats.

UNM Development Office Cultural Diversity/Affirmative Action

During the year the Director and Associate Director of Annual Giving participated in the cross-cultural communication workshops held for all senior administrators.

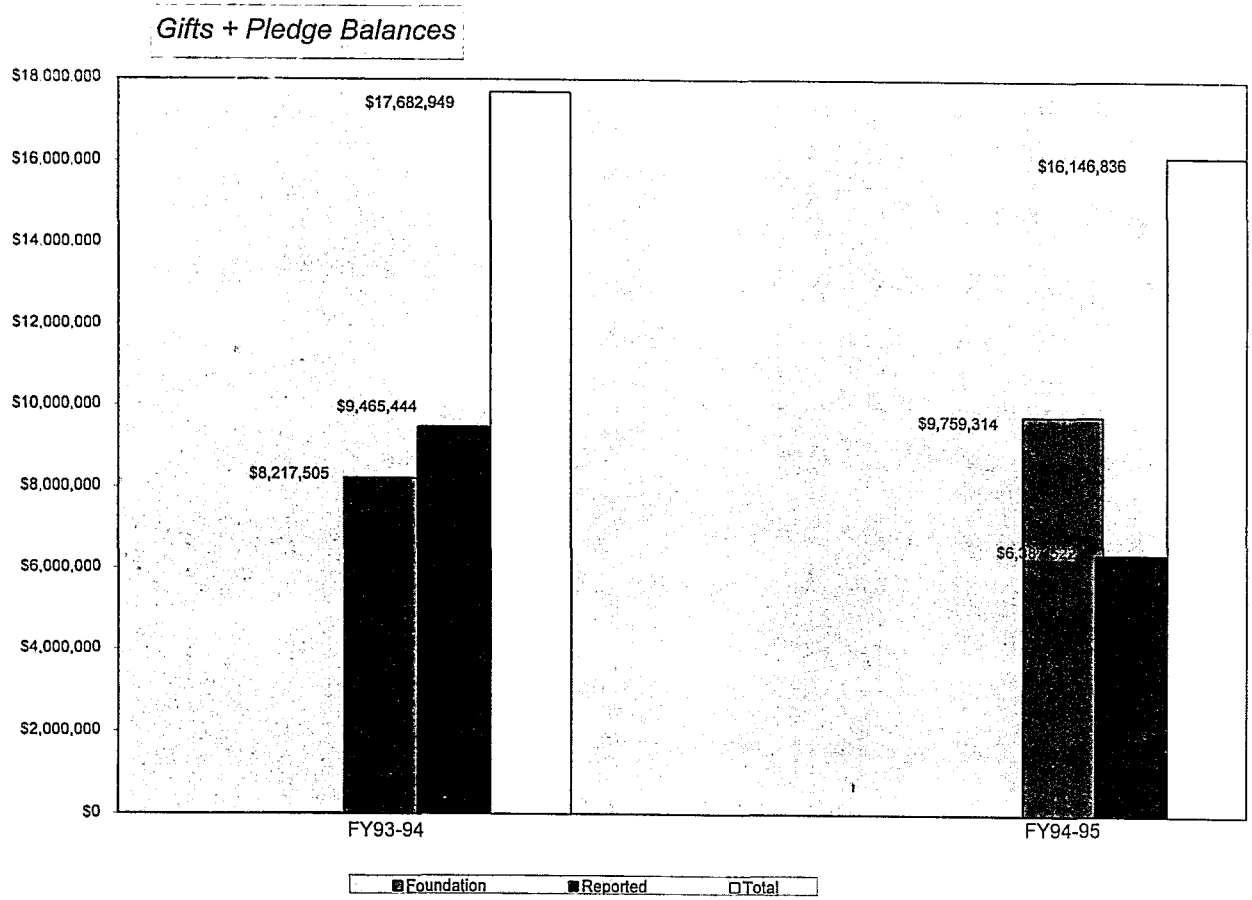
Hiring initiatives produced two new employees from under-represented groups; a third individual rejected an offer of employment.

Fund-raising initiatives, especially in scholarship development, frequently included focus on diversity and access issues important to the institution.

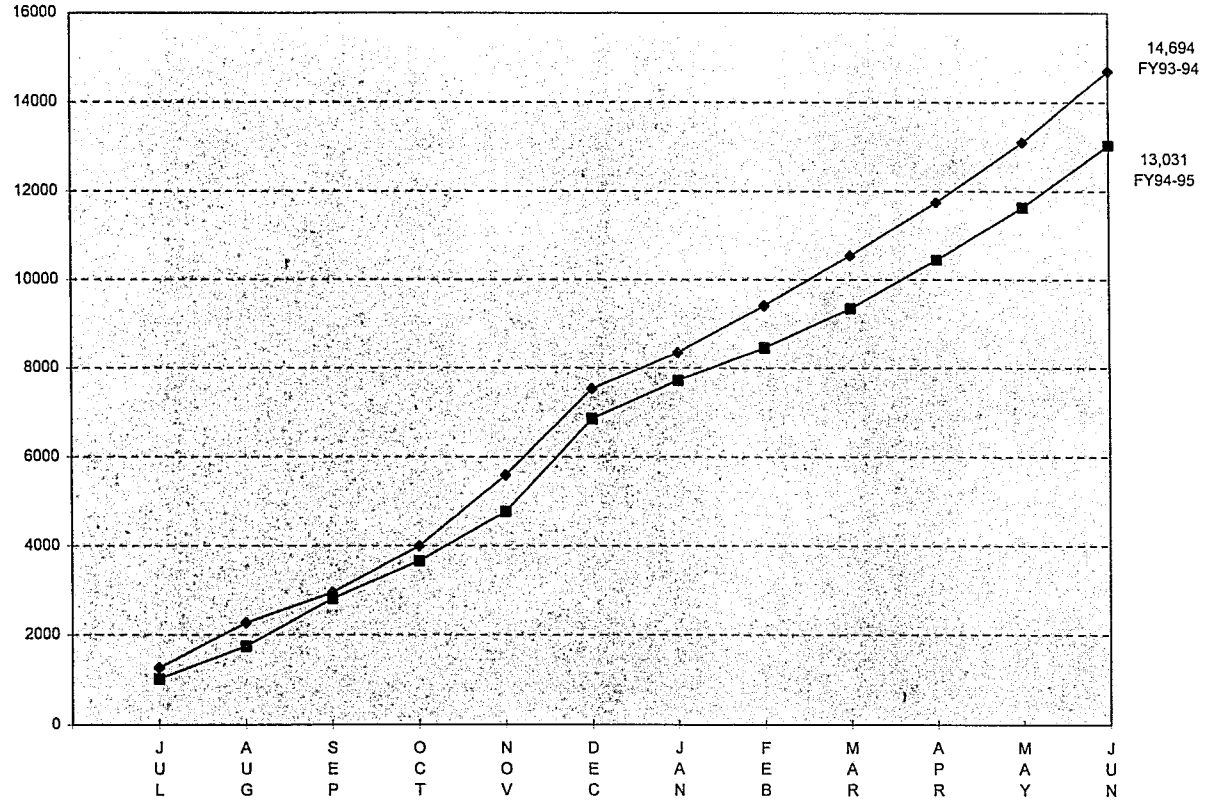
Statistical Gift Reports

Attached is a new report designed by the Development Office to better analyze and compare gift and pledge totals, comparing 1993-94 and 1994-95 results achieved by school, college or program, by source of contribution, by purpose and showing the number of individual gift transactions handled by our office annually.

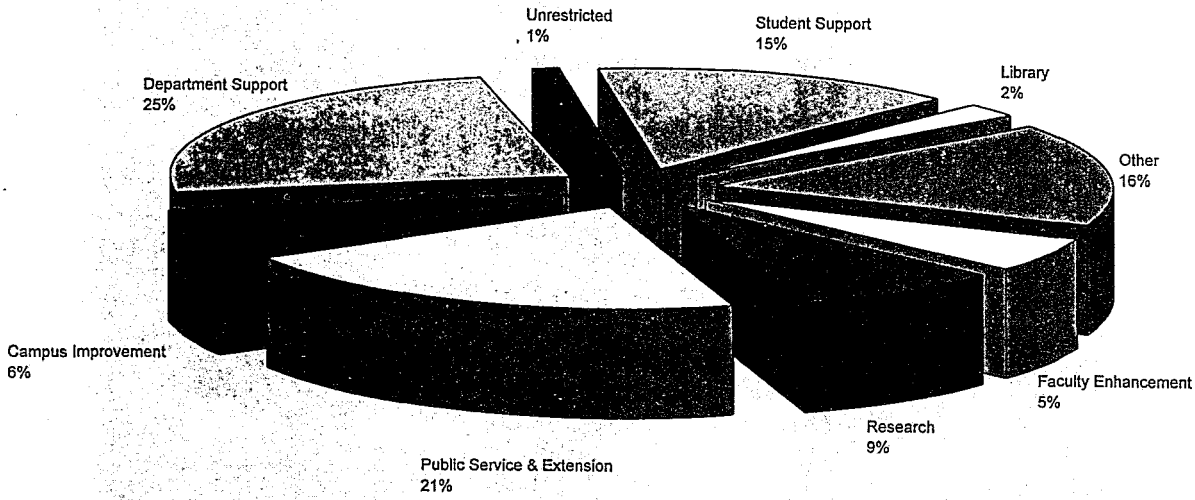
NOTE: Reported gifts received in fiscal year 1994-95 may increase, as departments frequently communicate gift information after our books have closed.


Gifts + Pledge Balances
$18,000,000
$16,000,000
$14,000,000
$12,000,000
$10,000,000
$8,000,000
$6,000,000
$4,000,000
$2,000,000
$0
$17,682,949
$16,146,836
$9,465,444
$9,759,314
$8,217,505
FY93-94
FY94-95
Foundation
Reported
Total

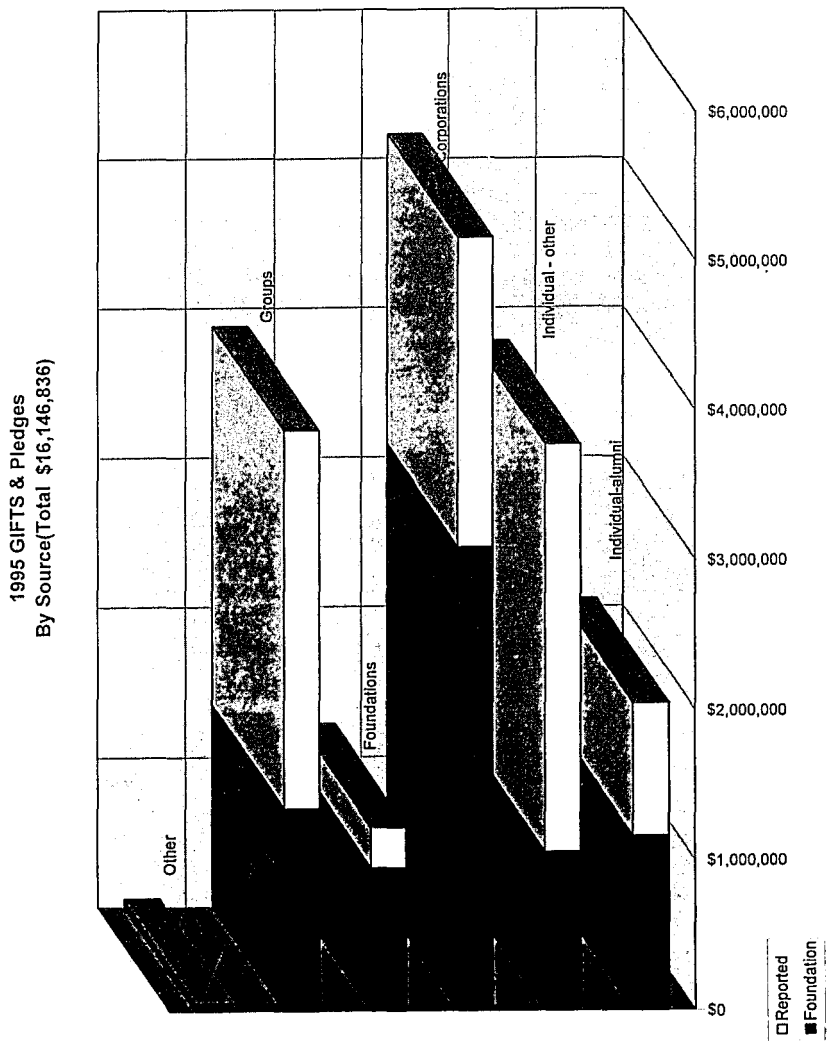
NUMBER OF GIFT TRANSACTIONS



GIFTS & PLEDGES BY PURPOSE FY94-95



Distribution of Gifts and Pledges according to the purpose prescribed by the donor.


1995 GIFTS & Pledges
By Source(Total $16,146,836)
Other
Groups
Foundations
Corporations
Individual - other
Individual-alumni
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$0
Reported
Foundation

UNM Development Revenue
01-July thru 30-June
By Donation Purpose

Donation Purpose	FY 93-94 Gift Total	Pledge Balance	Transaction Count	FY 94-95 Gift Total	Pledge Balance	Transaction Count
Academic Divisions	$ 3,895,868	$ 16,792	5,643	$ 2,647,462	$ 23,670	3,388
Academic Divisions, Endowed	$ 95,818	$ 1,667	65	$ 286,222		59
Athletics	$ 744,215		2,018	$ 952,428		2,555
Faculty & Staff Compensation	$ 36,376		61	$ 32,906	$ 140,000	81
Faculty & Staff Compensation, Endowed	$ 160,485	$ 33,000	38	$ 694,972	$ 5,050	90
Library	$ 46,041		156	$ 218,745	$ 143,649	1,182
Library, Endowed	$ 50		1			
Loan Funds	$ 8,756		27	$ 1,874		11
Loan Funds, Endowed				$ 5,430		2
Other Restricted	$ 2,147,033		2,869	$ 2,566,326	$ 35,000	2,319
Other Restricted, Endowed	$ 660		1	$ 29,712	$ 6,667	3
Property, Buildings, & Equipment	$ 985,256	$ 86,565	126	$ 356,955	$ 528,667	115
Property, Buildings, & Equipment, Endowed	$ 350		3	$ 60,300		4
Public Service & Extension	$ 2,975,844	$ 750,000	801	$ 3,443,452		427
Public Service & Extension, Endowed	$ 2,500		1	$ 20,000		4
Research	$ 3,089,104		737	$ 1,293,695		738
Research, Endowed				$ 96,200		13
Student Financial Aid, Annual	$ 1,525,853	$ 2,500	1,512	$ 1,490,007	$ 178,000	1,347
Student Financial Aid, Endowed	$ 532,890	$ 20,300	262	$ 719,069	$ 750	325
Unrestricted	$ 290,838		344	$ 61,753		366
Unrestricted, Endowed				$ 33,764	$ 74,111	2
University Totals	$ 16,537,938	$ 910,824	14,665	$ 15,011,273	$ 1,135,563	13,031
Total Gifts & Pledges		**$ 17,448,762**			**$ 16,146,836**	

UNM Development Revenue
01-July thru 30-June
By Department

Department	FY 93-94 Gift Total	FY 93-94 Pledge Balance	FY 93-94 Transaction Count	FY 94-95 Gift Total	FY 94-95 Pledge Balance	FY 94-95 Transaction Count
Alumni Relations Office	$ 73,466		270	$ 11,493		212
Anderson Schools of Management	$ 302,008		740	$ 305,836	$ 16,667	432
Children's Hospital	$ 338,863		2,040	$ 265,674		1,447
College of Arts and Sciences	$ 1,207,816		1,666	$ 838,456	$ 700	1,356
College of Education	$ 1,833,044	$ 750,000	551	$ 668,451		143
College of Engineering	$ 1,230,937		800	$ 967,252		345
College of Fine Arts	$ 669,684	$ 1,667	683	$ 847,291		482
College of Nursing	$ 224,160	$ 20,000	274	$ 62,797		61
College of Pharmacy	$ 297,945		212	$ 193,489		206
Dental Programs	$ 165		4	$ 9,762		25
Development Office	$ 1,560,849		418	$ 495,652	$ 750	518
General Libraries	$ 32,490		84	$ 192,407	$ 143,649	858
Intercollegiate Athletics	$ 959,356	$ 86,565	2,157	$ 1,177,982	$ 528,667	2,774
KNME-TV	$ 2,382,369		654	$ 2,761,957		276
KUNM-FM	$ 180,041		28	$ 226,841		60
Miscellaneous Organizations	$ 249,725		107	$ 320,562		184
President's Office	$ 4,500		2	$ 21,100	$ 35,000	8
Provost's Office	$ 96,415		3	$ 35,000	$ 140,000	2
School of Architecture & Planning	$ 63,149		162	$ 89,548		252
School of Law	$ 473,703		674	$ 985,264		617
School of Medicine	$ 2,851,042	$ 14,300	1,294	$ 1,692,364	$ 82,161	1,062
Student Financial Aid	$ 380,696	$ 22,500	832	$ 635,572	$ 175,000	619
UNM Cancer Center	$ 176,956		602	$ 277,170		609
UNM Medical Center	$ 105,213		194	$ 69,827		109
VP for Academic Affairs	$ 56,368	$ 15,792	102	$ 32,609	$ 12,970	173
VP for Admin & Student Affairs	$ 926,282		155	$ 779,924		166
VP for Business & Finance	$ 94,846		2	$ 1,047,005		35
University Totals	**$ 16,772,089**	**$ 910,824**	**14,710**	**$ 15,011,283**	**$ 1,135,563**	**13,031**
Total Gifts & Pledges		**$ 17,682,913**			**$ 16,146,846**	

Note: The transaction counts for KNME and KUNM are counts of their bulk deposits made to the Foundation, they do not reflect the actual number of donations.

0125

UNM Development Revenue
01-July through 30-June
By Program

Program	FY 93-94 Gift Total	FY 93-94 Pledge Balance	FY 93-94 Transaction Count	FY 94-95 Gift Total	FY 94-95 Pledge Balance	FY 94-95 Transaction Count
Annual Giving	$ 3,639,709	$ 32,592	10,628	$ 3,624,684	$ 23,119	8,228
Special Giving	$ 740,850		287	$ 716,086	$ 9,667	284
Major Giving	$ 1,611,791	$ 878,232	150	$ 2,920,602	$ 1,102,777	157
Planned Giving/Memorials	$ 1,042,061		1,172	$ 1,362,378		1,314
Reported Gifts	$ 9,503,529		2,428	$ 6,387,523		3,048
University Totals	$ 16,537,938	$ 910,824	14,665	$ 15,011,273	$ 1,135,563	13,031
Total Gifts & Pledges		$ 17,448,762			$ 16,146,836	

Note:
Annual Giving comprises gifts which are annual renewals, scholarships, first-time donors, and gifts < $1,000.
Special Giving comprises gifts which range between $1,000 and $49,999.99.
Major Giving comprises gifts which are $50,000 or more.
Planned Giving comprises gifts which are the result of trusts or bequests. Memorials are gift in memory of someone.
Reported Gifts are gifts received and processed by departments outside the Foundation and subsequently reported to the Foundation.

Gift Range Distribution:

Range	FY93-94 Count	FY93-94 % of Total	FY94-95 Count	FY94-95 % of Total
$1 - $999	13,110	89%	11,791	90%
$1,000 -$9,999	1,336	9%	1,010	8%
$10,000 -$24,999	146	1%	107	1%
$25,000 -$49,999	52	0%	59	0%
$50,000 -$99,999	25	0%	36	0%
$100,000 -$149,999	9	0%	13	0%
$150,000 -$499,999	13	0%	13	0%
$500,000 and up	2	0%	2	0%

UNM Development Revenue
01-July thru 30-June
By Donor Category

Donor Category	FY 93-94 Gift Total	Pledge Balance	Transaction Count	Percentage of Total	FY 94-95 Gift Total	Pledge Balance	ransaction Count	Percentage of Total
Alumni	$ 1,027,871	$ 49,248	6,571	45%	$ 1,963,175	$ 35,253	5,170	40%
Company/Business	$ 4,498,390	$ 778,167	1,991	14%	$ 4,173,204	$ 991,383	2,030	16%
Foundations	$ 3,312,969		106	1%	$ 1,221,669		77	1%
Friends of UNM	$ 3,094,329	$ 75,409	4,579	31%	$ 3,641,459	$ 104,015	4,631	36%
Groups	$ 4,408,320		912	6%	$ 3,875,558		364	3%
House Staff (Medical Residents)	$ 38,804	$ 8,000	290	2%	$ 49,795	$ 4,000	238	2%
Miscellaneous	$ 9,344		5	0%	$ 9,092		11	0%
Other Organizations	$ 118,087		8	0%	$ 48,339		8	0%
Religious Organizations	$ 1,300		5	0%	$ 145		3	0%
UNM Faculty & Staff	$ 28,524		198	1%	$ 28,839	$ 912	499	4%
University Totals	$ 16,537,938	$ 910,824	14,665	100%	$ 15,011,274	$ 1,135,563	13,031	100%
Total Gifts & Pledges		$ 17,448,762				$ 16,146,837		

0127

ANDERSON SCHOOLS OF MANAGEMENT

ANNUAL REPORT

1994-1995

TABLE OF CONTENTS

1. Introduction

2. Anderson faculty
   - 2.1 Faculty and staff 1994-95
   - 2.2 Academic areas
     - 2.21 Accounting
     - 2.22 Finance
     - 2.23 Marketing
     - 2.24 Operations management/management information systems
     - 2.25 Organizational behavior/human resources management
     - 2.26 Policy and planning
     - 2.27 Technology and international management
   - 2.3 Faculty publications
   - 2.4 Faculty committees
     - 2.41 Appointments, promotion and tenure (APT)
     - 2.42 Curriculum and programs
     - 2.43 Research allocations

3. Anderson students
   - 3.1 BBA program
   - 3.2 MBA program
   - 3.3 Student honors and awards
   - 3.4 Student organizations
     - 3.41 Associated Graduate Business Students
     - 3.42 Association of Accounting Students
     - 3.43 Beta Alpha Psi
     - 3.44 Data Processing Management Association
     - 3.45 Delta Sigma Pi (Gamma Iota)
     - 3.46 Operations Management Student Association
     - 3.47 Society for Human Resources Management, UNM Student Chapter
     - 3.48 Tourism Management Association
     - 3.49 UNM Junto Toastmasters
   - 3.5 Career planning and placement

4. Anderson special programs
   - 4.1 Management Development Center
   - 4.2 Travel and Tourism Program
   - 4.3 Western States School of Banking

5. Anderson and the community
   - 5.1 Public relations
   - 5.2 Development

Appendix
   - A.1 Anderson Foundation Board
   - A.2 Anderson donors honor roll
   - A.3 Anderson courses 1994-95

1. INTRODUCTION

Howard L. Smith
Interim Dean

The 1994-1995 academic year was a time in which the Anderson Schools put the finishing touches on one of its most significant projects while simultaneously continuing progress made in recent years toward renewing the faculty and staff. This year the Anderson Schools undertook a rigorous self-study required by the national accrediting body of the American Assembly of Collegiate Schools of Business (AACSB). There are 317 business schools accredited by the prestigious AACSB; approximately 20 percent of all business schools receive this distinction. In 1991 the AACSB adopted an entirely new set of standards in response to significant changes in the business environment. Among the challenges facing corporations today are global competitiveness, technological change and innovation, diversity of the workforce, the need for cross-functional and team management approaches, and emphasis on ethical issues. The AACSB is encouraging business schools to modify their curricula in response to the new business environment, and to reengineer how they function as academic institutions. In particular, the AACSB is fostering greater attention to missions and strategies for achieving them.

1994-1995 observed the final completion of Anderson Schools efforts to address the new AACSB standards. Having reexamined and polished the BBA, MBA and EMBA curricula, the faculty implemented several exciting changes designed to address concerns that businesses have expressed about business school education. Guided by business community input, the faculty has moved forward boldly with state-of-the-art curricula for which the Anderson Schools are well known. The curricula are driven by the fundamental mission of the Schools: notably to be a recognized leader in professional management education.

Another significant effort in 1994-1995 was the replacement of two key staff positions. Ms. Kate Livingston joined the Schools as Director of the Management Development

Center (MDC). The MDC oversees the Executive MBA program as well as continuing management education programs. Ms. Livingston left her position in charge of marketing training at Price Waterhouse in New York for the enchantment of the Southwest. Also joining us in 1994-1995 was Patricia Chavez as Director of Corporate Relations. Ms. Chavez previously served as Development Director at the UNM School of Engineering. Both of these individuals will be working with other fine staff members at the Anderson Schools who give so generously of themselves.

The AACSB self-study report and recruiting of new staff are important events in the development of the Anderson Schools of Management. However, this progress is most meaningful when combined with significant efforts by the faculty, staff and business community to develop a business school of national repute. In the following pages, other important accomplishments are summarized that are helping the Anderson Schools become a preferred school in which to study business management.

- Howard L. Smith

2. FACULTY

2.1 ANDERSON FACULTY 1994-1995

Addington, Dawn	Accounting	Visiting lecturer	MSAcc	U New Mexico
Baker, Kenneth G.	Marketing	Associate professor	PhD	U Oregon
Banbury, Catherine	Policy/Planning	Assistant professor	PhD	U Michigan
Bannister, Geoffrey J.	Tech/Int'l	Assistant professor	PhD	U Texas/Austin
Becker, D'Arcy	Accounting	Assistant professor	PhD	U Wis/Madison
Bernstein, Judith*	Parish Librarian	Associate professor	MLS	Columbia
			M A	Cornell
Blazek, Michele M.	Accounting	Assistant professor	PhD	Arizona State
Bose, Ranjit	OM/MIS	Assistant professor	PhD	U Texas/Austin
Bullers, Wm. I. Jr.	OM/MIS	Professor	PhD	Purdue
Burd, Stephen D.	AC OM/MIS	Associate professor	PhD	Purdue
Carayannis, Elias G.	Tech/Int'l	Assistant professor	PhD	RPI
Champoux, Joseph E.	OB/HRM	Professor	PhD	U Cal/Irvine
Coes, Donald V.	Tech/Int'l	Professor	PhD	Princeton
Dillard, Jesse F.	AC Accounting	Professor	PhD	U S. Carolina
de Gouvea Neto, Raul	Tech/Int'l	Associate professor	PhD	U Illinois
Dry, Eddie	Dir. Travel/Tourism	Lecturer III	PhD	Texas A&M
Elliott, Patrica	Accounting	Professor	DBA	U Colorado
Finkelstein, John M.	Finance	Associate professor	PhD	U Pennsylvania
Grant, Dwight	Finance	Professor	PhD	U Pennsylvania
Haley, Debra A.	Marketing	Assistant professor	PhD	Oklahoma State
Hamill, James	Accounting	Assistant professor	PhD	Arizona State
Hood, Jacqueline N.	OB/HRM	Associate dean	PhD	U Col/Boulder
Hozier, George C. Jr.	AC Marketing	Associate professor	PhD	U Arizona
Kassicieh, Suleiman K.	Tech/Int'l	Professor	PhD	U Iowa
Logsdon, Jeanne M.	Policy/Planning	Associate professor	PhD	U Cal/Berkeley
Miners, Ian A.	OB/HRM	Assistant professor	PhD	Michigan State
Mouck, Tom	Accounting	Assistant professor	PhD	Oklahoma State
Muller, Helen J.	AC OB/HRM	Associate professor	PhD	U SoCal
Parham, Patricia	OB/HRM	Visiting lecturer	PhD	U Texas/Austin
Parkman, Allen M.	Policy/Planning	Professor	PhD	UCLA
			J D	U New Mexico
Porter, James	Policy/Planning	Associate professor	J D	Temple
Preston, Alistair	Accounting	Associate dean	PhD	U Bath
Radosevich, Raymond	Tech/Int'l	Professor	PhD	Carnegie-Mellon
Rattner, Laurie	OM/MIS	Assistant professor	PhD	RPI
Ravinder, H.V.	OM/MIS	Associate professor	PhD	U Texas/Austin
Rehder, Robert R.	OB/HRM	Professor	PhD	Stanford
Reid, Richard A.	OM/MIS	Professor	PhD	Ohio State
Rogers, Robert D.	Marketing	Associate professor	PhD	U Nebraska
Sanders, Margaret	OM/MIS	Visiting lecturer	PhD	U New Mexico
Schatzberg, John D.	AC Finance	Associate professor	PhD	U Michigan
Schultz, Carl R.	OM/MIS	Professor	PhD	U N. Carolina
Shama, Avraham	Marketing	Professor	PhD	Northwestern
Simonson, Donald G.	Finance	Professor	PhD	U Michigan
Smith, Howard L.	Policy/Planning	Interim dean	PhD	U Washington
Thompson, Judith K.	AC Policy/Planning	Associate professor	PhD	U Cal/Berkeley
Togo, Dennis F.	Accounting	Associate professor	PhD	Arizona State
Vora, Gautam	Finance	Assistant professor	PhD	U Indiana
Warner, John		Assistant dean	MBA	U New Mexico
Young, John E.	Policy/Planning	Associate professor	PhD	U Kansas
Young, Joni J.	Accounting	Assistant professor	PhD	U Illinois
Yourstone, Steven A.	OM/MIS	Associate professor	PhD	U Washington
Yuthas, Kristi	Accounting	Visiting asst professor	PhD	U Utah

AC = Area coordinator

* Ex officio associate member of ASM faculty

ENDOWED CHAIR

New Mexico Bankers Chair of Banking	Donald G. Simonson

PROFESSORSHIPS

Douglas Minge Brown Professorship (Finance)	Dwight Grant
Arthur Andersen Professorship (Accounting)	Patrica Elliott
Ed Black Professorship (Entrepreneurship)	John Young
KPMG Peat Marwick Professorship (Accounting)	Jesse Dillard
James Rutledge Professorship	Richard Reid
ASM Advisory Board Professorship	Avraham Shama
Regents Professorship	Suleiman Kassicieh

LECTURESHIPS

Baldridge Lumber Lectureship	Allen M. Parkman
Lobo Center Lectureship	Laurie Rattner
Regents Lectureship	Jacqueline N. Hood/James Hamill
Rogoff, Diamond & Walker Lectureship (Accounting)	Alistair Preston
Sandia Federal Lectureship (Finance) I	John Finkelstein
Sandia Federal Lectureship (Finance) II	John Schatzberg
Wood Lectureship	Joseph E. Champoux

Charter Bank for Savings, F.S.B. Awards for Excellence

Outstanding teaching professor of the year:	Tom Mouck
Outstanding research professor of the year:	Ray Radosevich

El Paso Natural Gas Foundation Faculty Achievement Award

Steven Yourstone

ADMINISTRATION AND STAFF

Interim Dean	Howard L. Smith
Associate Dean	Jacqueline N. Hood
Associate Dean	Alistair Preston
Assistant Dean	John Warner
Assistant Dean	Doyle Kimbrough
Director MDC	Kate Livingston

Chastain, Loyola	Entrepreneurship program coordinator
Cromer, Mary	Administrative assistant
Crowther, Erin	Secretary
Fachman, Mary	Career planning coordinator
Folley, Sandra	Secretary
Francis, Janet	Secretary
Gibson, Alisa	Secretary
Henry, Mary	Entrepreneurship program manager
Kirby, Lisa	Placement coordinator
Kourkoumelis, Lisa	Secretary MDC
Lodato, Janice	Secretary
Lucero, Jennie	Asst. to associate deans
Martin, Kristi	Staff assistant
McHale, Analise	Staff assistant
Merrell, Margaret	Editorial assistant
Occhialino, Sally	Student advisor III
Otero, Deborah	Secretary
Podeyn, Sue	MBA program manager
Ponto, Roberta	Staff assistant, School of Banking
Rhodes, Doris	Director of development
Seazzu, Alex	Computing facilities supervisor
Siget, Marlene	Director, public relations
Teel, Jacqueline	Office manager
Thompson, Teri Silva	BBA program manager
Trujillo, Darlene	Administrative assistant
Trujillo, Tina	Staff assistant, MDC
Willard, Doris	Student advisor III

2.2 ACADEMIC AREAS

2.21 ACCOUNTING AREA

Jesse F. Dillard, Area Coordinator	
Dawn Addington	Tom Mouck
D'Arcy Becker	Alistair Preston
Michele Blazek	Dennis Togo
Patrica Elliott	Joni Young
James Hamill	Kristi Yuthas
Part time	
Robert Armstrong	Nancy Swenson
C. Jack Emmons	Robert Tepper
Eileen Iles	Pat Tucker
Camille Koehler	Don Umbrage
Charles Moss	Louise Umbrage
Gordon Petrie	Richard Wildermuth
Rosa Steele	

Appointments, promotions, and separations

- Dawn Addington received an appointment as visiting lecturer, responsible for coordination of Mgt 202.
- Kristi Yuthas (PhD University of Utah) served as visiting assistant professor.
- James Hamill was approved for tenure and promotion to associate professor.
- Professors Michele Blazek and Alan McNamee resigned from the University faculty.

1994-95 activities and honors

- Vigorous recruiting throughout the 1994-95 year resulted in the following appointments for Fall 1995:
  Philip Bougen (PhD, London School of Economics), associate professor
  Michele Chwastiak (PhD, University of Pittsburgh), visiting assistant professor
  Leslie Oakes (PhD, University of Wisconsin), assistant professor
  Kristi Yuthas (PhD, University of Utah), assistant professor
- Tom Mouck was again, by student vote, chosen Teaching Professor of the Year.
- James Hamill's student-written *Tax Tips* was distributed to more than 1,000 alumni and friends of the school.
- 1994-95 was ASM's self-study year for AACSB accreditation review. The Accounting Area's accompanying application for separate accreditation entailed considerable discussion and planning by the area faculty of existing and projected programs, research, faculty assessment and development, and the feasibility of a PhD program.

Faculty publications are reported in Section 2.3.

2.22 FINANCE AREA

John A. Schatzberg, Area Coordinator	
John M. Finkelstein	Donald G. Simonson
Dwight Grant	Gautam Vora
Part time	
Ken Buehler	Walter Harvey
Doris Chavez	J. Ross Thomas

Appointments, promotions, doctoral program

- Gautam Vora was promoted to Associate Professor with tenure.
- Doctoral candidate Doris Chavez passed both her Economics and Finance qualifying examinations and is a formal PhD candidate. Anderson funding enabled her to travel to the Wharton School at the University of Pennsylvania to examine a data base.

Area activities

- Visiting speakers
  - Professor A. M. Santomero, Richard King Mellon Professor of Finance, Wharton.
  - Professor Keith M. Howe, William M. Scholl Professor of Finance, DePaul.
  - Professor Ned C. Hill, Joel C. Peterson Professor of Business Administration, Brigham Young University.
- New Mexico State University/University of New Mexico finance areas seminar. This year's program was held at NMSU and included the University of Texas/El Paso.
- Financial Executive Institute. Members Finkelstein and Grant were the producers of "Educator's Night" for the New Mexico chapter.
- American Association of Individual Investors. Gautam Vora is a founder and secretary of this 750-member New Mexico chapter.

The area thanks the Southwest Institute for Finance for its support; the Anderson Schools Foundation; and the supporters of the New Mexico Bankers chair, Douglas Brown professorship, and Sandia Federal lectureships.

2.23 MARKETING AREA

George C. Hozier, Jr., Area Coordinator

Kenneth G. Baker	Robert Rogers
Debra Haley	Avraham Shama
Part time	
Kathy Dixon	Jon Olsen
Barry Fieg	John Pollock
Seana Moran	

Area innovations, changes, special projects

- The marketing faculty is continuing to redesign the curriculum and course content to reflect the changing needs of the business community and the new AACSB guidelines. The curriculum is being changed to allow for more specialized coursework and for more customized student programs. Individual courses are becoming more project-oriented with direct involvement of the local business community in the form of class speakers, field trips, and project sponsorship. The changes are constrained by the small number of faculty, decreasing number of students, and lack of resources.
- Specific innovations include increasing coordination between the marketing faculty and faculty members in the finance and production areas at the core course level and in the development of a joint management decision-making course.

Community interaction

- Professors Baker, Hozier and Rogers completed a number of research and management assistance projects for the State of New Mexico, Sandia and Los Alamos National Laboratories, J.C. Penney, and other local business and community organizations.
- Professor Shama coorganized a conference on the economic restructuring of defense, sponsored by Los Alamos and Sandia National Laboratories and the University of New Mexico. He also served as faculty advisor to Beta Gamma Sigma honorary society, and on the UNM Faculty Senate.
- Professor Haley is president of the Western Marketing Educators Association.

Faculty publications are reported in Section 2.3.

2.24 OPERATIONS MANAGEMENT/MANAGEMENT INFORMATION SYSTEMS AREA

Stephen Burd, Area Coordinator

Ranjit Bose	Richard Reid
William Bullers	Carl Schultz
Suleiman Kassicieh	Margy Sanders
Laurie Rattner Schatzberg	Steven Yourstone
H.V. Ravinder	

Adjunct/Part time

William Epler	Terry Othick
Moira Gerety	Donald Sikora
Howard Lambert	Renee Ulibarri

- Appointments, promotions and leaves
  - Professor Steven Yourstone was granted tenure and promoted to Associate Professor. He was on sabbatical leave during the Spring 1995 semester.
  - Professor Carl Schultz was on sabbatical leave during the Fall 1994 semester.

- Area developments, innovations and items of interest
  - A committee comprised of industry representatives and faculty from the Anderson Graduate School of Management and the School of Engineering began preliminary planning and development of a masters program in Manufacturing Engineering Management. Detailed curriculum development continues into the 1995-96 academic year.
  - The MIS faculty has changed the Computer Based Information Systems and Introduction to Information Processing courses for full use of Microsoft Windows application packages, including Excel, Powerpoint, and Access. The use of the Internet, including email and World Wide Web browsers, has also been introduced. Other innovations include: Visual Analyst Workbench, a Computer Aided Software Engineering (CASE) tool, integrated into the BCS and MIS curricula in the areas of systems analysis and design; Microsoft Access and Oracle relational database management systems, implemented in the BCS/MIS database courses; and a new course in Local Area Network administration, including Novell Netware, added to the BCS curriculum.
  - The Operations Management Student Association (OMSA) toured a variety of manufacturing and service organizations, including Bueno Foods, Plastech, Rio Grande Brewing Company, and Rio Grande Portland Cement Corporation.

- Faculty professional activities
  - Professor Steven Yourstone volunteered over 110 hours to the Board of Examiners for the Quality New Mexico initiative, in cooperation with over 60 professionals in the field of quality improvement.
  - Professor Ranjit Bose's paper, "Intelligent Agents Framework for Collaborative Computing," was honored as Best Paper in the MIS Track at the Western Decision Sciences Institute meeting in San Francisco (April, 1995).
  - The Operations Management Student Association honored Professors Richard Reid and Carl Schultz at the annual awards ceremony with plaques recognizing their support.
  - Professor Laurie Schatzberg continued her service as faculty adviser to the student chapter of the Data Processing Management Association.

2.25 ORGANIZATIONAL BEHAVIOR/ HUMAN RESOURCES MANAGEMENT AREA

Helen J. Muller, Area Coordinator	
Joseph E. Champoux	Ian Miners
Jacqueline N. Hood	Patricia Parham
Howard Finston (emeritus)	Robert R. Rehder
Adjunct/Part time	
Dolores Acree	Suzanne Kryder
Helen Gonzales	Mary Ann Lunderman
Ron Johnson	Frank Reinow
	Maggie Seeley

Area events

- Appointments to faculty
  - Monica North, PhD in Organization Studies, Massachusetts Institute of Technology, has accepted appointment as an Assistant Professor.
  - Jan Corzine, formerly with the UNM Business Technology Program, has accepted appointment as an Associate Professor. Dr. Corzine will supervise the OB/HRM internship program.
- Dr. Patricia Parham, Visiting Lecturer, continued to help integrate workforce diversity into the undergraduate core classes, and taught a graduate seminar on managing diversity.
- The OB/HRM area continued the revision of its curriculum, with the help of the student HRM chapter, to update courses and allow more flexibility and choice. The following improvements have been made:
  - The OB/HRM BBA concentration requirements now permit students a *choice* of four upper level classes, increasing the variety of classes students can select.
  - Employment Law is now offered every semester.
  - An OB/HRM internship course successfully completed its second-time offering in the Spring. It will now be offered every semester to undergraduate and graduate students. Internships have been developed with local businesses such as PNM, UNM, and Intel.
  - New courses *Compensation, Benefits, and Training* and *Staffing and Employee Relations* were offered successfully for the second time and will be continued.
- The subject of "workforce diversity" is now an integral part of the core OB/HRM curriculum.
  - All Mgt 306 core classes now focus on workforce diversity and intercultural relations along with organizational behavior.
  - The graduate core classes Mgt 506 and EMBA 706 also include this topic.
  - This project is highlighted in the Anderson AACSB accreditation report.
- Jacqueline N. Hood was appointed one of two ASM Associate Deans.
- The ASM student chapter of the HRM Society, under the leadership of Ms. Lee Belew, received a national recognition award.
- Professor Champoux holds the Ed Wood Lectureship for 1995-96; he is now on the International Faculty of the WLRA International Centre of Excellency (Netherlands).

2.26 POLICY AND PLANNING AREA

Judith Thompson, Area Coordinator	
Eddie Dry	James Porter
Jeanne Logsdon	Howard Smith
Allen Parkman	John Young
Adjunct/Part time	
Sam Archuleta	Luther Hodges, Jr.
Sloan Carr	Tim Kelly
Cheryl Chatfield	Ann Patrick LeMay
Michael Daly	Randy Lovato
Nancy Bell Greiff	Carolyn Meinel
Allegra Hanson	Richard Meyer
Jurgen Haver	Rikki Quintana
James Hayes	Wallace Van Dusen

Faculty appointments, promotions, & sabbaticals

- Yolanda Sarason accepted a position as Assistant Professor in Entrepreneurship and Strategy. She is completing her dissertation in Business Administration at the University of Colorado/Boulder, with a major in Strategic Management.
- John Young was on sabbatical leave for the spring 1995 semester. He was awarded a scholar-in-residence position at the Center for Entrepreneurial Leadership of the Ewing Marion Kauffman Foundation, Kansas City MO. He will remain on leave for the fall 1995 semester, and continue his work on a project on entrepreneurial learning.
- Howard Smith was appointed Interim Dean of the Anderson Schools, after serving as Associate Dean for four years with Dean Kenneth Walters.
- Jeanne Logsdon completed her three-year term as Area Coordinator. She will be on sabbatical leave 1995-96.

Faculty activities

- Allen Parkman took a USIA-sponsored trip to India and Bangladesh, speaking in Calcutta, Jamshedpur, Delhi, Madras, Truchi, Bangalore and Dacca on privatization and banking issues. He also received substantial positive feedback from readers of a column he wrote for the Albuquerque *Journal*, contending that our basic problem with health markets is employer deductibility of employee health insurance premiums.
- Jeanne Logsdon was invited to attend a conference on "Environmental Ethics and Business" at Georgetown University in October 1994. She also presented papers at the Academy of Management annual meeting in Dallas and the International Association for Business and Society in Vienna. Professor Logsdon represents ASM on the Washington Campus executive board, and attended the board annual meeting in June 1995.
- Eddie Dry traveled in Russia and Mexico (see Travel & Tourism report).
- Judith Thompson attended a conference in The Hague on Biotechnology in European Society.

Area innovations, changes, and special projects

- The area grew somewhat smaller as faculty members specializing in International Management and Management of Technology formed a new area, Technology and International Management.
- Jeanne Logsdon and Judith Thompson coordinated the campus visit of two corporate lobbyists, Mark F. Haynes (Fluor Corp.) and Frank Jackson (Bristol-Myers Squibb).

The visit was sponsored by the Bryce Harlow Foundation. The lobbyists participated in several sections of Mgt 308 and 508, and met with students about career opportunities in public affairs.

- In conjunction with the program in Entrepreneurial Studies, the Small Business Institute engaged in over fifty cases in the Albuquerque community.
- Managing Family Businesses, a new course in the Entrepreneurial Studies program, was offered in the spring 1995 semester.

Travel and Tourism is covered in the Special Programs section.

Faculty publications are listed in Section 2.3.

2.27 TECHNOLOGY & INTERNATIONAL MGT AREA

Suleiman Kassicieh, Area Coordinator	
Catherine Banbury	Donald V. Coes
Geoffrey Bannister	Raul de Gouvea Neto
Elias Carayannis	Raymond Radosevich
Part time	
Jose Chacon	Rich Reisinger

Significant developments during 1994-95

- The area was formed by combining the faculty of the Management of Technology program and the International Management program. The courses and new concentration of MOT were approved by the Anderson and UNM administrations and faculty. We started accepting students in the area concentrations.

Significant plans and recommendations

- Both programs are facing increased demand from students. The MOT program plans to expand its faculty resources to meet this demand. The MOT faculty is planning to hold a joint conference with the University of South Australia in Adelaide in Fall 1996. Also, the MOT program is proposing the formation of a Center for Strategic Alliance Formation (C-SAF) at UNM with funding from multiple sources.
- The International Management faculty plans to continue its faculty and student exchanges with the University of Brasilia, University of Guanajuato (Mexico), Federal University of Brazil and the Brazilian Financial Markets Institute (IBMEC)

Appointments, separations, and leaves

- Professor Elias Carayannis joined the MOT faculty in January 1995.
- Professor Don Coes was on leave at the Federal University of Brazil.

Outside professional activities

- Professor Coes is working with the World Bank on the Brazilian economic structure.
- Professor de Gouvea is working with the Brazilian Financial Markets Institute (IBMEC) on economic projects.

- Professor Radosevich presented invited papers at two Australian conferences on technology transfer as well as one at the Stanford Conference on Technology Commercialization.
- Professor Kassicieh is software editor of *OR/MS Today*, special issue editor for the "Information Technology and Technology Transfer" issue of the *IEEE Transactions on Engineering Management* and the Technology Transfer track chair of the Hawaii International Conference on Systems Sciences.

Outside Sponsored Research

- S. K. Kassicieh, " Technology Commercialization Assessments," Sandia National Laboratories ($100,000).
- S. K. Kassicieh and H. R. Ravinder, "Elicitations of Expert Opinions in WIPP research," Sandia National Laboratories ($38,000).
- S. K. Kassicieh, "Information Modeling in Environmental Operations, " Sandia National Laboratories ($52,000).

Faculty publications and awards are reported in Section 2.3.

2.3 FACULTY PUBLICATIONS JULY 1, 1994 - JUNE 30, 1995

ACCOUNTING AREA

Becker, D'Arcy

Using hypermedia to provide learner control (with M. Dwyer). *Journal of Educational Multimedia and Hypermedia, 3* (2), 1994, 155-174.

The measurement of navigational paths in a hypertext environment. *Proceedings, IEEE International Conference on Systems, Man and Cybernetics,* October, 1994, San Antonio.

Effects of hypermedia on learner control and student achievement. *Proceedings, AAA Annual Meeting,* August 1994, New York.

Dillard, Jesse F.

The effect of the prospective payment system on rural health care. *Proceedings of the Interdisciplinary Perspectives on Accounting Conference, 1,* 9.1-9.15. Manchester UK: University of Manchester.

Discussion of "Moving toward an accounting that will be enabling: Accounting, Habermas, and issues of gender.' *Proceedings of the Interdisciplinary Perspectives on Accounting Conference, 6,* 3.1-3.2. Manchester UK: University of Manchester.

Elliott, Patrica

West's federal taxation: Individual income taxes, 1995 edition (co-authored). West Publishing, 1994.

West's federal taxation: Corporations, partnerships, estates, and trusts, 1995 edition (co-authored). West Publishing, 1994.

West's federal taxation: Comprehensive volume, 1995 edition (co-authored). West Publishing, 1994.

Hamill, James R.

Tax savings opportunities in estate freeze transactions: An application of the Black-Scholes model (with J. Sternberg). *Financial Services Review,* Spring 1995, 9-22.

How taxes influence whether to exercise executive stock options (with J. Sternberg). *The Journal of Taxation of Investments,* Spring 1995, 187-196.

Nonqualified stock plans can be adapted to meet the needs of privately held companies. *Journal of Taxation,* February 1995, 100-106.

S elections vulnerable on debt-equity question. *Taxation for Accountants,* January 1995, 4-11, reprinted in *Taxation for Lawyers,* March/April 1995, 269-276.

Proper S corp. formation ensures continued S status. *Taxation for Accountants,* September 1994, 354-361, reprinted in *Taxation for Lawyers,* November/December 1994, 162-168.

The effect of repeal of the capital gain preference on venture backed companies (with I. Khurana). *The Journal of Small Business Finance, 3* (2), 1994, 97-109.

Avoiding capital structure traps in S corporations. *Taxation for Accountants,* December 1994.

Mouck, Tom

Accounting, economics and physics: The emerging challenge of chaos theory. *Proceedings of the Fourth Interdisciplinary Conference on Accounting.*

Discussion of R. Tamminien's 'Unobserving the obvious: In what sense is income determination possible?' *Proceedings of the Fourth Interdisciplinary Conference on Accounting.*

Preston, Alistair

Worrying about accounting in health care (with W. Chua). *Accounting Auditing and Accountability Journal, 7* (3), 4-17.

Togo, Dennis

Computer integration into the accounting curriculum: Learning benefits, problems, and guidelines (with A. McNamee). *Journal of Accounting Education,* Spring 1995.

A transfer-of-learning approach to computer integration (with A. McNamee). *Journal of Accounting and Computers,* Fall 1994.

Chapter 10 - Problem definition. In S. Marcus & J. Wilkinson (Eds.), *Handbook of management consulting services.* New York: McGraw-Hill, 1995

Ace Company: A case for incorporating competitive considerations into the teaching of capital budgeting (with C.W. Chow & Y. Hwang). *Issues in Accounting Education,* Spring 1995.

Young, Joni

Getting the accounting right: Accounting and the savings and loan crisis. *Accounting Organizations and Society,* 1995.

Yuthas, Kristi

Paradise regained? Myth, Milton, and management accounting (with T. Tinker). *Critical Perspectives on Accounting,* March 1995.

FINANCE AREA

Schatzberg, John

Ex-dividend days and daily stock returns (with E. Dyl & S. Basu). In Ghosh, D.K. (Ed.), *New advances in financial economics.* London: Pergamon Press, 1994.

Signalling under intertemporal resolution of uncertainty: Distinguishing debt with warrants from similar offerings (with E. Robbins). *Review of Quantitative Finance and Accounting,* 1994, 155-178.

Simonson, Donald

A long-term perspective on marketing risk management services. *Journal of Psychology and Marketing,* Winter 1995.

Bank management: Text and cases (4th ed.) (with G. Hempel & A. Coleman). New York: John Wiley and Sons, 1994.

Analysis of community bank competition. In Davis, J.M. (Ed.), *The community banker's toolbox for the future.* American Bankers Association, 1994.

MARKETING AREA

Shama, Avraham

Cloning the Russian manager: A survey of the transformation of Russian managers. *International Journal of Business, 11* (4), December 1994.

Developing and testing a theory of management transformation from planned to a market economy: The case of Russia. *Technological Forecasting and Social Change, 47,* 1-24.

The transformation of Russian management: A qualitative and theory building approach. *International Business Review,* 1994, 1-21.

Transformation of marketing management in Russia: A qualitative and theory building approach. *The International Executive, 35* (5), September/October 1994, 1-26.

OM/MIS AREA

Bose, Ranjit

CMS: An intelligent knowledge-based tool for organizational procedure modeling and execution. *Expert Systems with Applications -- An International Journal, 8* (1), 1995, 1-21.

Intelligent agents framework for collaborative computing. *Proceedings of the Western Decision Sciences Institute's Twenty-Fourth Annual Meeting,* San Francisco, April 11-15, 1995, 414-416. (Received "Best Paper" award in the Management Information Systems track).

Rattner, Laurie

Using a reference model to characterize manufacturing information integration (with S. Pant & C. Hsu). *International Journal of Operations and Production Management, 14* (11), 1994, 52-72.

A metadatabase approach to managing and integrating manufacturing information systems (with G. Babin, M. Bouziane, W. Cheung, C. Hsu, A. Rubenstein & L. Yee). *Intelligent Manufacturing, 5,* 1994, 333-349.

The information processing roles for mid-level production management in agile manufacturing (with R. Reid). *Proceedings of the 1994 IEEE Systems, Man & Cybernetics Conference,* San Antonio, October 1994, 518-524.

Reid, Richard A.

Software piracy: Is it related to level of moral judgment? (with J. Thompson & J. Logsdon). *Journal of Business Ethics, 13* (11), November 1994, 849-857.

An integrated modeling approach for identifying promising technologies to address waste management problems (with D. Christensen & D. Harbur). *Radioactive Waste Management and Environmental Restoration, 18* (3), 1994, 197-208.

Evaluate decision criteria systematically (with D. Christensen). *Chemical Engineering, 90* (7), July 1994, 44-49.

The information processing roles for mid-level production management in agile manufacturing (with L. Rattner). *Proceedings of the 1994 IEEE International Conference on Systems, Man and Cybernetics,* San Antonio, October 1994.

Facility shutdown: A model-based approach to production planning (with D. Clements). *Production and Inventory Management Journal, 35* (4), 1994, 43-49.

Walk-through audits: Providing an empirically-based customer service perspective (with S. Cummings). *Proceedings of the Third International Decision Sciences Institute Meeting,* Puebla, Mexico, June 1995.

Yourstone, Steven

SPC-Pro: An expert system approach for variables control charts (with W. Zimmer & S. Kassicieh). *Quality Engineering, 7* (1), August/ September 1994, 89-104.

ORG BEHAVIOR/HRM

Champoux, Joseph

Time-serial substitution effects of absence control on employee time-use (with M. Moore, I. Miners, & J. Martocchio). *Human Relations,* 1994.

OD impacts interrupted: A multi-year time-serial study of absence and other time uses (with I. Miners, M. Moore, & J. Martocchio). *Groups & Organization,* 1994.

Hood, Jacqueline N.

Care and connection: A study of gender differences in charitable contributions to small businesses (with J. Thompson). *Journal of Business and Entrepreneurship, 6* (2), 1994, 73-89.

Leadership and quality of working life in home health care (with H. Smith & N. Piland). *Home Health Care Services Quarterly, 14* (4), 1994, 3-22.

Miners, Ian

Time-serial substitution effects of absence control on employee time-use (with J. Champoux, M. Moore, & J. Martocchio). *Human Relations,* 1994.

OD impacts interrupted: A multi-year time-serial study of absence and other time uses (with J. Champoux, M. Moore & J. Martocchio). *Groups & Organization,* 1994.

Occupational and longitudinal differences in health-care and non health-care worker attitudes concerning AIDS and work (with N. Nykodym, J. Simonetti, & W. Neilson). *Health Marketing Quarterly,* 1994.

Muller, Helen J.

Managing diversity in health service organizations (with B. Hasse). *Hospital and Health Services Administration, 39* (4), Winter 1994.

Women in urban Burma: Social issues and political constraints. *Women's Studies International Forum, 17* (6), 1994.

The legacy and opportunities for women managers in Zimbabwe. In N.J. Adler & D. Izraeli (Eds.), *Competitive frontiers: Women managers in a global economy.* London: Basil Blackwell, 358-373, 1994.

Rehder, R.R.

Learning and adaptation at Nissan UK: Is Europe's lean manufacturing model a worker's paradox? (with J. Thompson). *Business Horizons,* 1994.

Nissan UK: The Japanese transplant beachhead in Europe (with J. Thompson). *Columbia Journal of World Business,* Fall 1994, 92-106.

POLICY/PLANNING

Dry, Eddie

Visitor survey and economic impact methodology. Invited paper for Second Tourism Research Conference, Albuquerque, 1994.

Marketing plan for the Mighty 8th Air Force Heritage Center, Savannah GA, 1994.

Logsdon, Jeanne

Software piracy: Is it related to level of moral judgment? (with J. Thompson & R. Reid) *Journal of Business Ethics, 13* (11), November 1994, 849-957.

Financial assurance mechanisms for environmental programs on tribal lands (with N. Falk, K. Hinds, & D. Kane). Report prepared for the U.S. EPA, Region 8, through the Environmental Finance Center, New Mexico Engineering Research Institute, University of New Mexico, 1994.

Comparative advantage in supercomputers: Japan vs. the U.S. Paper presented at the Social Issues in Management Division, Academy of Management annual meeting, Dallas, August 1994.

Smith, Howard

Determining costs associated with quality management in health care delivery (with B. Waress & D. Pasternak). *Health Care Management Review,* 1994.

Leadership and quality of working life in home health care (with J. Hood & N. Piland). *Home Health Care Services Quarterly, 14* (4), 1994, 3-22.

Thompson, Judith

Learning and adaptation at Nissan UK: Is Europe's lean manufacturing model a worker's paradox? (with R. Rehder). *Business Horizons,* 1994.

Nissan UK: The Japanese transplant beachhead in Europe (with R. Rehder). *Columbia Journal of World Business,* Fall 1994, 92-106.

Care and connection: A study of gender differences in charitable contributions to small businesses (with J. Hood). *Journal of Business and Entrepreneurship, 6* (2), 1994, 73-89.

Software piracy: Is it related to level of moral judgment? (with J. Logsdon & R. Reid) *Journal of Business Ethics, 13* (11), 849-857.

Young, John

Measuring and assessing the entrepreneurial infrastructure: The case of Singapore (with T. Meng & T. Liang). *Proceedings, 5th World Conference on Entrepreneurship,* Singapore, July 1994.

TECHNOLOGY/INTERNTL

Banbury, Catherine

The effect of introducing important incremental innovations on market share and business survival (with W. Mitchell). *Strategic Management Journal,* Summer 1995.

How strategy-making processes can make a difference (with S. Hart). *Strategic Management Journal, 15,* 1994, 251-269.

Bannister, Geoffrey

Domestic distortions and international trade (with J. Anderson & P. Neary). *International Economic Review, 36* (1), February 1995, 139-157.

Regional concentration and efficiency in Mexican manufacturing (with C. Stolp). *European Journal of Operational Research, 80* (1), January 1995, 672-690.

Rent sharing in the multi-fibre arrangement: The case of Mexico. *Weltwirtschaftliches Archiv, 130* (4), December 1994, 800-827.

East Asian investment and trade: Prospects for growing regionalization in the 1990s (with C. Primo Braga). *Transnational Corporations, III* (1), February 1995, 97-136.

Liberalizing international transactions in services: A handbook (with C. Primo Braga, P. Mallampally, T. Noyelle, K. Sauvant, J. Weber & Z. Zimny). Washington: United Nations & The International Bank for Reconstruction and Development.

Transnational corporations, the neo-liberal agenda and regional integration: Establishing a policy framework (with C. Primo Braga & J. Petry). *Quarterly Review of Economics and Finance, Special Issue (Proceedings of Latin America 2000 Conference)*, 77-100.

Coes, Donald V.

Macroeconomic crises, policies, and growth in Brazil, 1964-90. Washington: The World Bank (Comparative Macroeconomic Studies Series), 239 pp.

deGouvea Neto, Raul

Marketization strategies - Is Brazil moving in the wrong gear? *The International Executive,* July/ August, 1994.

Kassicieh, Suleiman

Correlation between attitudinal, situational, and personal characteristics of entrepreneurs and inventors from national laboratories (with R. Radosevich). *Proceedings of the Twenty-fourth Annual Meeting of the Western Decision Sciences Institute,* San Francisco, 1995.

SPC-Pro: An expert system approach for variables control charts (with W. Zimmer & S. Yourstone). *Quality Engineering, 7* (1), August/ September 1994, 89-104.

Radosevich, Ray

A test of surrogate-entrepreneurship model of public-technology commercialization. *Proceedings of the 28th Annual Hawaii International Conference on Systems Sciences,* January 1995.

A model for entrepreneurial spin-offs from public technology sources. *International Journal of Technology Management, 10* (XX), 1995.

Problems in financing and launching spin-off companies: A management perspective. *Proceedings of the La Trobe University Conference From the Laboratory to the Marketplace: Mechanisms of Technology Transfer and the Formation of Spin-off Companies,* Melbourne, 1995.

Correlation between attitudinal, situation, and personal characteristics of entrepreneurs and inventors from national laboratories (with S. Kassicieh). *Proceedings of the Twenty-fourth Annual meeting of the Western Decision Sciences Institute,* San Francisco, 1995.

2.4 FACULTY COMMITTEES 1994-95

2.41 APPOINTMENTS, PROMOTION & TENURE (APT)

Chair: Allen Parkman

Members: All of the tenured ASM faculty

Purpose — Recommendations to the Dean on issues of appointment, promotion and tenure

Noteworthy Actions

- Recommendations on tenure and promotion to associate professor for James Hamill and Gautam Vora.
- Recommendations on mid-probationary reviews (T5) for Ranjit Bose and Tom Mouck.
- Recommendations regarding three year review (T3) for Joni Young.
- Election of Steve Burd to a three-year term on the Executive Committee.
- Recommendation of sabbatical leaves for Spring 1995 and Fall 1995 for John Young, for Fall 1995 for Helen Muller and Gautam Vora, and Fall 1995 and Spring 1996 for Raul de Gouvea Neto and Jeanne Logsdon.

2.42 CURRICULUM & PROGRAMS COMMITTEE

Accounting	Joni Young
Finance	John Finkelstein (chair)
OB/HRM	Robert Rehder
MS/MIS	Steven Yourstone (1)
	Carl Schultz (2)
Marketing	
Policy/Planning	Eddie Dry (1)
	James Porter
TIM	Raul de Gouvea Neto (2)
MBA representatives	Joe DiSorbo
	Bryan Paez

The committee plays a coordinating role in the maintenance and development of the Anderson Schools' curricula and programs. In addition to the work of the Entrance and Credits subcommittee (Finkelstein, Porter, Muller, plus the associate dean and advisor for each program), the committee serves as a forum for a variety of faculty concerns.

During 1994-95, the committee usually met twice a month. This was a year of careful attention to and revision of various details, and planning for projects in 1995-96. Among these items are:

- Practicality of an Executive DBA
- AACSB accreditation site visit
- Issues of student dishonesty
- Innovations in teaching (John Boquist of Indiana University, ranked one of athe top ten teachers in business schools in the United States, will visit on Friday, October 6)

- Completed revision of the Executive MBA, MBA and BBA curricula. The new curricula were approved by the ASM faculty.
- Student petitions

2.43 ASM RESEARCH ALLOCATIONS COMMITTEE

Members	
Joseph Champoux	Allen Parkman
Patrica Elliott	Richard Reid
Dwight Grant (chair)	Robert Rogers
Suleiman Kassicieh	

The 1994-95 Research Allocations Committee's primary activity was the review of faculty research proposals and recommendations for research funding. The committee recommended summer research funding for the following professors:

Catherine Banbury	Monica North
Geoffrey Bannister	Leslie Oakes
Ranjit Bose	Allen Parkman
Elias Carayannis	Laurie Rattner Schatzberg
Donald Coes	Robert Rehder
Raul de Gouvea Neto	John Shatzberg
John Finkelstein	Dennis Togo
James Hamill	Gautam Vora
Jeanne Logsdon	Joni Young

The committee also discussed various ways in which its function might be improved, and agreed to make recommendations to that effect early in the fall of 1995.

The committee nominated Professor Jesse Dillard as Anderson Research Professor of the Year.

3. STUDENTS

3.1 BBA PROGRAM

Teresa Silva Thompson	Undergraduate Program Manager
Sally Occhialino	Advisor III
Doris Willard	Advisor III
Sandra Folley	Secretary

Admissions:	Summer/Fall 1994: 181	Spring 1995: 170
Applications:	Summer/Fall 1993: 349	Spring 1994: 211

Enrollment concentration distribution for 1994-95*

Concentration	Fall 1994	Spring 1995
Accounting	234	193
Business Computer Sys	13	69
Entrepreneurial Studies	19	18
Finance	76	64
General Management	126	122
Human Resources Mgt.	60	49
International Mgt.	25	21
Management Science	5	-
Marketing	93	61
Production Operations Mgt.	8	7
Travel & Tourism	26	25
*Total	685	629

*Double concentrations counted twice

BBA Ethnic Distribution for 1994-95

	Fall 1994	Spring 1995
African American	13	14
Asian American	34	37
Caucasian	412	439
Hispanic	251	262
Native American	26	28
Foreign	22	19

BBA Graduates 1994-95

NOTE: The 1994-95 Dean's List is located in Section 3.3 (Student Honors and Awards)

Concentration distribution of 1994-95 graduates*

Concentration	Summer 1994	Fall 1994	Spring 1995	% of total
Accounting	8 (1)	34 (2)	38 (6)	27.02
Business computer systems	4 (1)	16	22 (2)	14.10
Entrepreneurial studies	-0-	-0-	5 (2)	1.68
Finance	3	7 (1)	17 (1)	9.12
General management	8	18 (2)	22 (7)	16.20
Org behavior/human res mgt	1	21 (2)	20 (6)	14.10
International management	1	5 (3)	5 (3)	3.71
Marketing	6	20 (7)	17 (3)	14.50
Production/operations mgt	-0-	2 (2)	-0-	.67
Travel & tourism	1	2 (2)	3 (1)	2.02
Total	32	125	149	

* Students with dual concentrations are counted twice. Numbers in parentheses indicate the number of double-concentration students included in a given total.

Ethnic Profile of BBA Graduates 1994-95

Ethnicity	Summer 1994	Fall 1994	Spring 1995	% of total
African American	-0-	2	1	1.6
Asian/Pac. islander	6	2	7	5.7
Hispanic	10	40	39	31.7
Native American	-0-	4	2	2.1
Caucasian	14	66	88	59.8
Female	14	66	69	53.1
Male	16	48	68	46.9
Total	30	114	137	

3.2 MBA PROGRAM

Sue Podeyn	Program Manager

During 1994-95, the MBA office received and processed 368 applications. 194 applicants were admitted or readmitted to graduate status. Total MBA enrollment was 449 in Fall 1994 and 459 in Spring 1995 (not counting dual-degree and 3/2 students). The MBA office handles over 250 requests for information monthly.

Degrees conferred

In academic 1994-95, the Anderson Graduate School of Management conferred 103 MBA degrees and 4 MAcc degrees. Two students completed the MBA/MALAS degree requirements.

Graduate Degree Program
Concentration distribution of 1994-95 graduates*

Concentration	Summer 1994	Fall 1994	Spring 1995
Accounting	-0-	3	2
Finance	6	9(2)	5(1)
General management	2	9(2)	9
Human resource management	1	3	4
International management	1	6(1)	5(1)
Management information systems	1	2	4
Management science	-0-	-0-	-0-
Marketing	2	2(1)	3
None	3	4	4
Production operations management	1	3	5
Policy & planning	1	4	4
Tax accounting	-0-	1(1)	1
Health systems/administration	-0-	-0-	-0-
Masters of Accounting	-0-	2	2

*Note: Students with a dual concentration are counted twice. Numbers in parentheses indicate the number of double-concentration students included in a given total.

Ethnic profile of MBA graduates

Ethnicity	Summer 94	Fall 94	Spring 95
African American	0	0	2
Asian/Pacific Islander	0	2	2
Hispanic	3	6	9
Native American	-0-	-0-	-0-
White/Other	11	38	34
Not reported	-0-	-0-	1
Female	6	18	22
Male	8	28	26

3.3 STUDENT HONORS & AWARDS

HONORS AND AWARDS

Beta Gamma Sigma Honorary Society inductees

Elizabeth Ann Adkinson
Julianne Bonnett
Carole J. Chazet
Rita Dorn
Noel F. Dye
Malcolm Fitzsimmons
David William Friede
Jeanne Yu-Chen Fu
Ethan Frederick Goodman
Verlynn Blair Hart
Karen Elizabeth Heerschap
John Chris Hollowwa
Jan L. Hylko
Kirtan Kaur Khalsa
Karl Jonas Petter Kjellmert
Dawn E. Knepper
Stana D. Kopczuk
Caryn K. Magee
Deborah K. Orozco
Jennifer Renee Page
Jean A. Rightley
Stella M. Saindon
Thomas Vincent Salazar
Claudia J. Scofield
Kerry Bradley Shover
Melissa J. Smith
Robert Victor Taylor
Steven Edward Thompson
Christina Maria Tomlinson

Financial Executives Institute award to outstanding finance/accounting students:

Undergraduate: Karl Jonas Petter Kjellmert - Finance
Graduate: Jean A. Rightley - Accounting

Graduating Presidential Scholars

Jose Lorenzo Archuleta
John David Benavidez

Washington campus program fellowships

David Ashley
Laura L. Hagen
Patricia Jeremia
Jacques Pan-Kita

FELLOWSHIPS & SCHOLARSHIPS

ABQ/Sandia Federal Joint Fellowship — Ryad Aouad
Clinton P. Anderson Memorial Scholarship — Stella Saindon
Anderson Foundation Board Fellowship — Sidney Lee
Anderson/Roberts Fellowship — David Nadeau
ASM/UNM Foundation Scholarship — Brandon Jakino, Diana Kim, Steven Thompson
Arco Aspen Scholarship — Diana Kim
Douglas & Sarah Brown Fellowship — Jose Perea
Gloria F. Brown Fellowship — Lisa Ice
Nat F. DePalma Memorial Scholarship — Kirtan Khalsa, Drucilla Aragon
El Paso Natural Gas Scholarship — Daniel Ivey-Soto
Ernst & Young Accounting Fellowship — JoAn Martinez
Roget Jehenson Scholarship — Brandon Jakino
Cameron Galindo Memorial Scholarship — Adam Weeks

George L. Headrick Finance Fellowship	William Pearson
	Jonathan Mower
Jean Mullins Macey Scholarship	Julie Flanigan
	Wendy Francis
Jean Mullins Macey Fellowship	Patricia Auyer
	Doris Chavez
	Denise Williams
Geroge A. Maloof Memorial Scholarship	Debra Venner
Philip Morris Scholarship	Stella Saindon
	Judy Armijo
Homer D./Howard D. Olson Memorial Scholarship	Michael LaBarbera
	Joseph DiSorbo
J.C. Penney Scholarship	Lori Bowen
Ben Lomond Roberts Memorial Scholarship	Jerry Chavez
	Steve Harmon
Ted Russell Memorial Scholarship	Harold Dorton
Sunwest MBA/LAS Fellowship	Jim Randall
John Taylor/Dean Witter Reynolds Scholarship	Cheryl Zielke
Tetra Corporation Scholarship	Jeremy Bowman
United New Mexico Bank Fellowship	Bruce Fretwell
Paul Vollmar Jr. Scholarship	Camillia A. Garcia-Sanchez
	Patrick J. Mullen
	Donald W. Stout

Travel & Tourism Management:

Albuquerque Innkeepers Association Scholarships:	Aaron Jarrett
	Ronda Olilla
	Erika Schneider

Ford Motor Company Hispanic Scholars for 1994-1995

Eugene Abeyta	Drucilla Aragon
Jerry Chavez	JoAn Martinez
Erika McDavid	Annita Romero
Valerie Romero	Vaadra Ruiz
Stella Saindon	Todd Sandoval

Anderson School Presidential Scholars

Judi Armijo	Jason Hix
Diana Kim	Cindy Mitchell

BBA DEAN'S LIST 1994-95

Fall 1994

Nicole Abadie
Elizabeth Adkison
Drucilla Aragon
Juana Arellano
Judi Armijo
James Atencio
Jennifer Arenas
Julianne Bonnett
Ann Brooks
Solange Cintron
Sarah Coverley
Rita Dorn
F. Noel Dye
Asa Emanuelsson
Julie Flanagin
Wendy Francis
William Frost
Jeanne Y. Fu
Steven Harmon
John Harp
Marc Hashagan
Karen Heerschap
Jason Hix
John Hollowwa
Brandon Jakino
Jens Karlsson
Salina Kelley
Kirtan Khalsa
Diana Kim
Karl Kjellmert
Stana Kopczuk
Horace Maez
Caryn Magee
Caryl Malone
Melanie Moore
Dream Mullick
Linda Neal
Jennifer Page
Paulomi Patel
Valerie Romero
Stella Saindon
Claudia Scofield
Kerry Shover
Melissa Smith
Robert Taylor
Steven Thompson
Debra Venner
Heidi Jackson Walker
Eric Wolf
Debbie W. Wong

Spring 1995

Nicole Abadie
Elizabeth Adkison
Jennifer Arenas
Randolph Baca
Julianne Bonnett
Sheila Burns
Karen Chavez
Solanage Cintron
Sara Coverley
Gary Davidson
Wendy Darnell
Rita Dorn
Asa Emanuelsson
Wendy Francis
Jeanne Fu
Aron Takeshi Fukuhara
Joel Galassini
Rahim Gillani
Steven Harmon
Marc Hashagen
Karen Heerschap
Jason Hix
Denise Hohman
John Hollowwa
Brandon Jakino
Alan Kachelmeier
Jens Karlsson
Salina Kelley
Kirtan Khalsa
Diana Kim
Karl Kjellmert
Stana Kopczuk
Horace Maez
Caryn Magee
Carl Malone
Dream Mullick
Richard Newman
Jenni Olson
Jennifer Page
Charles Rippberger
Ronald Ross
Claudia Scofield
Kerry Shover
Melissa Smith
Preston Smith
Robert Taylor
Ally Towle
Sanggeetha Vijayakumar
Eric Wolf

3.4 STUDENT ORGANIZATIONS

The Dean's Student Advisory Council composed of officers of all Anderson Student organizations held seven monthly luncheon meetings with the Dean. The council, membership recruiting events, and involvement in school events, were coordinated by Ms. Marlene Sigel, director of public relations.

Fifteen student organizations were chartered at Anderson in 1994-95:

American Indian Business Association (Spring 1995)
Associated Graduate Business Students
Association of Accounting Students
Association of Collegiate Entrepreneurs (ACE)
Beta Alpha Psi
Beta Gamma Sigma Honorary Society
Data Processing Management Association
Delta Sigma Pi (Gamma Iota)
Finance & Investment Association
International Business Students Association
Marketing Association
Operations Management Student Assn
Society for Human Resources Mgt, UNM Student Chapter
Tourism Management Association
UNM Junto Toastmasters

Nine of these submitted annual reports (see following pages).

- During 1994-95 the student organizations held two membership recruiting events, "Club Daze", in September 1994 and January 1995. Approximately 200 new club members were recruited at each event.

- Members of student clubs assisted the Office of External Relations with a number of events, including "Put Yourself in Business" and "Experience Teaches."

3.41 ASSOCIATED GRADUATE BUSINESS STUDENTS

Officers	
President	William Pearson
Executive vice president	Bryon Paez
Vice president/administration	Tim Clark
Treasurer	Patrick Cowan
Faculty sponsor: Allen Parkman	Members: all AGBS students

Purpose:

To represent ASM graduate students responsibly and to promote, through educational and social endeavors, positive interaction among students, faculty, the ASM Foundation Board, alumni and the business community.

- 1994-95 activities and accomplishments

- Planned, organized and executed Orientation 94 for incoming graduate business students. The activity included presentations by faculty, the Dean, alumni, members of AGBS, and members of the Albuquerque Dukes.

- Community events: Organized annual Thanksgiving food drive: collected 2200 pounds of food for the Roadrunner Food Bank; coorganized, with the Society for Human Resource Management, Easter egg hunt for children at Joy Junction homeless shelter.

- Social events:
  Halloween costume party with prizes
  Graduation party for December 1994 and May 1995 MBA graduates

- Organized proposal for computer grant: $4,000 of computer hardware and software bought specifically for the use of graduate business students.

- Organized sport teams: UNM intramural soccer champions, intramural softball semi-finalists, intramural basketball quarter-finalists.

- Continued to improve management of the graduate student lounge.

3.42 ASSOCIATION OF ACCOUNTING STUDENTS

Officers	
President	Brandon Schultz
Vice president	Austin Lindsey
Treasurer	Mark Edler
Speakers chair	Paulomi Patel
Career Fair chair	Chinn Tong
VITA co-chair	Karen Snyder
VITA co-chair	Sandra Salazar
Faculty sponsor: Tom Mouck	
VITA faculty sponsor: Jim Hamill	Members: 82

Purpose:

To provide information and services to our members and other interested students; to acquaint our members with the various career options available to accountants and to introduce the membership to members of the business community within these fields; to provide information pertaining to the work environments within these fields. We serve as a liaison between the professional business community and UNM students, faculty, and staff.

- 1994-95 activities and accomplishments

- Hosted Fifteenth Annual Accounting Career Fair at the Holiday Inn
- Organized and operated VITA (Volunteer Income Tax Assistance) program at the UNM Student Union Building
- Sponsored eight luncheon speakers' meetings
- Awarded six scholarships from the AAS scholarship fund
- Kept members informed of career opportunities, posting current job openings
- Coordinated with local accounting firms for their open house events
- Encouraged and assisted member participation in various professional organizations
- President and vice president served as committee members for the first annual New Mexico Society of CPAs scholarship fund raiser

3.43 BETA ALPHA PSI

Officers			
President	Stella Saindon	Dir. prof. meetings	Rob Burdick
VP publicity	Chinn Tong	Liaison to IMA	Teddy Deshler
VP membership	Jeanne Fu	Liaison to NMSCPA-Alb.	Ruth Harris
VP prof. activities	Clint Malin	Dir. newsletters	Caroline Jones
VP social activities	Rahim Gillani	Dir. manuscripts	Linda Morton
VP social activities	Karen Heerschap	Dir. service/liaison EDPAA	Jay Olive
VP serv. activities	Paulomi Patel	Liaison to IIA	Jenny Olson
Secretary	Peggy Moran	Dir. alumni relations	Traycee Reed
Treasurer	Caroline Jones		
Faculty sponsor: D'Arcy Becker			Members: 43

Purpose:

To encourage and give recognition to scholastic and professional excellence in the field of accountancy; to provide opportunities for the interaction of members with accounting professionals; to provide programs encouraging the development of professional growth and excellence; and to encourage a sense of ethical, social and public responsibility.

- 1994-95 activities and accomplishments

- Professional meetings with speakers from public, private and not-for-profit accounting, education and government agencies, including Step Dobyns, Brandon Haines, Irv Diamond, Shane Guilliams, Gary Garbrecht, Edward Gurule, Anthony Berrett, Mick Daly
- Active participation in Volunteer Income Tax Assistance (VITA) program
- Staffing and organization of volunteer tutoring for ASM accounting lab
- Special tutoring sessions for accounting courses MGT 202 and MGT 303
- Participation in the KNME pledge drive
- Booth at ASM Career Fair
- Holiday social
- Third annual volleyball tournament. Participation open to accounting firms, government agencies, student groups, and ASM faculty
- Attendance by members at professional organization meetings: Institute of Management Accountants (IMA), New Mexico Society of CPAs (NMSCPA), American Society of Women Accountants (ASWA), and Beta Alpha Psi national meeting (New York)
- Publication of monthly Beta Alpha Psi newsletter
- "Welcome Back Reception" for public and private accounting firms, government agencies, faculty, ASM administration, local corporations, and accounting students
- Mock interviews and interview skills seminar
- Pledge orientations
- Presentations to Sandia High School accounting classes (with NMSCPAs) about accounting careers
- Organization of Club Daze, student club membership drive
- Advisory board meetings
- Food drive to benefit Roadrunner Food Bank
- Participation in Paint the Town
- Initiation of new members
- Participation with Recreational Health Occupation Center (RHOC), project to paint their recreation room
- Fund raising for NAMASTE in Los Lunas

3.44 DATA PROCESSING MANAGEMENT ASSOCIATION

Officers		
	(Fall 1994)	(Spring 1995)
President	Shaun Tapey	Lee Dixson
Vice president	Erik MacDonald	Robert Haffner
Secretary	Caryl Malone	Asaad Shaat
Secretary	Dru Aragon	Joni Roberts
Treasurer	Darcy Pullman	Caryl Malone
Faculty advisor:	Laurie Rattner	Members: 20

Purpose:

To develop a better understanding of the nature and functions of information systems in the modern business environment.

- 1994-95 activities and accomplishments

- Guest speakers: James Whetherbe (University of Minnesota); Mary Fachman (University of New Mexico); Renee Martinez (Presbyterian Hospital)
- Toured CIRT
- Toured UNM's Business Service's Novell Network
- Increased interaction with DPMA's local national chapter

3.45 DELTA SIGMA PI (GAMMA IOTA)

Officers	
President	Patricia Tafoya
Senior vice president	Franklin Martinez
Vice president chapter operations	Laura Kaiser
Vice president pledge education	Mary Hasselstrom
Vice president professional activities	Jean-Paul De Jager
Alumni advisor	Brian Pezzillo
Chancellor	Patricia Tafoya
Historian	Angela Estrada
Secretary	Diana Kim
Treasurer	Michael Montoya
Faculty sponsor: Mary Fachman	Members: 46

Purpose:

Delta Sigma Pi is a professional business fraternity organized to foster the study of business in universities; to encourage scholarship, social activities and the association of students for their mutual advancement by research and practice; to promote closer affiliation between the commercial world and students of commerce, and to further a higher standard of commercial ethics and culture and the civic and commercial welfare of the community.

3.46 OPERATIONS MANAGEMENT STUDENT ASSN

Officers	
President	Dante DiGregorio
Vice president	Chris Frazer
Secretary	Durrall Carroll
Treasurer	James LaFont

Board of directors:
Carl Schultz, Steven Yourstone, Dick Reid

Faculty advisor: Richard Reid

Purpose:

To increase the interest of students in a career in operations management (POM) through peer association, professional networking, plant tours, guest speakers, advising, tutoring and internships. And to provide a mechanism for gathering information to continuously improve the curriculum and its delivery

- 1994-95 activities and accomplishments

  - Tours: Bueno Brand Food Products, Rio Bravo Brewpub, Levi Strauss & Company, Stride Writing Instruments, and Rio Grande Portland Cement Company
  - Guest speaker: Mr. Linn Reece, Production Control Manager, PlasTech Corporation
  - American Production and Inventory Control Society (APICS) meetings and tours: AmTech, Ethicon, Inc., and Intel
  - Continued informal organizational relationships with APICS
  - Planned and cultivated new relationship with the American Society for Quality Control
  - Promoted organization and recruited membership through short formal presentations in several undergraduate and graduate classes
  - Participated in ASM Club Daze (both semesters), the ASM Hall of Fame Luncheon, the ASM 16th Awards Banquet, and Dean's Student Advisory Council

3.47 SOCIETY FOR HUMAN RESOURCES MGT UNM STUDENT CHAPTER

Officers	
President	Lee Ballew
Vice president	Jan Meier
Newsletter co-editors	Jennifer Rowley
	Durrall Carroll
Co-VP administration	Jennifer Rowley
	Lan Ho
Co-VP finance	Bob Scholl
	Heather Shields
Co-VP public relations	Greg Armijo
	Pamela Romero
President-elect	Jennifer Rowley
Faculty sponsor:	Helen Muller
Professional chapter liaisons:	
Don Shoemaker and Birdie Baca-Daniels of Intel	

Purpose:

To serve as a bridge between students and human resource professionals by exploring HR disciplines in an environment promoting friendship, growth and hands-on experience. The organization provides opportunities and resources to market the skills, knowledge, and abilities of its members successfully.

- 1994-95 activities and accomplishments

- Guest speakers

  Cathy Haymaker (St. Joseph's Healthcare), Josi Noyes (PNM), Gregory Green (SHRM State Director), Don Shoemaker (Intel), Victor Silva (PNM), Mary Rutland (CVI Laser), Birdie Baca-Daniels (Intel)

- Activities

  - Compiled and distributed two editions of the SHRM student résumé book
  - Cosponsored Holiday Toys for Tots campaign for UNM Hospital Pediatrics
  - Received $3000 in student scholarships from our professional chapter
  - Established ties with professionals in human resource management through shadow day programs and company visits
  - Participated in ASM activities (Club Daze, ASM Advisement Center Open House, Dean's Advisory Council)
  - Participated in interviewing process for OB/HRM professor search by hosting open forums with the candidates
  - Published monthly newsletter distributed to membership and professionals
  - Cosponsored (with AGBS) Easter egg hunt for Joy Junction
  - Put chapter activities on the Internet
  - Sent six members to the SHRM State Conference
  - Applied for Superior Merit Award from National SHRM on the basis of our activities supporting Human Resource Management and developing our professionalism (award anticipated)
  - Sent two members to the SHRM State Leadership Conference

3.48 TOURISM MANAGEMENT ASSOCIATION

Officers	
President	Darren Zinkhon
Vice president	Heather Carroll
Secretary	Travis Radcliff
Treasurer	Linda Buddenhagen
Historian	Krista Harmelink

Faculty sponsor: Eddie Dry Members: 37

Purpose:

To foster professional development of students, friendships and networking among students, graduates and industry professionals, employment opportunities, and knowledge and appreciation of tourism management as a highly respected career path.

- 1994-95 activities and accomplishments

  - Held semimonthly (on and off campus) meetings covering various entities of the tourism industry and providing exposure to actual workplaces.
  - Published monthly association newsletter promoting jobs, student projects, TMA trips, and other events in the tourism industry.
  - Invited representatives of various businesses to speak at association meetings; participants included Southwest Airlines, American Airlines, Tourism Association of New Mexico, Tanoan Country Club, Albuquerque Convention and Visitors Bureau, The Golf Guys, Holiday Inn Express, and Albuquerque Hilton.
  - Sponsored day and weekend trips to all corners of New Mexico, including ski trips, picnics, camping trips, and others associated with the travel and tourism industry in the Land of Enchantment.
  - Participated in Hall of Fame Dinner, Club Daze I and II, Experience Teaches, NM Tourism Research Conference, Tourism Legislative Day in Santa Fe, and the Dean's Student Advisory Council Board, giving TMA a grasp on happenings in both the Anderson Schools of Management and the business environment.
  - Continued computer classes before TMA meetings to foster the business environment skills needed today.
  - Assisted in familiarization tours with ACVB.
  - TMA members graduating during the 1994-1995 year: Aileen Ho, Nussara Barrow, Heather Bohman, Kimberly Ann Coca, Kerry Ann Coddington, Renee Fuemmeler, Charleen Selbee, Travis Radcliff, Suzanne Atkinson, and Tracy Toohey.

3.49 UNM JUNTO TOASTMASTERS

Officers	
President	Adam Avery
Vice president/education	Denise Williams
Vice president/membership	Ryad Aouad/Peggy Gantz
Vice president/public relations	Sherri Lyster/Jacques Pan-Kita
Treasurer	JoAn Martinez
Secretary	Loyola Chastain
Sergeant at Arms	JoAn Martinez/Scott Miller
Members: 35	

Purpose:

The mission of the UNM Junto Toastmasters Club is to provide a mutually supportive and positive learning environment in which every member has the opportunity to develop communication and leadership skills, which in turn foster self-confidence and personal growth.

- 1994-95 activities and accomplishments

  - Club organized in Spring Semester 1994 and chartered by Toastmasters International (TI) on July 11, 1994

  - Four members earned Competent Toastmaster (CTM) designation: Anne Apicella, Adam Avery, Scott Miller, Denise Williams. The CTM designation is awarded by TI for the completion of a program of ten speech projects.

  - Club participation in speech contests held by TI:

    Loyola Chastain participated in the Fall 1994 Humorous Speech contest and won the Club, Area 15, and Division C contests.

    Denise Williams participated in the Spring 1995 Dramatic Reading contest and won the Club and Area 15 contests. She placed third in the Division C contest.

  - On track to be recognized as a Select Distinguished Club by TI. This is the second highest recognition TI gives for excellence in club administration, educational accomplishments of members (CTM, etc), and club growth. The final determination will be made in July. The UNM Junto is currently considered one of the top five clubs in the state of New Mexico.

3.5 CAREER PLANNING AND PLACEMENT

Mary Fachman	Director
Lisa Kirby	Placement coordinator
Kristi Martin	Staff assistant
Erin Crowther	Secretary

In 1994-95, the placement director has worked on job development, participation in professional organizations and employer relations, and compilation of statistical information on graduating students.

Highlights of 1994-95 placement activities

- Individual recruiting days at ASM for 25 corporations: Peat Marwick, Lawrence Livermore*, Atkinson & Company, Arthur Andersen, Rogoff, Diamond & Walker, Philip Morris*, Boy Scouts of America*, General Motors, Target*, Pulakos & Alongi, K-Mart*, Federal Reserve Bank, Intel*, Olde Discount Stockbrokers*, JD Edwards*, Kraft, Waddell & Reed, EDS, Ford, TXI, Autozone, Meyners & Company, Honeywell, Department of Treasury, Twin Mountain.

- Recruiting lunch/dinner meetings with 13 organizations: National Coalition of Employers Conference*, Rocky Mountain College Placement Association*, AT&T, Norrell, JC Penney, Disney, Miller Brewing Company, E&J Gallo Winery, Ford Motor Company, K-Mart, Arthur Andersen, and US West.

*More than one visit/meeting

- Various activities with student groups, including: AGBS graduate student orientation, Welcome Back Days, Beta Alpha Psi, Put Yourself in Business, Boy Scouts of America, Club Daze, Experience Teaches, alumni luncheon, factory tours, exit survey phone calls, and participation in four career fairs (ASM Career Fair, Government Career Fair, HEO Career Fair, and Minority Job Fair).

Placement System and Job Placement Success. An average of 400 students are actively registered with the placement office at any given time, and are entered in the Career Placement System (CPS) database. Similarly, all jobs are entered in the CPS to monitor placement activity. For the year 6/1/94 - 5/30/95, a total of 455 jobs were posted at ASM and records show that 96 of those jobs were filled by our students. Actual placements may be higher, since obtaining data is difficult because of the time lag from posting to filling a job.

Contributions. The ASM placement office received three contributions during the past year: $250 from JC Penney Business Services, $2,000 from General Motors to purchase the PhoneMaster System, and PhoneMaster software donated by EDS.

4. SPECIAL PROGRAMS

4.1 MANAGEMENT DEVELOPMENT CENTER

Kate Livingston, Director		
Tina Trujillo		Staff assistant
Lisa Kourkoumelis		Staff secretary
Student employees:	Kathleen Dobrusky	Miriam Lamb
	Amanda Farmer	Michelle Marin

The Management Development Center (MDC) is a 501(c)3 nonprofit corporation. As such, it receives no state funding and is completely self-supporting. Excess earnings generated by the MDC are distributed back to the Anderson Schools to support faculty research, travel, pedagogy, and student scholarships.

In 1994, the MDC undertook a search to replace director Dr. Bob Velk, who took a position at the University of Hawaii. Assistant dean John Warner served as interim director for six months until February 1, 1995. The new director, Kate Livingston, was formerly marketing training director at the national office of Price Waterhouse in New York. She also has served as Assistant Dean of Continuing Education at the University of Miami and the University of New Orleans, where she earned her MBA.

At present, the MDC has four primary areas of activity:

- The Executive MBA Program
- Noncredit programs such as the Basic Management Certificate Program
- Custom-designed training programs
- Consulting assignments

Executive MBA

Thirty members of the 1992-94 class completed their capstone course, Mgt 798 (Integrative Seminar) in the summer of 1994 and were officially graduated in December.

The 1993-95 class of approximately 48 students completed eight courses during the academic year: Mgt 704 (Economic Analysis), Mgt 707 (Organizational Behavior and Leadership), Mgt 708 (Ethical, Political and Social Environment), Mgt 709 (Business Law), Mgt 720 (Operations Management), Mgt 722 (Marketing Management), Mgt 726 (Financial Markets), and Mgt 751 (Practicum). In the summer of 1995, this class will complete its final two courses, including the new Managing Technology in Competitive Markets.

The 1994-96 class began its two-year program in July, 1994, with 57 students. During their first year, class members completed six courses: Mgt 700/712 (Management Perspectives and Business Communications), Mgt 701 (Statistics and Management Science, Mgt 702 (Accounting), Mgt 704 (Economic Analysis), Mgt 706 (Organizational Behavior I), and Mgt 710 (Computer-Based Information Systems). In the fall of 1995, this class will travel to France for eight days as part of Mgt 728 (International Management).

Recruiting for the 1995-97 class culminated with an orientation session and welcome dinner on June 28, 1995. Fifty-five new EMBA students begin classes on July 7.

Other program activities

Four public sessions of the Basic Management Certificate Program were held throughout the academic year, with a total enrollment of 110 students. In addition, customized training programs were conducted for PNM, Army Corps of Engineers, Central Training Academy, and New Mexico Beverage Company. Consulting assignments included work for the VA Hospital and Albuquerque Public Schools.

4.2 TRAVEL AND TOURISM MANAGEMENT

Eddie Dry, Director

Service to state/community. Professor Dry:

- Served as Vice-President of the New Mexico Hotel and Motel Association.
- Cosponsored the 3rd New Mexico Tourism Research Conference, Albuquerque (140 attended).
- Member, Paper Committee of the 3rd New Mexico Tourism Research Conference.
- Member, Tourism Research Committee, Tourism Association of New Mexico.

Service to students

- Dr. Dry secured a grant from the UNM Teaching Allocation Committee to purchase computerized projection equipment; developed a course in Powerpoint and taught 8 classes with over 132 students attending; and developed a system for students to check out and use the Powerpoint equipment for class presentations. An estimated 110 groups (330 students) checked out the equipment to make class presentations.
- The Tourism Management Association (TMA) continues to be one of the most active, progressive, and educational associations at Anderson. Projects included a series of outstanding speakers, including New Mexico Secretary of Tourism John Garcia, Vice President Ann Rhoades of Doubletree Hotels and Resorts, Stu Pruviance of the Albuquerque Convention and Visitors Bureau; and many trips to all corners of New Mexico, including two ski trips.
- A Tourism Job Newsletter was published every Tuesday, and on most weeks included two extra pages of over 30 jobs for students. It now is a widely recognized tool for the New Mexico tourism industry.
- Large scholarships from Albuquerque Innkeepers continued (one $1,500 and two $750 scholarships), as well as the dozens available from the National Tour Association, the NM Hotel & Motel Association, and the American Hotel & Motel Association.

Innovations, Changes, and Special Projects

- Guanajuato, Mexico student exchange: 22 ASM students visited Guanajuato for a week and 22 Guanajuato students visited UNM for a week. This year was perhaps the best exchange in the four years of the agreement, with Associate Dean Preston accompanying the group, Norwest donating $30,000 to support the program, and the President (Rector) of the University of Guanajuato attending three of the functions. A new exchange agreement was signed.

Special Student Honors, Achievements, Notice

- Ten students participated in a national survey of travel agents and airlines funded by a trade organization. Results appeared in *Travel Weekly*, a national trade publication of the United States tourism industry.
- Five students completed a Marketing Plan for Bishop's Lodge of Santa Fe.
- Six students completed an official conversion study for the New Mexico Department of Tourism. The study is the basis for the $1,900,000 state advertising and marketing budget.

Other:

- Dr. Dry traveled to Irkutsk (Russia) at the request of Fin-Prom Industrial Financial Company to assist in tourism development of the Siberia area. Follow-up involved a UNM graduate student going to Irkutsk in March, 1995 to help develop a small business development project. Also, Dr. Dry and the student hosted two officials of Fin-Prom in Albuquerque for a week in April, 1995.

4.3 WESTERN STATES SCHOOL OF BANKING

Donald G. Simonson	Director
Roberta Ponto	Staff assistant

The Western States School of Banking conducted its 21st annual session on the UNM Anderson Schools campus May 18-26, 1995. The school awarded its diploma to 52 bankers at its graduation banquet May 26 at the Albuquerque Marriott. There were an additional 61 bankers in the incoming freshman class of 1995-96.

The school presented its prestigious *Banking Leadership Award* to Dr. Gaylord A. Jentz, Herbert D. Kelleher Professor of Business Law, University of Texas/Austin. Dr. Jentz has taught for WSSB for the past 15 years. Other honorees included Rod D. McNamara, First State Bank, Santa Fe (Jaramillo Outstanding Scholar, class of 1994-95); Terri Murphy, First National Bank of Alamogordo (runner up, Jaramillo award); Thomas Plunkett, First Security Bank in Albuquerque (Jentz-Frascona Award in Legal Aspects of Banking); Sian DuShane, First National Bank of Santa Fe (Robert Morris Associates Award for Credit Studies).

GOVERNING BOARD OF WESTERN STATES SCHOOL OF BANKING

Chairman: James Foley, Norwest Bank New Mexico, Belen
John Papen (elected 5/26/95), First National Bank of Dona Ana County

Vice Chairman: John Papen, First National Bank of Dona Ana County, Las Cruces
James D. Rose (elected 5/26/95), First National Bank of Farmington

Members:

J. Paul Boushelle (First Security Bank, Albuquerque), Craig Cosner (First National Bank of Tucumcari), John Dowling (Sunwest Bank, Gallup), Randy Harris (Sunwest Bank, Clovis), H. Barton Jones (First National Bank of Tucumcari), Mahlon Love (Sunwest Bank of Albuquerque), John Papen (First National Bank of Dona Ana County), James Renfrow (Carlsbad National Bank), James Rose (First National Bank, Farmington), Donald G. Simonson (University of New Mexico), Danny Arnold (New Mexico State University, Las Cruces), Raymond Holt (First National Bank, Buffalo WY), John Anderson (New Mexico Bankers Association), Howard Smith (University of New Mexico), Douglas Ylarez (Norwest Bank New Mexico, Roswell). Student members are: Gerald Sahd (First Security Bank) and Dean Turvaville (First Saving Bank of Clovis).

Directors emeriti: James Clark (Albuquerque), Henry Jaramillo (Ranchers State Bank, Belen), Robert Rehder (UNM)

Dr. Simonson conducted meetings of past, present and potential students in Denver, Las Cruces, and Santa Fe.

Roberta Ponto retired from her duties as staff assistant after 15 years of service.

NEW MEXICO BANKERS CHAIR IN FINANCE
Incumbent: Donald G Simonson

Current members of the Western States School of Banking Foundation:

Raymond J. Holt, chair (First National Bank, Buffalo WY); John Anderson (New Mexico Bankers Association); John M. Davis (GRA Thompson White & Co. Englewood CO); Robert M. Goodman (Sunwest Bank, Albuquerque); Randy Harris (Sunwest Bank, Clovis); R.B. Holmes (Norwest Bank New Mexico, Alamogordo); R. Stephens Parker (Burns National Bank, Durango); Roger R. Reiling (Bankers' Bank of the West, Denver); Earl C. Spruiell (First New Mexico Bank, Durango); William C. Wood (Norwest Bank New Mexico, Albuquerque); Dale Leighty (Bank of La Junta CO); Ben Haines (First National Bank of Dona Ana County, Las Cruces).

Emeritus: Henry Jaramillo, Jr. (Ranchers State Bank, Belen)

Honorary: Robert L. Clarke (Bracewell & Patterson, Houston)

The New Mexico Bankers Chair in Finance directs the Western States School of Banking, conducts a program of research, teaching and communications with the regional, national and international banking communities, and maintains an awareness of public policy and economic developments affecting the nation's financial services industry.

During the academic year 1994-1995, Professor Simonson conducted the annual *Symposium for Bank Directors*, advised the American Bankers Association Community Bank Council, helped plan the annual conference of the Association for Financial Technology, and taught seminars in Munich (Germany), Kishinev (Moldova), and Bratislava (Slovakia).

- *SYMPOSIUM XVIII for Bank Directors:* Santa Fe, October 31-November 2, 1994, about 250 bank CEOs, directors and spouses attending. Speakers included: Robert L. Clarke (former US Comptroller of the Currency), John Davis (GRA Thompson White), Thomas Hoenig (President, Federal Reserve Bank of Kansas City), Robert Litan (Assistant Attorney General, Department of Justice), Patrick Mulley (Majority Counsel, US Senate Banking Committee) and Diane McCartney (Bracewell & Patterson - Dallas).
- *Association for Financial Technology.* San Antonio, TX, September 13-15, 1994. Professor Simonson helped plan and conduct the annual national conference for this industry group with members offering electronic data processing services to the financial services industry.
- *US AID Program for International Banker Education.* Professor Simonson conducted a one-week seminar (May 8-12) for central and commercial bankers in Bratislava, capital of the Slovak Republic. He conducted a one-week seminar (December 12-16) for the chief executives of the principal banks of Moldova in the capital, Kishinev.
- *Other.* Professor Simonson also:
  - Advised the American Bankers Association's project on "The Future of Community Banking" as an expert on competition among banks and nonbanks in traditional banking markets. His summary recommendations, and those of six other investigators, were published by the ABA in spring 1994.
  - While on sabbatical, taught in Munich for the MBA programs of the Institute for International Business Studies (IIBS). The Institute's programs culminate in the MBA issued by Clemson and Wake Forest Universities.
  - Participated as an instructor in educational programs in banking, including: Western States School of Banking (UNM), Southwestern Graduate School of Banking (Southern Methodist University), Graduate School of Banking (University of Wisconsin/Madison), and the Pacific Coast Banking School (University of Washington).
  - Continued service as the sole columnist for the *United States Banker* magazine
  - Presented the following papers:
    - keynote address to the annual CEO conference of the National Association of Federal Credit Unions (NAFCU) in San Antonio, January 27, 1995.

- *Priorities for Community Banks*, before banker audience at Colorado State University, Fort Collins CO, February, 1995.
- *Lending Strategies: Commercial Banks as Finance Companies*, to economics and finance faculty at Colorado State University, February 1995.

5. ANDERSON AND THE COMMUNITY

Marlene Sigel
Director of public relations

5.1 PUBLIC RELATIONS

- Activities in the Public and Alumni Relations area during 1994-95 included:
  - *Publications.* Production of printed material associated with Anderson Schools' programs and events, including brochures and marketing materials.
  - *Media relations.* Coordination of the Schools' media relations programs, including print, radio, and television, locally and regionally.
  - *Conferences and events.* Club Daze - Fall and Spring; Put Yourself in Business; Experience Teaches; Corporate America Speaks; Alumni Hall of Fame Dinner.
  - *Student activities.* Coordination of Dean's Student Advisory Council.

- Alumni Relations
  - Production of *Anderson Today.*
  - Anderson School liaison to the Anderson Alumni Association, providing support and coordination of newsletter and other activities.

- BBA FastTrack
  - Production of FastTrack brochure, media exposure, breakfast for local CEOs and human resource directors, on-site presentations, etc.

5.2 DEVELOPMENT

The Director of Development, Doris Rhodes, left the Anderson Schools at the end of 1994. From January through July, 1995, Ms. Sigel served as Acting Development Director, overseeing all administrative aspects of the development office, including completing the establishment of several new endowments, coordination with donors on the awarding of several scholarships, planning donor recognition events, and serving as liaison to the Anderson Foundation Board.

Total funds raised during 1994-95 were $404,545.81, up slightly from the 1993-94 total of $391,357.11.

A.1 ANDERSON FOUNDATION BOARD OF DIRECTORS 1994-1995

Arthur A. Blumenfeld
(retired)

Thomas H. Bonafair
New Mexico Beverage Company

Michael Bowlin
Bowlin's Inc.

Douglas M. Brown
Talbot Financial Services

Graham Browne
Sutin, Thayer & Browne

Paul Cassidy
Rauscher Pierce Refsnes

Tom Clausen
Charter Companies

Herb Denish
Herbert M. Denish & Associates, Inc.

Gary Dushane
KPMG Peat Marwick

Neil Elliott
Horizon Healthcare Corp.

Bill Garcia
Intel Corporation

Frank Gorham III
Cinco General Partnership

Ted Hobbs
(retired)

Debbie Johnson
Rick Johnson & Company, Inc.

Jim Knight
J. C. Penney

Edward Lujan
Manuel Lujan Insurance, Inc.

Timothy Marquardt
Boatmen's Sunwest, Inc.

Howard Mock
Jaynes Corporation

Larry Pearsall
Rogoff, Diamond & Walker, CPAs

Doris Rhodes
Norwest Bank New Mexico, N.A.

Miguel Rios, Jr.
Orion International Technologies, Inc.

Betty Rivera
Infiniti of Albuquerque

William E. Schuler
BDM Federal, Inc.

Jim Tegnelia
Sandia National Laboratories

James Wimbush
Consultant

Judy Zanotti
Public Service Company of New Mexico

Ray Ziler
Arthur Andersen & Co.

A.2 ANDERSON DONORS HONOR ROLL

Fiscal Year 1994-95

The Anderson Schools of Management gratefully acknowledge financial support from the following friends during the past year.

ENDOWED GIFTS

We give special thanks for ongoing support to those who have funded the following positions:

Chair
New Mexico Bankers

Professorships
Douglas M. Brown
Anderson Schools Foundation Board
Arthur Andersen & Co.
Albert Franklin Black Memorial
KPMG Peat Marwick
James L. & Ruth E. Rutledge

Lectureships
J. C. Baldridge Lumber Company
Lobo Center/United New Mexico Bank
Rogoff, Diamond & Walker, CPAs
Sandia Federal Savings & Loan
Edward R. Wood

Other Endowments
Abruzzo
Atkinson & Co., Ltd.
BDM International Inc.
Roy W. Bidwell
Charter Companies Award for Excellence
Frascona Jentz Legal Aspects of Banking Award
Endowment for Entrepreneurship
Sunwest Bank MBA/MALAS
United New Mexico Bank Endowment for International Business

PRESIDENTIAL SCHOLARSHIPS

Academy Development Company
American Furniture
Herbert M. Denish & Associates
Mr. and Mrs. Irvin Diamond
First Security Bank
IBM
International Credit Association of Albuquerque
Kiwanis Club of Manzano Sunrise ('93-'94)
Rick Johnson & Company
KPMG Peat Marwick
Rubie M. Krohn Endowed Memorial
New Mexico Bureau Lath & Plaster Endowed
Phelps Dodge Corporation
Herbert H. Strauss Endowed Memorial
Sunwest Bank
Western Bank of Albuquerque

FELLOWSHIPS AND SCHOLARSHIPS

Albuquerque Innkeepers
American Indian MBA
American Marketing Association
Clinton P. Anderson
Anderson Schools Foundation
Arco-Aspen
Douglas & Sarah Brown
Gloria F. Brown
Julian Chavez, Sr. Memorial
Delta Sigma Pi (with Economics)
Nat F. DePalma Memorial
Ernst & Young Foundation
Ford Motor Company
Jerald & Maxine Friedman MBA/MALAS
Cameron Galindo Memorial
General Electric Company
General Motors Corporation
George L. Headrick Memorial
Hispanic Graduate Fellowship Fund
Henry Jaramillo, Jr.
KPMG Peat Marwick Washington Campus
George Maloof Memorial
Antonio Miera
Mountain States Life Insurance/Assumption Mutual Life
Jean Mullins Macey
Navajo Nation MBA
New Mexico Advertising Federation (with Journalism)
New Mexico Cash Management Association
Homer D. Olson/Howard D. Olson Memorial
Martin Olson Memorial
J. C. Penney Company

CORPORATE PARTNERS
Affiliates Club CEOs ($5,000+)

Bank of America New Mexico
Boatman's Sunwest
Burlington Resources/Meridian Oil Foundation
The Coleman Foundation, Inc.
Dillard Department Stores, Inc.
EDS
Ford Motor Company
GE Foundation Higher Education Program
KPMG Peat Marwick
Norwest Bank New Mexico N.A.
Rogoff, Diamond & Walker, CPA's
Sandia National Laboratories
St. Joseph Healthcare System
Technology Ventures Corporation
US West Foundation
Mr. Milton H. Ward

CORPORATE DONORS
Affiliates Club Directors ($2,000-$4,999)

AT&T
Atkinson & Co., Ltd. CPAs
BDM Federal, Inc.
Bowlin's Inc.
Mr. Douglas M. Brown
El Paso Natural Gas Foundation
Mr. Henry Ingalls
Kauffman Foundation
Ms. Grace Lieblein
Mountain States Life Insurance Company
Phelps Dodge Corp-New Mexico
Ms. Beatriz Rivera
Mrs. Nancy Roberts

CORPORATE FRIENDS
Affiliates Club Vice Presidents ($500-$1,999)

Anderson Alumni Chapter
Arthur Andersen & Co.
Big J Enterprises, Inc.
Buffett Foundation, Inc.
Mr. & Mrs. Paul Cassidy
Mr. Gary L. Dushane
Mr. Lee Ellis
General Motors Corporation
Mr. Donald P. Goldfarb
Mr. Karl Werner Gustafson
Honeywell, Inc.
IBM Corporation
Mr. & Mrs. Henry Jaramillo, Jr.
Mr. & Mrs. David W. Jessen
Mr. Tony C. Knudsen
Mr. James LaBorde
Manuel Lujan Insurance, Inc.
Lukens Medical Corporation
Mr. Terrence Melia
Mr. Antonio Miera
Mr. & Mrs. John Stevens Moawad
Mr. & Mrs. Fred M. Mossman
New Mexico Hotel & Motel Assoc.
Mr. Leonard R. Sanchez
Dr. Don Simonson
Dr. Howard Smith
Mr. Tony J. Strati
Ms. Barbara Tambakakis
Ms. Marva B. Vollmar
Mr. James Wimbush
Mr. C. E. Woodcock
Mr. Ralph Workman
Mr. & Mrs. Raymond Ziler
Mr. Ray Zimmer

Affiliates Club Executives ($250-$499)

Mr. & Mrs. Ralph J. Birkelo
Ernst & Young Foundation
First National Bank of Belen
Mr. Joe Bob Fleming
Mr. & Mrs. Dennis L. Garcia
J.C. Penney Business Services
Mr. & Mrs. Patrick James
Mr. Martin E. Mathisen
Mr. Lee A. Moore
PNM Foundation, Inc.
Mr. & Mrs. Clinton Parker
Mr. Ted H. Pate
Santa Fe Pacific Gold Corporation
Mr. George R. Savage
Mr. Robert T. Tuffnell
Mr. Emmett C. Usinger
Mr. James Welch
William & Linda Worden, Jr.
Mr. Ralph Workman

Affiliates Club Executives ($100-$249)

AMOCO Corporation
Amoco Production Company
Mr. & Mrs. Gregory Atkin
Mr. Jerrell A. Atkinson
Ms. Elizabeth Avery
Ms. Beverly Bendicksen
Mr. Raymond E. Berube, Jr.
Mr. & Mrs. Richard E. Boehmler
Mr. Arthur W. Brown
Mr. John William Brown
Ms. Kelda Jane Caldwell
Mr. Samual Carnes
Mr. Robert S. Carr
Ms. Stephanie Catasca
Mr. Richard Champine
Mr. William A. Cleary
Chevron Corporation
Dr. Donald V. Coes
Mr. Stephen Bradley Compton
Mr. Parley "Don" Cronquist
Mr. Jack L. Cunningham, Jr.
Dun & Bradstreet, Corp.
Lt Col. Richard M. Elliott
Mr. & Mrs. Roland Ferguson
Mr. Howard V. Finston
Mr. Richard H. Follingstad
Ford Motor Company
Ms. Libby Foster
Mr. & Mrs. Gary Garbrecht
Mr. Donald J. Greenhalgh
Mr. H. Dennis Grossman
Hallmark Corporate Foundation
Mr. George E. Hamilton, Jr.
Herbert M. Denish & Associates
Ms. Nancy Dean Herring
Dr. Cornelius J. Higgins
Highland High School '54
Mr. Robert J. Howatt
Mr. & Mrs. James Y. Huang
Ms. Jane E. Jacaruso
Mr. James L. Jackson
Mr. Lawrence C. Johns
Mr. & Mrs. Robert L. Johnson
Mr. Mark A. Joiner
Ms. Becky Ann Kilbourne
Mr. Allen Kirkpatrick
Ms. Barbara Larson
Ms. Irene F. Lefton
Ms. Julianne Levings
Mr. John R. Lewinger
Ms. Barbara Lewis
Mr. Gerald H. Lindsay
Mr. Pete Lubar
Mr. Peter C. Marks
Mr. Patrick A. McCarthy
Mr. James R. McCaskill
Mr. Jon Robert Meadows
Mr. Michael A. Mimovich
Mr. James Mooney
Mr. John H. Morrison
Mr. Eberhard Ulrich Mugler
Mrs. Jessamine Musson
Mr. Max Myers
Mrs. Victoria R. Nance
National Semiconductor
Ms. Mary Beth Nelson
Mr. & Mrs. Brett Newberry
Mr. Stephen C. Novak
Ms. Geraldine O'Brien
Mr. Kevin M. O'Brien
Owens-Illinois, Inc.
Mr. & Mrs. Robert Parks
Ms. Jeri Ann Peterson
Mr. & Mrs. John Petronis, Sr.
Mr. F. William Power
Mr. & Mrs. Bradley J. Preber
Ms. Christella Prucha
Ms. Stephanie Rogers
Mr. & Mrs. James D. Rose
Ms. Fredda Ruppenthal
Mr. & Mrs. Angelo Scarola
State Farm Companies
Ms. Joan M. Staveley
Major Kevin S. Stewart
Mr. & Mrs. Randall Stewart
Ms. Eileen R. Street
TRW Foundation
Mr. Eric J. Telles
Texas Instruments, Inc.
Mr. Clyde John Thurow
Ms. H. Celeste Toole
Mr. Jerome Truskowski
Mr. Scott Turney
Ms. Tracy L. Utterback
Mr. & Mrs. David Keith Warner
Mr. John F. Wawrek
Mr. Sean S. Weiner
Mr. & Mrs. Richard Wickens
Ms. Joan A. Williams
Mrs. Margaret C. Williams
Mr. Keith Yocum
Mr. & Mrs. Raymond Ziler

Affilates Club Friends (Under $100)

Mr. Charles K. Ables
Dr. & Mrs. Abramson
Mr. George C. Allen, Jr.
Mr. James Anthony
Mr. & Mrs. Rodolfo Archbold
ARCO Foundation, Inc.
Arthur Andersen & Company
Ms. Sheryle Joan Augustine
Mr. Robert M. Barela
Mr. Kenneth Aldon Beechy
Mr. & Mrs. Vladimir Berniklav
Mr. Phillip Blythe
Mr. Henry Boehme
Mr. John Booker
Mr. James E. Bowman
Ms. Kaelynn Boyd
Ms. Lorna E. Bridenstine
Ms. Pauline Bryant
Mr. Igor Bulim
Mr. David Harlin Bullock
Mr. & Mrs. Jacob Carian
Ms. Karen Stacy Carl
Ms. Kate Carraher
Mrs. Carol Carrie
Ms. Judy Cartmell
Miss Stephanie Catasca
Mr. Thomas W. Cavanaugh
Mr. Marc Cervellino
Mr. Leroy Anthony Chavez
Mr. & Mrs. Donald C. Clampitt
Mr. Charles Clouthier
Mr. Ronald Compher
Ms. Marilyn Elaine Cornell
Mr. Manuel C. Cortez
Mr. & Mrs. Danny Cox
Doug & Yvonne Cox
Mr. & Mrs. Richard Coyle
Mr. Kendall D. Coyne
Ms. Denise Cramer
Mr. Timothy Critchfield
Mr. & Mrs. Vern Curtis
Dr. & Mrs. Scott S. Darling
Mr. Ben L. Darwin
Mr. Ralph Davies
Ms. Rosemarie Delorenzo
Mr. Joseph Demkovich
Mr. Jamieson Devel
Digital Equipment Corporation
Mr. & Mrs. Travis Eden
Mr. & Mrs. Paul H. Eichenberger
Mr. Michael Eighmy
Deacon & Mrs. W. Vincent Einsmann
Mr. William H. Ellis
Ms. Barbara Esch
Ms. Debra Eston
Mr. Mark W. Evans
Mr. Troy Ewton
Mr. Gary Ey
Senator Joseph A. Fidel
Mr. Warren Flaherty
Mr. & Mrs. Robert Carlos Gandert, II
Mr. Richard Garrett
General Electric Company
Ms. Barbara Gibson
Ms. Elizabeth D. Gitajn
Mr. Robert H. Gorham, II
Mr. Robert Gorrell
Ms. Marilyn Grum
Ms. Alicia Guiterrez
Mrs. Eileen Harpole
Ms. Peggy Harrelson
Ms. Ginger Hendricks
Ms. Terry Hendrix
Mr. & Mrs. Frank E. Heslin, Jr.
Mr. & Mrs. William High
Mr. Richard Hill
Mr. Shawn D. Hinds
Mr. & Mrs. Kenneth Paul Hoeg
Mr. & Mrs. Harland Hoffland
Intel Foundation
Ms. Gloria Sue Jewell
Mr. James Johnson
Ms. Reta Jones
Mr. Gordon J. Jorgensen
Mr. Brian Knight
Mrs. Mary J. Koerschner
Ms. Carole Kratunis
Mr. & Mrs. Martin Lange
Mr. Theodore Lapina
Mr. David Alan Laubhan
Mr. Peter J. Leonard
Mr. & Mrs. Claude L. Lewis
Mr. Mark C. Lewis
Mr. Robert Maestas
Mr. Leonard Malczynski
Martin Marietta Corporation Foundation
Mr. Dennis Martin
Mr. Tiofilo A. Martínez
Mr. Larry McCarty
Mr. John McCarty
Mr. & Mrs. James McDowell
Mr. & Mrs. Richard McInturtt
Mr. Franklin Miles
Mr. & Mrs. John R. Miller
Ms. Rose Minton
Mr. & Mrs. David Mondlick
Mr. Frederic Montoya
Mr. Samuel Montoya
Ms. Jessica Mooney
Motorola
Mr. & Mrs. David Neal
Mr. Glenn Nelson
New Mexico Beverage Company
Mrs. Michelle Newsom

Ms. Barbara Ohm
Mr. Richard Thomas Pagan
Ms. Jo Ann Parish
Mr. & Mrs. Laurence Paxton
Mr. Steve Pecci
Ms. Rosemary Pecoraro
Mr. & Mrs. Tobias Perea
Mr. Richard Perovich
Ms. Stephanie M. Peterson
Mr. & Mrs. Steve A. Petranovich
Mr. & Mrs. Paul V. Petty
Mr. Joseph Picaro
Ms. Robin Prausa
Capt. William Quarg
Mr. Charles B. Quinn
Mr. David Read
Mr. Alfredo Rey
Ms. Laurette M. Roach
Ms. Gayle Roark
Mr. James Roche
Ms. Monica Romero
Mr. Joseph A. Ruggles
Mr. & Mrs. Frank Ruvolo, Jr.
Mr. & Mrs. James Sacoman
Mr. & Mrs. Randolph Sahd
Mr. Jimmy Raymond Sanchez
Ms. Susan Scholtz
Mr. & Mrs. James A. Schroer
Mr. Phillip Segotta
Mr. Martin D. Shannon
Ms. Patty G. Shepherd
Mr. & Mrs. John Sikor, Jr.
Mr. Tom T. Shishman
Mr. Phillip Sisneros
Mr. Michael Thomas Solan
Ms. Mary Spence
Mr. Thomas Lawrence Spero
Mr. Walter Alfred Stark, Jr.
Mr. Kenneth C. Stein
Mr. Kenneth Robert Stoddard
Mr. Shawn Stomp
Mr. Todd Strahan
Ms. Donna Swarbrick
Mr. Andrew Thompson
Mr. & Mrs. Jerrold Thompson
Mr. James S.Tinker
Mr. John Leon Tribbey
Mr. Richard Tribby, Jr.
Ms. Maureen Ullmann
Ms. Marquerite R. Valencia-Reed
Mr. Michael J. Vigil
Ms. Lucy Ann Warner
Mr. Jerry Watson
Mr. Tim Wauneka
Mr. Kerry Weems
Mr. Ronald Westad
Ms. Elizabeth Wiggins
Mr. & Mrs. George Wight
Mr. Ted R. Williams
Mr. John H. A. Wills
Mr. Edward Wilson
Ms. Karen Winter
Mr. & Mrs. Gregory W. Young
Mr. George J. Young, Jr.
Mr. & Mrs. Frank J. Zellner
Mr. & Mrs. Gregory Zeter

A. 3 ANDERSON COURSES 1994-1995

*Note - Statistics are from UNM Registrar Census (21-day) Report

Course	Instructor	Number of students[1] Summer 94	Fall 94	Spring 95
ACCOUNTING				
101 Fundamentals of accounting I	R Armstrong		21	14
	L Umbrage		43	34
102 Fundamentals of accounting II	D Umbrage			7
202 Principles of financial accounting	M Blazek	25		
	Addington		121(3)	142(3)
	E Connolly		41	54
	G Petrie		44	
	R Tepper			23
303 Accounting for management control	C Moss		62	59(2)
	R Steele			56
	R Tepper		22	
	Togo	32		77(2)
	R Wildermuth		95(2)	
340 Financial accounting I	Blazek	10	66(2)	58(2)
	R Steele		29	
	N Swenson			22
341 Financial accounting II	C Moss		17	
	Joni Young		61(2)	63(2)
342 Income tax accounting I	C Koehler	25		
	Elliott			47(2)
	Hamill		55(2)	
343 Income tax accounting II	Elliott		16	
	Hamill			29
346 Managerial & cost accounting	McNamee	17		
	Yuthas		63(2)	65(2)
348 Legal concepts for accountants	R Tepper		17	
440 Financial accounting III	Mouck		45(2)	40(2)
443 Auditing	Becker		56(2)	51(2)
444 Accounting not for profit	Mouck			19
449 Accounting information systems	C Emmons		52	35(2)
451 Problems	Becker	1		
	Hamill		1	
502 Accounting MIS	Dillard		53(2)	
	Preston	18		49
503 Managerial accounting	Dillard			40(2)
	Preston		20	
	Togo	24		
540 Financial accounting II	Blazek		25	
541 Advanced acct theory & practice	Joni Young			12
542 Seminar: personal tax planning	Elliott		7	
543 Seminar: business tax planning	Hamill			8
544 Seminar: adv auditing	Becker			2
545 Seminar: acct theory development	Philips		14	
546 Seminar: controllership	Yuthas		8	
547 Tax res proc & prac	P Tucker			5
548 Seminar: international accounting	Philips			14
551 Problems	Preston	1	1	
	Hamill		2	
552 Problems	Dillard			1
	Preston			1
	Hamill			1

[1] (#) indicates number of sections if more than one

Course	Instructor	Number of students[1] Summer 94	Fall 94	Spring 95
FINANCE				
270 Introduction to real estate[2]	J R Thomas			18
271 Introduction to insurance[2]	K Buehler		12	
326 Financial management	Finkelstein	82(2)		
	Grant		45	98(2)
	Schatzberg		85(2)	59
426 Advanced problems in financial management	Simonson		18	
452 Problems	Finkelstein			2
470 Financial markets & institutions	Finkelstein	8	15	23
471 Investment analysis & management	Vora		14	29
473 Commercial banking	D Chavez			30
474 International financial management	Grant		14	
(490)Spec top/Finance	Vora			2
526 Financial management	Schatzberg			43
	Vora	19	44	
551 Problems	Finkelstein		1	
552 Problems	Finkelstein			1
556 Financial planning & capital budg.	Simonson		23	
570 Analysis of the financial system	Finkelstein	7	13	14
571 Security analysis & investment management	Vora		10	6
573 Seminar: management of fin. institutions	Finkelstein			5
574 Seminar: international fin. management	Grant		29	
575 Seminar: finance	Vora			15
699 Dissertation	Finkelstein			1
MARKETING				
222 Introduction to marketing[2]	B Feigi			40
	J Olsen		39	
314 Professional selling	Haley			9
322 Marketing management	Baker	49	54	
	N Byers		53	
	K Dixon			35
	Haley			30
	S Moore			30
	J Pollock			47
	Rogers		15	
	Shama		21	
384 Professional selling	Haley			8
451 Problems	Baker		1	
	N Byers	1		
480 Buyer behavior	Baker		38	27
481 Marketing research I	Rogers		26	34
482 Marketing research II	Rogers			31
483 International marketing	Shama		34	37
484 Sales management	Haley		28	
486 Distribution systems mgt	Hozier		9	
487 Promotion management	Rogers			23
488 Procurement management	J Olsen			12
489 Mktg. of services	Hozier		23	
522 Marketing management	Baker	16		
	Haley		18	
	Hozier			44
551 Problems	Shama		1	
	Hozier		1	
580 Buyer behavior	Baker		5	13

[1] (#) indicates number of sections if more than one
[2] Not applicable for BBA

Course		Instructor	Number of students[1] Summer 94	Fall 94	Spring 95
582	Strategic mkgt planning	Feig		15	
583	International marketing mgt	Shama			20
584	Mgt of sales & procurement systems	Haley		6	
586	Ind marketing mgt	Hozier			8
587	Mkt. comm. mgt.	Rogers			7

OPERATIONS MANAGEMENT/MANAGEMENT INFORMATION SYSTEMS

290	Stat methodology	Math department	29(2)	159(5)	180(4)
		W Epler			18
291	Business statistics lab (1 hr cred)	W Epler		8	24
		Sanders	182(7)	222(7)	
300	Operations research/mgt science	H Kraye			14
		Ravinder		64	
		Reid			14
		Schultz			126(2)
		Yourstone	26	130(3)	
301	Computer based info systems	Bose		75(3)	
		Bullers	34		
		H Lambert			12
		Rattner			80(2)
		R Ulibarri		36	28
327	Business data processing	T Othick		12	
329	Data management	Bullers		22	13
331	Business appl programming	A Al-Kasir			27
337	Survey of computer systems	Burd		17	18
432	Cases-Prod & ops mgt	Ravinder			10
433	Management of service operations	Reid		3	
434	Production & inventory control	M Hernandez		5	
439	Management of information systems	T Othick			4
459	Information analysis	Bose			16
		Rattner		19	
460	Information systems design	Rattner		32	20
461	System development project	M Hernandez			25
		D Sikora		17	
(491)	Spec top/Adv database mgt	Bullers			4
(491)	Spec top/Mgt of quality	Kassicieh			5
500	Quant analysis I	W Epler		15	34
		H Lambert		46	
501	Stat analysis for mgt decisions	Ravinder		12	
		Sanders	30	41	
510	Introduction to info processing	Bullers	22	39	
		H Lambert			25
		D Sikora		28	
520	Operations research & prod mgt	Ravinder			11
		Reid		26	16
		Yourstone	47		
521	Production/inventory management	M Hernandez		18	
523	Service operations management	Reid		15	
525	Management of quality	Kassicieh			19
529	Intermed operations research	Ravinder			3
530	Appl gen sys theory	Reid			9
532	Simulation	Schultz			8
534	Management of info systems	T Othick			20
535	Info system analysis & design	Bose			15
537	Database management systems	Bullers			17
538	Mgt info sys design applications	Kassicieh		7	
539	Decision support systems	Kassicieh		9	

[1] (#) indicates number of sections if more than one

[2] Not applicable for BBA

Course	Instructor	Number of students[1] Summer 94	Fall 94	Spring 95
551 Problems	Burd		1	
552 Problems	Bullers			2
	Schultz			1
(594)Spec top/Adv database mgt	Bullers			13
699 Dissertation	Kassicieh		2	2
ORGANIZATIONAL BEHAVIOR/HUMAN RESOURCES MANAGEMENT				
306 Organizational behavior I	H Gonzales		36	
	Hood	26		
	S Kryder		8	16
	Muller			43
	Parham		108(3)	78(2)
307 Org. behav. II: theory & concepts	Champoux		66	79
	R Johnson			26
	Miners	61	31	31
361 Organizational theory[2]	J Chacon			44
	Champoux		65(3)	
452 Problems	Champoux			1
463 Employment law	M. Lunderman		47	38
464 Hum res theory & practice	Rehder		30	
466 Organizational development	F Reinow			26
467 Men/women & leadership	Hood			36
(490)Spec top/Employee relations	R Johnson		21	
(490)Spec top/Comp benfts & trn	D Acree			12
493 *T/Internship in OB/HRM*	Miners			4
506 Organizational behavior I	Champoux		31(3)	2
	Hood		18	
	Miners			35
	Muller			26
	Rehder	8		
551 Problems	Champoux	1		
	Hood	1		
560 Seminar: cross-cultural org behavior	Rehder		19	
561 Interpersonal dynamics	J Chacon		18	
562 Organization design & development	M Seeley		14	
563 HRM theory & applications I	Rehder			8
565 Seminar: admin theory & decision mkg	Champoux			5
566 Human relations lab	Parham			11
567 Women in management	Muller		17	
568 Creative leadership	Rehder			22
(594)Spec top/Employee relations	R Johnson		10	
(594)Spec top/Mgt presp & comm	Rehder	57		
(594)Spec top/Intnshp in OB/HRM	Miners			6
(594)Spec top/Comp benfts & trn	D Acree			5
POLICY AND PLANNING				
195 Introduction to entrepreneurship	J Haver			30
308 Organizational environment	M Daly		69(2)	86(2)
	J Hodges			37
	Logsdon		93(2)	
	W VanDusen	15		42
309 Man, society and law	Porter		21	29
310 Law of contracts	S Archuleta		23	
	A Hanson			18
	R Lovato		34	
	Porter	40	30	72(2)
	R Quintana		26	26
324 *New venture strategies*	S Carr		11	
	C Chatfield	10		16

[1] (#) indicates number of sections if more than one

[2] Not applicable for BBA

Course	Instructor	Number of students[1] Summer 94	Fall 94	Spring 95
	C Meinel		18	17
358 Man, society and law[2]	Porter		37	36
359 Law of contracts[2]	S Archuleta		12	
	A Hanson			13
	R Lovato		22	
	Porter	13	12	27(2)
	R Quintana		11	12
411 Travel & tourism management I	Dry		26	24
412 Hotel & restaurant management	Dry		16	
413 Travel & tourism management II	Dry			19
451 Problems	John Young		1	
452 Problems	Smith			1
(490)Spec top/Mang. fam busin	R Patrick			6
(490)Spec top/Negotiation strategy	N. Bell Grieff			15
(493)T/Travel & tourism internship	Dry	7	5	6
(493)T/Entrepreneurship internship	S Carr			12
495 Seminar: small business	John Young		16	
496 Venture capital	C Chatfield			11
498 Senior seminar	Banbury		13	
	T Kelly			36
	Radosevich			40
	Shama (Mktg)	69(2)		
	Smith		32	24
	W Van Dusen			53(2)
504 Organizational economics I	J Hayes			48
	Parkman		48(2)	
505 Organizational economics II	J Hayes			20
	Parkman		33	
508 Organizational environment	M Daly	10		
	Logsdon			40
	Thompson		43(2)	17
509 Organizational environment law	H Archuleta			24
	A Hanson		24	
	Porter	7	33	
551 Problems	Logsdon	1		
	Smith	2		
552 Problems	Dry			1
	J Emery			2
	Smith			3
558 Seminar: on corporations & society	Logsdon			10
(593)Field study Health sys.	John Young			1
(593)Intern Trav/Tour	Dry			1
(594)Spec top/New ventures	Meyer		11	
(594)Spec top/Mang fam busin	R Patrick			1
(594)Spec top/Negotiation strategy	N Bell Greiff			15
(594)Spec top/Mergers & acquisitions	T Bonafair			15
598 Seminar: general management II	Banbury		33	42(2)
	W VanDusen	31		
	Smith			6

TECHNOLOGY/INTERNATIONAL MGT

328 International management	Bannister		67(2)	22
	J Chacon			39
	de Gouvea Neto	24	90(2)	98(2)
451 Problems	de Gouvea Neto		1	
	Banbury		1	
452 Problems	de Gouvea Neto			1
(490)Spec top/International mgt.	J Emery		10	
(490)Spec top/Ent strt intl mkt	de Gouvea Neto			9
(490)Spec top/Intl management seminar	Dry			7

[1] (#) indicates number of sections if more than one
[2] Not applicable for BBA

Course	Instructor	Number of students[1] Summer 94	Fall 94	Spring 95
(490)Spec top/Mex/US integration	Bannister			2
528 International management	Coes		37	
	de Gouvea Neto	24		39
551 Problems	Coes		1	
	de Gouvea Neto	2	2	
	Radosevich	1		
559 Technical entrepreneurship	Radosevich		18	
(594)Spec top/itl mgt sem fd st	J Guthmann	30		
	Dry			3
(594)Spec top/intro mgt of technology	Carayannis			15(2)
(594)Spec top/Ent strt intl mgt	de Gouvea Neto			6
(594)Spec top/International mgt	Emery		2	
(594)Spec top/Mex/US integration	Bannister			22
595 Mgmt in Latin America	Coes		15	

OTHER

105 Bus co-op work phase	K Cantrell			19
113 Management - introduction	R Johnson		125(2)	45
	J Warner		56(2)	133(3)
398 Management career planning	L Edwards	24	53(2)	42(2)
	M Fachman		66(2)	91(2)

EXECUTIVE MBA PROGRAM

1992-94 class				
798 Integrative seminar		30		
1993-95 class				
704 Economic analysis	J. Guthman	48		
707 Org innovation & leadership	Champoux	47		
708 Eth pol & soc environment	Thompson		46	
709 Business law	Porter			43
720 Operations management	Reid			45
722 Marketing management	R Lattanza			44
726 Financial markets	Finkelstein		48	
751 Practicum	(various instructors; see MDC files)			48
1994-96 class				
700-712 Mgt perspectives & bus comm	Rehder	57		
701 Statistics & mgt science	Yourstone			48
702 Accounting	Dillard		54	
704 Economic analysis	Parkman			48
706 Org behavior I	Muller		54	
710 Computer based info systems	Burd	56		

[1] *(#) indicates number of sections if more than one*
[2] Not applicable for BBA

COLLEGE OF ARTS AND SCIENCES

ANNUAL REPORT

July 1, 1994 - June 30, 1995

WILLIAM C. GORDON, DEAN

COLLEGE OF ARTS AND SCIENCES

Annual Report, July 1, 1994 - June 30, 1995

TABLE OF CONTENTS

		Page
I.	Overview of Arts and Sciences, 1994-95	1
II.	Administration	1
III.	Recent Major Developments in the College of Arts and Sciences	3
IV.	Affirmative Action	9
V.	Research and Scholarly Activities	10
VI.	Teaching	11
VII.	Special Projects and Functions	11
VIII.	Departmental Reports	19

Associate Dean Kenneth Frandsen continued to provide assistance and information concerning Affirmative Action and Equal Opportunity policies and data sources, liaison with the Equal Opportunity Programs and Faculty Contracts offices, and oversight of search and screening efforts in conjunction with the appointment of regular and temporary part-time faculty in the departments of the College, in the Women Studies Program and in the General Honors Program. Also, he served as Area Coordinator for the College's participation in the University United Way Campaign.

Associate Dean Kathryn Vogel assumed responsibility for various aspects of College administration related to faculty, particularly oversight of the process by which files of individuals being considered for promotion and tenure are prepared, received and reviewed at the College level. Also, she administered requests for sabbatical leaves, the allocation of College funds to support special faculty travel and the allocation of funds to support visiting lecturers and the expenses of professional publications. Christine Kozojet continued to serve as Development Officer in the College of Arts and Sciences.

A new Chairperson was appointed for AY 1994-95 in Psychology (Michael Dougher).

III. RECENT MAJOR DEVELOPMENTS IN THE COLLEGE OF ARTS AND SCIENCES

Teaching Enhancement Initiatives

1. Incentive Structure

In an effort to reinforce teaching excellence, all departments have been asked to develop faculty merit raise formulas that give equal weight to teaching and research performance. In addition, the College has begun to reserve 50% of all special merit increase monies for

I. OVERVIEW

The 1994-95 academic year in the College of Arts and Sciences saw slight decreases both in the head count of students enrolled and in student credit hours recorded, contrary to the trend of the past three years.

Four departments (Biology, Philosophy, Sociology and Foreign Languages and Literatures) successfully completed external reviews of their graduate programs and several other departments began preparing for similar reviews scheduled for completion during the 1995-96 Academic Year.

The ranks of the tenure-stream faculty in the College increased by a net of five as twenty-five new faculty were hired and twenty resigned or retired. Funds budgeted for the College in the Spring of 1995 were sufficient to yield only a 2.75% average salary increase for faculty returning in 1995-96. Although all funds available to the College for 1995-96 exceed funds available in 1994-95, this increase is insufficient to support other aspects of the College's operations which remain seriously underfunded.

II. ADMINISTRATION

The College's administration in 1994-95 remained essentially the same compared to 1993-94. William C. Gordon, Dean, appointed Kathryn Vogel, Robert Fleming and Kenneth Frandsen as Associate Deans. Associate Deans of the College accepted individual responsibilities similar to those identified in annual reports covering the previous two years.

Associate Dean Robert Fleming assumed responsibility for the College's student advisement effort and for validation of curriculum changes and graduation requirements. He continued to serve as the College office's liaison with the College's Undergraduate Education Committee and with the College's Graduate Education Committee, and provide oversight of the various scholarly publications that the College supports.

those faculty who have excelled to their teaching activities over the course of the preceding year.

2. Diminishing the College's Reliance on Part-time Instructors

The College has taken the position that its teaching mission is best carried out by instructors who are thoroughly familiar with the academic standards and expectations within a department, who are regular members of the academic community within the University and who are regularly available to students throughout the day. Thus, the College has encouraged its departments to rely more heavily on tenure-track faculty, regular non-tenure-track faculty and senior level graduate assistants to teach their courses, rather than hiring part-time instructors to teach on a course by course basis. As a result of this encouragement, several departments have shifted resources normally reserved to pay part-time instructors over to the support of graduate students and full-time lecturers.

3. Improving Instruction by Graduate Assistants and Part-time Faculty

Although our goal has been to increase significantly the proportion of our courses that is taught by regular faculty, some portion of our instruction will always be carried out by graduate assistants and part-time instructors. Thus, we have also focused on improving the quality of instruction delivered by these personnel. Beginning Semester I, 1995-96 AY, all departments in the College are required to have a formal approved plan for the orientation, training, supervision and evaluation of all graduate teaching assistants and all part-time instructors who teach undergraduate courses and laboratories in Arts and Sciences. As part of this initiative, the College issued an instructor handbook to all

departments to be used by graduate assistants and part-time faculty. This handbook includes information concerning academic regulations and policies in the College, teaching resources that are available on campus and programs that are available to aid instructors in developing their teaching skills. Also included are sections dealing with course planning and management and with the development of a positive learning environment in the classroom.

4. New Faculty Teaching Orientation

Another initiative that will be undertaken for the first time during Semester I, 1995-96 AY, is a campus-wide orientation program for newly hired faculty in the University. This program will strongly emphasize the teaching mission at UNM and the development of teaching skills. It was initially proposed by Arts and Sciences and much of the planning and development of the program was carried out by Arts and Sciences faculty and administrators.

Research Enhancement Initiatives

For some time our College has supported faculty and student research programs by providing equipment and computer funds to newly hired faculty, by providing matching funds for faculty who submit research grant proposals, and by supporting the establishment of collaborative research centers and institutes within the College. The College also supports several professional journals relating to disciplines within the Arts and Sciences, it regularly sponsors regional and national research meetings on the campus and it provides travel funds to enable faculty to attend professional research meetings elsewhere. In addition the College has recently

implemented two new initiatives designed to support research and scholarly activities. These are as follows:

1. Arts and Sciences Small Grants Program

The Research Allocations Committee at UNM has long sponsored a small-grants program on campus designed to provide seed money for faculty research efforts. However, this program has focused primarily on providing support for new junior faculty. The College has established its own small-grants program for the faculty in Arts and Sciences. This program is designed to provide support on a competitive basis to faculty who wish to initiate new, innovative research and/or creative projects. The highest priority in this program will be given to more advanced faculty who are changing research directions, who are attempting to revitalize their research programs, or who find themselves between grants needed to support their work.

2. Research Semester Program

A second initiative to begin during the 1995-96 AY is the College's Research Semester Program. Through a highly-competitive proposal process, the College will grant a research semester to two or three faculty each semester. Faculty who are granted research semesters will be freed from all formal teaching and service responsibilities during the designated semester and will be expected to devote their time exclusively to their research activities and to the mentoring of undergraduate and graduate students who are themselves engaged in research. The goal of this program is not only to foster the research programs of the faculty selected, but also to increase the involvement of our students in research

and creative activities.

Major Research Developments

The creativity and productivity of Arts and Sciences faculty in combination with the College's support for research efforts has produced a significant increase in highly visible research activities and programs over the past year. In fiscal year 1995, for example, Arts and Sciences faculty members received grant and contract awards totalling $18,967,823. This figure represents a 37% increase over total awards received in fiscal year 1993. It is notable that the total awards for fiscal year 1995 cited above include only those awards to support work carried out exclusively within the College. Additional awards totalling more than 20 million dollars were garnered by Arts and Sciences faculty conducting research in cross-college, interdisciplinary research units. Thus, Arts and Sciences faculty were responsible for obtaining approximately 39 million dollars in grant and contract awards during fiscal year 1995.

Enhancement of Undergraduate Educational Programs

Over the past few years the College has made significant progress in enhancing the quality of the educational experience it offers to its undergraduate students. Our efforts in this area have focused on the improvement of undergraduate teaching, the expansion of educational and advisement programs and the enhancement of the instructional and laboratory equipment that is available to our students. Our efforts to improve undergraduate instruction have been described above. What follows are some of the steps we have taken in the development of programs and in the improvement of instructional and laboratory equipment.

1. New Academic Programs/Curriculum Enhancement

An area of emphasis within our College has been our disciplinary Honors programs. Although twelve of the College's twenty departments currently offer undergraduate disciplinary Honors programs, the College has made a commitment to expand opportunities for Honors education within Arts and Sciences. During the 1995-96 AY, the Sociology department will offer an undergraduate Honors program for the first time and discussions over how to fund and implement a new Honors program in Economics are currently underway.

2. Improving Instructional and Laboratory Equipment

The College has committed itself to improving the instructional equipment used in its undergraduate courses and the laboratory and computer equipment that is available to our students. The College earmarked approximately $150,000 of its own funds for the enhancement of such equipment over and above the College's equipment allocation from the University. These resources will enable us to establish new computer-based laboratories in Sociology and Economics, to fully computerize the College's language laboratories and to construct a state-of-the-art geographic information technologies laboratory in our Geography department. These funds are also being used to establish a new sign-language interpreting laboratory in Linguistics and to purchase new broadcast journalism equipment in Communication and Journalism. In addition most departments have been able to purchase new audio-visual equipment for lecture courses and virtually all science departments have upgraded their equipment in undergraduate laboratory courses.

Enhancing Graduate Educational Programs

The College's recently adopted five-year plan has as one of its highest priorities the strengthening of graduate programs within the College. Certainly many of our recent faculty hiring initiatives and research enhancement initiatives were designed to help us strengthen graduate educational opportunities. In addition, the following initiatives have been undertaken.

1. Graduate Student Support

Beginning in the 1995-96 AY, using a budget increase from the University and funds garnered through our development efforts, the College created six new graduate assistantships within Arts and Sciences. In addition, we raised the dollar amount of the average graduate stipend in our College by approximately 5.5% which far exceeded the average stipend increase given in the University as a whole.

2. Graduate Recruitment

Beginning in the 1995-96 AY, the College will implement a program through which matching funds are provided to departments that undertake special graduate recruitment initiatives. To receive matching funds from the College, each department must have an approved recruitment plan designed to increase its number of graduate applicants and to increase the diversity of its applicant pool.

IV. AFFIRMATIVE ACTION

The College continued its efforts to increase the cultural and gender diversity among its faculty during the 1994-95 AY. Consistent with Regents' policy concerning diversification

of search committee membership, several of the members of search committees were from ethnic groups currently underrepresented in the faculty and many of the search committee members were female.

Appointments resulting from conventional searches, conducted during AY 1993-94 and AY 1994-95, added twenty-two new faculty to the College of Arts and Sciences ranks for AY 1995-96, seven females and fifteen males, including one Hispanic female, and one Hispanic male. Of the twenty separating faculty, five are female and none are members of protected groups. Special recruiting efforts, outside the framework of conventional searches, identified one African American male, another Hispanic male and one female who will begin their appointments during AY 1995-96.

During AY 1994-95, the College continued efforts to ensure equity within the faculty salary structure for members of underrepresented groups and to provide support to those faculty for the purpose of career development at the individual level. These efforts to nurture and develop faculty already at UNM will continue during AY 1995-96.

V. RESEARCH AND SCHOLARLY ACTIVITY

The scholarly and creative achievements of Arts and Sciences faculty that resulted in published works during 1994 are thoroughly documented in the annual volume of Faculty Publications and Creative Works issued by the Office of the Associate Provost for Research. The level of activity both in grant expenditures and new grant awards increased in AY 1994-95 compared to AY 1993-94 as detailed in Table 10.

Three events of special significance to the College's research posture and creative character occurred in AY 1994-95. The first was the retirement of Gerald Nash, Distinguished

Professor of History. Nash's significant achievements and national reputation in Western History contributed significantly to the scholarly profile of the College.

The second was the appointment of Jane Buikstra as Professor of Anthropology. Buikstra's is the first member of the National Academy of Sciences to join the UNM faculty. Her reputation as a senior scientist in bio-archeology will be an important asset in one of the College's established doctoral programs.

The third was the appointment of Gerald Davis as Professor of American Studies. Davis, former Chair of Africana Studies at Rutgers University and former holder of the PNM Chair at UNM, has gained recognition for his work in folklore and his research on the Pueblo Oral Tradition. He will be an important contributor to the diversity of scholarly studies in the College.

VI. TEACHING

Summary data on various aspects of the College's teaching efforts are presented in Tables 5,6,7,8 and 9. Although classrooms with a better profile of capacities continue to be a requisite for improved efficiency of instructional delivery, the College's numerical productivity continues to increase, especially with respect to enrollments in courses offered during evening and weekend hours. These increases are particularly notable in view of a decrease in the total FTE budgeted faculty for AY 1994-95 compared to AY 1993-94, as detailed in Table 4. However, our analysis indicates that, in the context of student demand, the College instructional efforts are seriously understaffed, especially in the category, graduate teaching assistants.

VII. SPECIAL PROJECTS AND FUNCTIONS

Advisement and Record Center

Under the supervision of the Associate Dean for Student Academic Affairs, Robert Fleming, the College Advisement Center admits students to the College, advises them and monitors their academic performance (including placing students on probation or suspending them if necessary), and certifies them for graduation. Each year, advisors conduct 20,000 personal advisement sessions and handle another 15,000 telephone inquiries.

The Center is open from 8 am until 5 pm Monday through Friday, including the lunch hour. In addition, advisors assist with new admittees and transfer students on Saturdays and after hours. Each year advisors go to the branch campuses in Gallup, Los Alamos, and Valencia County and to area junior colleges such as TVI and Northern New Mexico Community College.

In addition to routine matters, the Center handles all student petitions for waivers and the first steps in grievance procedures. Advisors are responsible for all pre-professional advisement. The Health Sciences Advisory Committee screens dossiers and interviews candidates for admission to medical and dental school. This committee, consisting of two professional advisors, one faculty member each from Biology and Chemistry, and the Associate Dean, writes official College letters of recommendation for those applicants who request them. This year, 54 such letters were written.

One or more advisors and the Associate Dean participated in a number of extramural activities this year, including the annual Welcome Back Days, the Career Fair, Pre-Med Day, Advisement Centers Update Conferences, College Enrichment Program Orientations and twelve different summer orientation programs run by the Dean of Students' office. The advisement staff for the year consisted of:

Robert E. Fleming, Associate Dean

Kristi Martin, Receptionist and Computer Operator

Julie Bustamante, Advisement Co-ordinator

Monique Denzler, Advisement Co-ordinator

Carolyn Beske, Advisor

Mary Lawton, Advisor

Leonor Lucero, Advisor

Mary Lou Wilkerson, Advisor

Graduate Committee

The College Graduate Committee oversaw significant changes in the College curriculum. the Sub-committee on Students heard petitions and selected nominees for fellowships. The Sub-committee on Faculty screened 36 sabbatical requests (13 for Spring, 1995 and 23 for Fall, 1995).

The Graduate Committee in Arts and Sciences consisted of the following members:

Graduate Committee	Dept.
Robert E. Fleming	A&S, Chair
Ruth Salvaggio	American Studies
Sylvia Rodriguez	Anthropology
Su-Moon Park	Chemistry
Mary Oelschlaeger	Communicative Disorders
Ken Frandsen	Communication and Journalism
John Geissman	Earth & Planetary Sciences
Stu Burness	Economics
Pete White	English
Claude Senninger	Foreign Languages & Literatures
Brad Cullen	Geography
Richard Robbins	History

Michael Buchner	Mathematics & Statistics
Mark Peceny	Political Science
Bob Fiala/Beverly Burris	Sociology
John Lipski	Spanish & Portuguese

Sub-committee membership included the following:

Sub-committee on Faculty:

John Geissman (E&PS)
Richard Robbins (History)
Bob Fiala (Sociology)

Sub-committee on Curriculum and Standards:

Ruth Salvaggio (American Studies)
John Lipski (Spanish and Portuguese)
Stu Burness (Economics)

Sub-committee on Students:

Claude Senninger (Foreign Lang & Lit)
Mark Peceny (Political Science)
Sylvia Rodriguez (Anthropology)
Robert Affoldt (Student-English)

Senate Graduate Committee Representative:

Ken Frandsen (Communication & Journalism)
Peter White (English)
Su-Moon Park (Chemistry)

Undergraduate Committee

The Arts and Sciences Undergraduate Committee reviews requests from departments both within and outside the College for curricular degree changes that may impact one or more A&S departments. The Committee also discusses issues of undergraduate curriculum and concerns with instructional support and effectiveness. Associate Dean Robert Fleming chaired the Arts and Sciences Undergraduate Committee in 1994-95.

This year the following curricular changes were made:

1. American Studies renumbered many of its courses, grouping them numerically into Cultural Studies; Environment, Science, Technology; Gender Studies; Popular Culture; Race, Class, Ethnicity; and Southwest Studies.

2. Anthropology changed its major: now students have a less rigid core requirement and have some choices in anthropological subfields.

3. Biology added Cell Biology as a required course for the major (BS) and minor.

4. Communicative Disorders increased the number of required courses and required support courses.

5. We now have a European Studies major.

6. The Music major is no longer available through Arts and Sciences.

7. Both Physics and Astrophysics changed their major requirements.

8. In addition to a Russian Studies major, we now offer a Russian major (1st and 2nd major option).

9. Accelerated Foreign Language courses now give 6 hours credit (instead of 3).

Dean's List - College of Arts and Sciences Honor Roll

The criteria for inclusion on the Dean's List are a semester GPA of 3.75 or higher while enrolled for 12 or more credit hours with letter grades, and a cumulative GPA for UNM coursework of at least 3.25. In Fall 1994, 380 students achieved this honor; in Spring 1995 the number of students was 377. Students who met the criteria for inclusion on the Dean's List received a letter of appreciation and congratulations signed by Dean Gordon and Associate Dean Fleming.

Human Subjects Committee

The College of Arts and Sciences Institutional Review Board (IRB) is one of the three IRBs at the University of New Mexico empowered by the U.S. Department of Health and Human Services and UNM to approve and certify all research using human subjects conducted by, for, or with faculty and students; the Arts and Sciences IRB is responsible for all human research conducted under the auspices of the Colleges of Arts and Sciences, Engineering, and Fine Arts, the School of Law, and the School of Architecture and Planning. The goal of the IRB is to promote and foster all types of human research while ensuring that subjects receive proper care and protection from research risk. Information regarding the board's responsibilities and functions is provided through mailings to deans, department chairpersons, and faculty, and from presentations by the IRB chair to departmental chairpersons and faculty.

The Arts and Sciences IRB, consisting of Mike McKee (Chairperson, Economics), Fall 1994 and Spring 1995, Beatrice Vigil (Secretary, Arts and Sciences), Hank Jenkins-Smith (Political Science), Shannan Carter (Medical Center Counsel), and Liane Donisthorpe (Lawyer) reviewed a total of 113 proposals from the following units: Anthropology (13), Communication/Journalism (18), Communicative Disorders (6), Economics (4), English (1), Linguistics (4), Political Science (2), Psychology (54), Sociology (3), and other institutions (9). The majority of proposals were either ruled to be exempt from IRB review or received expedited approval from individual board members within two weeks of submission. Minutes of monthly meetings and records of the actions of the IRB are available in the Office of the Dean, College of Arts and Sciences.

Summer Session

The 1995 Summer session allocation to the College was only slightly more than that of

1994, as detailed in Table 12. Our support of unique summer programs - intensive language institutes, study abroad programs and field schools continued.

Travel and Special College Funds

The College disbursed about $30,000 to individual faculty for travel expenses, in addition to the support provided by departments. The College also reimburses faculty for the cost of reprints of their scholarly work and to provide honoraria for selected guest lecturers. In 1994/95 this included about $14,600 for reprints and $4,850 for speakers' fees. A summary of these distributions appears in Tables 13 and 14.

Arts and Sciences Women's Caucus

As a mentoring effort of both the Caucus and A&S, Kathryn Vogel (A&S, Biology) invited all new women faculty to meet as a group in the early fall. Nineteen women were invited and most of them came. Three senior women (Joan Bybee, Linguistics; Beverly Burris, Sociology; Diane Marshall, Biology) agreed to come and share wisdom on such subjects as publishing, the tenure process, juggling family commitments, university politics, etc. A lively discussion followed. Two women who could not attend the session met with Dean Vogel separately the following week. The group was invited to meet again for lunch in the spring. The Arts and Sciences Women's Caucus was relatively quiet this year compared to previous years. A general meeting in the spring was organized by Louise Lamphere (Women's Studies, Anthropology) and a pot-luck supper was held.

Development Efforts

The 1994-95 fiscal year was spent continuing to build on the development program which

was designed and fully implemented during the 1993-94 fiscal year. In the annual giving area, this program consisted of three mailings to our 22,000 alumni. The first mailing was an honor roll listing all donors to the College's unrestricted fund. In the Fall, a personalized solicitation letter requesting a specific donation based on previous giving was mailed with an issue of **Inside Arts and Sciences**. In late Spring another issue of the newsletter was sent. These publications were well received and funds raised for the entire college through these mailings were up by over $5,000 or a 36% increase. Once again this effort was funded by alumnus, Mr. Lee Galles.

The phonathon, managed and conducted by the UNM Foundation, also has always played a role in the success of our annual giving campaign. Due to staff changes, funding shortages and difficulty in hiring student callers, the UNM Foundation was less successful at reaching our alumni than in previous years. Results show a 30% decrease in dollars raised through the phonathon. However, plans for the upcoming fiscal year are to conduct calling through a professional telemarketing firm. The UNM Foundation believes that, as a result of employing this firm, returns will be considerably higher than in past years.

Gifts larger than $1,000 increased greatly in 1994-95. Over 13 new endowments for graduate and undergraduate student support within various departments were established with an overall value of nearly $220,000. In the past three years, the college development program has submitted a total of 36 formal proposals to individuals, corporations and foundations for major support in specific areas. Of these, 20 have been funded with the most recent being a $300,000 grant from the W. M. Keck Foundation for the Department of Physics and Astronomy. Because of the timing of the gift, it will be counted in the 1995-96 fiscal year.

The past year has been one of considerable transition as a new Director of Development

was hired to oversee the UNM Foundation. Significant changes have taken place over the year that have had some effect on the college's fundraising strategies. As a result of considerable debate, the UNM Foundation Board voted to increase the fee charged on all endowment accounts from .25% to .50%. Additionally, all short term accounts held by the departments will no longer receive interest unless they have a value of $25,000 or more. Under the old system a sliding scale was in place for interest on these short term accounts starting with $2,000 receiving 20% of earned interest and $10,000 accounts receiving 80% of the earned interest. The funds generated by these changes will be used by the Foundation to pay for enhanced development efforts like the new telemarketing program. The College of Arts and Sciences has been allocated $30,000 of this new income for use in our own fundraising efforts.

Overall fundraising results for the fiscal year are generally positive. The method currently used to calculate private funds donated to the college is a combination of the development officer's work and gifts reported to the UNM Foundation by each department. Using this calculation, Arts and Sciences raised $705,401 during the 1994-95 fiscal year as compared to $1,083,136 in 1993-94. This difference can be explained by one large reported gift of $400,000 received by the Department of American Studies in 1993-94. While total funds appear to be down for the year, gifts for purposes designated by the college to be of the highest priority, graduate student aid for instance, are up significantly.

VIII. DEPARTMENTAL REPORTS

Detailed reports on activities in the twenty departments comprising the College of Arts and Sciences are forwarded along with this College report.

TABLE 1

CHAIRPERSONS AND INTERDEPARTMENTAL PROGRAM DIRECTORS, 1994-95

AMERICAN STUDIES
Vera Norwood

ANTHROPOLOGY
Erik Trinkaus

BIOLOGY
David Ligon

CHEMISTRY
Cary Morrow

COMMUNICATION/JOURNALISM
Everett Rogers

COMMUNICATIVE DISORDERS
Linda Riensche

EARTH & PLANETARY SCIENCES
Barry Kues

ECONOMICS
David Brookshire

ENGLISH
Michael Fischer

FOREIGN LANG & LITERATURE
Diana Robin

GEOGRAPHY
Bradley Cullen, Acting

HISTORY
Jonathan Porter

LINGUISTICS
Jean Newman

MATHEMATICS & STATISTICS
Alex Stone

PHILOSOPHY
Russell Goodman

PHYSICS & ASTRONOMY
David Wolfe

POLITICAL SCIENCE
Neil Mitchell

PSYCHOLOGY
Michael Dougher

SOCIOLOGY
Gary LaFree

SPANISH & PORTUGUESE
Erlinda Gonzales-Berry

0206

INTERDEPARTMENTAL PROGRAMS

ASIAN STUDIES (minor, major)
Noel Pugach

BIOCHEMISTRY (major)
Robert H. Glew

COMPARATIVE LITERATURE (min, maj)
Diana Robin

CRIMINAL JUSTICE (major)
Tomas Atencio

ECONOMICS-PHILOSOPHY (major)
Russell Goodman

ENGLISH-PHILOSOPHY (major)
Barbara Hannan

EUROPEAN STUDIES (minor)
Charles McClelland

IBERO-AMERICAN STUDIES (Ph.D.)
Kenneth Coleman

ITALIAN STUDIES (minor)
Rachele Duke

LATIN AMERICAN STUDIES (minor, major)
Kenneth Coleman

MEDIEVAL STUDIES (minor)
Helen Damico

PALEOECOLOGY (minor)
Roger Anderson

PEACE STUDIES (minor)
Donald Lee

PERIOD STUDIES (minor)
Helen Damico

QUATERNARY STUDIES (minor)
Roger Anderson

RELIGIOUS STUDIES (minor, major)
Andrew Burgess

RUSSIAN STUDIES & EAST EUROPEAN STUDIES (minor, major)
Natasha Kolchevska

SCIENCE, TECHNOLOGY & SOCIETY (minor)
Ron Reichel

SOCIAL WELFARE (minor)
Tomas Atencio

TABLE 2

STANDING & SPECIAL COMMITTEES
COLLEGE OF ARTS AND SCIENCES, 1994-95

A&S Graduate Committee

Robert E. Fleming, Arts and Sciences, Chairperson
Ruth Salvaggio, American Studies
Sylvia Rodriguez, Anthropology
Su-Moon Park, Chemistry
Kenneth Frandsen, Communication/Journalism
Mary Oelschlaeger, Communicative Disorders
John Geissman, Earth & Planetary Sciences
H. Stuart Burness, Economics
Peter White, English
Claude Senninger, Foreign Lang & Lit
Brad Cullen, Geography
Richard Robbins, History
Michael A. Buchner, Mathematics & Statistics
Mark Peceny, Political Science
Robert Fiala/Beverly Burris, Sociology
John Lipski, Spanish & Portuguese

A&S Undergraduate Committee

Robert E. Fleming, Arts and Sciences Chairperson
Charlie Biebel, American Studies
Jeffery Froelich, Anthropology
David Ligon, Biology
Cary Morrow, Chemistry
Fred Bales, Communication/Journalism
Annette Rowland, Communicative Disorders
Maya Elrick, Earth & Planetary Sciences
Richard Santos, Economics
Scott Sanders, English
Peter Pabisch, Foreign Lang & Lit
Rod Snead, Geography
Charlie Steen, History

TABLE 2 (continued)

Jean Newman, Linguistics
Ronald Schrader, Mathematics & Statistics
Russell Goodman, Philosophy
David Wolfe, Physics & Astronomy
William Stanley, Political Science
Harold Delaney, Psychology
Pat McNamara, Sociology
Rosa Fernandez, Spanish & Portuguese

A&S Junior Faculty Promotion and Tenure Committee

Garland Bills, Span/Port, Chairperson
Astrid Kodric-Brown, Biology
Fritz Allen, Chemistry
Karen Foss, Communication & Journalism
Laura Crossey, Earth & Planetary Sciences
Shaul Ben-David, Economics
Louis Owens, English
Natasha Kolchevska, Foreign Lang & Lit
Ferenc Szasz, History
Krystof Galicki, Mathematics & Statistics
Hank Jenkins-Smith, Political Science
Jane Smith, Psychology

A&S Senior Faculty Promotion and Tenure Committee

Helen Damico, English, Chairperson
Robert Santley, Anthropology
Oswald Baca, Biology
John Geissman, Earth & Planetary Sciences
Stuart Burness, Economics
Linda Hall, History
Carla Wofsy, Mathematics & Statistics
George Schueler, Philosophy
John Panitz, Physics & Astronomy
Samuel Roll, Psychology
Patrick McNamara, Sociology
Anthony Cardenas, Spanish & Portuguese

TABLE 2 (continued)

A&S Human Subjects Committee

Fall 1994

Mike McKee, Economics, Chairperson
Beatrice Vigil, A&S, Secretary
Shannan Carter, Medical Center Counsel
Liane Donisthorpe, Community Representative
Hank Jenkins-Smith, Political Science
Richard Harris, Psychology

Spring 1995

Mike McKee, Economics, Chairperson
Beatrice Vigil, A&S, Secretary
Shannan Carter, Medical Center Counsel
Liane Donisthorpe, Community Representative
Hank Jenkins-Smith, Political Science

TABLE 3

Changes in status of tenure-stream faculty in the College of Arts and Sciences: Decisions reached in AY 1993-94 to take effect in AY 1994-95.

Promotions to Full Professor

Jane Caputi	American Studies
Ruth Salvaggio	American Studies
Estelle Zannes	Communication & Journalism
David Johnson	English
Mary Bess Whidden	English
Evangelos Coutsias	Mathematics & Statistics
Howard Tuttle	Philosophy
Robert Sutherland	Psychology
Beverly Burris	Sociology
Susan Tiano	Sociology
Bert Useem	Sociology (with tenure)
Tey Diana Rebolledo	Spanish & Portuguese

Promotions to Associate Professor and Award of Tenure

Stephen Stricker	Biology
David Keller	Chemistry
Phillip Ganderton	Economics
Virginia Scharff	History
Alejandro Aceves	Mathematics & Statistics
David Dunlap	Physics
Paul Amrhein	Psychology
Holly Waldron	Psychology

Awards of Tenure to Current Associate and Full Professors

Carole Nagengast	Anthropology
Gary Smith	Earth & Planetary Sciences
Wolfgang Rudolph	Physics & Astronomy
Kristina Ciesielski	Psychology

Positive Mid-Probationary Reviews

Gabriel Melendez	American Studies
Bradford Hall	Communication & Journalism

TABLE 3 (continued)

Terry Hamill	Communicative Disorders
Barbara Hannan	Philosophy

Positive Third-Year Reviews

Kishore Gawande	Economics
Mark Peceny	Political Science
Kenneth Roberts	Political Science
William Stanley	Political Science
Miguel Korzeniewicz	Sociology

1995-96 New Appointments

Gerald Davis	American Studies
James Treat	American Studies
Jane Buikstra	Anthropology
Joseph Powell	Anthropology
Paul Lewis	Biology
Bopanna Ballachanda	Communicative Disorders
Jane Selverstone	Earth & Planetary Sciences
Melissa Binder	Economics
Janie Chermak	Economics
Richard Johnson-Sheehan	English
E. Antonio Mares	English
Deborah Jenson	Foreign Lang & Lit
David Gutzler	Geography
O. Paul Matthews	Geography
Robert Himmerich y Valencia	History
Melissa Axelrod	Linguistics
Alexandru Buium	Mathematics & Statistics
Aladdin Yaqub	Philosophy
Ivan Deutsch	Physics & Astronomy
Lonna Atkeson	Political Science
Jack Blanchard	Psychology
Robert Egly	Psychology
Richard Wood	Sociology
Michael Kidd	Spanish & Portuguese
Susan Rivera	Spanish & Portuguese

TABLE 3 (continued)

Resignations/Retirements (effective 1995-96)

Stanley Rhine	Anthropology
Marvin Riedesel	Biology
Charles Coates	Communication & Journalism
Diane Lamb	Communication & Journalism
Crayton Yapp	Earth & Planetary Sciences
Shaul Ben-David	Economics
Alfred Parker	Economics
Paul Davis	English
Sandra Lynn	English
Claude-Marie Senninger	Foreign Lang & Lit
Julian White	Foreign Lang & Lit
Rodman Snead	Geography
Gerald Nash	History
Jean Newman	Linguistics
Jeffrey Davis	Mathematics & Statistics
Reuben Hersh	Mathematics & Statistics
Clifford Qualls	Mathematics & Statistics
Charles Beckel	Physics & Astronomy
Harry Stumpf	Political Science
Gina Agostinelli	Psychology

TABLE 4

FTE BUDGETED FACULTY, 1994-95

Department	Regular Faculty	Residual Instruction	GAs/TAs
American Studies	5.83	.13	2.50
Anthropology	22.96	.38	7.50
Biology	32.67	.67	18.50
Chemistry	16.67	1.72	16.00
Communicative Disorders	4.00	.38	1.00
Communication/Journalism	16.83	.89	3.50
Earth & Planetary Sciences	17.00	.11	6.50
Economics	14.92	.22	6.25
English	33.33	.89	29.00
For Lang & Lit	12.15	.80	6.75
Geography	3.50	.34	1.50
History	26.42	.34	10.50
Linguistics	10.67	.42	2.00
Mathematics & Statistics	35.17	2.24	20.50
Philosophy	10.00	.27	3.00
Physics & Astronomy	26.09	1.23	12.00
Political Science	17.67	1.01	5.00
Psychology	22.15	1.12	12.25
Sociology	17.19	.67	6.50
Spanish & Portuguese	10.00	.30	16.50
Total	355.22	14.13	187.25

Date Source: College of Arts and Sciences Instructional Budget, 1994-95

TABLE 5

NUMBER OF STUDENTS ENROLLED
COLLEGE OF ARTS AND SCIENCES

Year	Semester I	% Inc. Over Previous Year	Semester II	% Inc. Over Previous Year
1984-85	3,139	3.1	3,238	1.4
1985-86	3,520	12.1	3,333	2.9
1986-87	3,509	-0.3	3,548	6.5
1987-88	3,648	4.0	3,730	5.1
1988-89	3,794	4.0	3,875	3.9
1989-90	3,984	5.0	4,214	8.7
1990-91	4,252	6.7	4,393	4.2
1991-92	4,434	4.2	4,598	4.6
1992-93	4,720	6.4	4,813	4.6
1993-94	5,048	6.9	5,041	4.7
1994-95	4,564	-9.5	4,643	-7.8

Data Source: Arts and Sciences Registered Students Listing - 21 day report

TABLE 6

DEGREES AWARDED
COLLEGE OF ARTS AND SCIENCES

	Bachelor's Degrees		Advanced Degrees					
			Master's (a)		Doctor's		Total	
Year	No. Degree	% Inc. Over Prev. Yr.	No.	% Inc.	No.	% Inc.	No.	% Inc.
1986	587	13.1	127	-22.1	76	16.9	231	-12.5
1987	595	1.4	153	20.5	66	-13.2	229	-0.9
1988	665	11.8	164	7.2	62	-6.1	226	-0.9
1989	732	10.1	170	3.7	63	1.6	233	3.1
1990	763	4.2	155	-8.8	63	0.0	218	-6.4
1991	837	9.7	159	2.6	73	15.9	232	6.4
1992	856	2.3	226	42.1	74	1.4	300	29.3
1993	905	5.7	205	-9.3	75	1.4	280	-6.7
1994	1020	12.7	236	15.1	82	9.3	318	13.6
1995	1133	11.1	229	-2.5	85	3.7	314	-1.3
10 Year Change	546	93.0	102	80.3	9	11.8	83	35.9

(a) These figures do not include Master of Arts in Teaching and Master of Education in Science degrees.

Data Sources: Bachelors taken from A&S final graduation lists. Advanced degrees taken from Graduate Studies final graduation lists.

TABLE 7

DEGREES AWARDED BY DEPARTMENT*

Department	Bachelor's			Master's			Doctoral		
	1993	1994	1995	1993	1994	1995	1993	1994	1995
Am St	6	7	9	9	9	5	4	5	5
Anthro	34	36	46	25	24	15	10	10	5
Astroph	2	3	3	-	-	-	-	-	-
Biochem	9	8	8	-	-	-	-	-	-
Biology	102	108	137	11	6	8	4	9	10
Chem	15	17	15	4	10	8	9	7	7
Comm.	82	75	52	5	8	9	-	-	-
Com Dis	18	18	24	17	18	21	-	-	-
Comp Lit	1	-	1	2	-	-	-	-	-
Cret Wrtg	7	-	-	-	-	-	-	-	-
Crimin	-	65	71	-	-	-	-	-	-
Crim Just	8	38	9	-	-	-	-	-	-
Econ	52	56	54	4	11	9	3	3	5
Econ-Phil	1	-	-	-	-	-	-	-	-
English	83	113	112	27	28	28	4	6	6
Engl-Phil.	3	6	2	-	-	-	-	-	-
Geography	13	12	13	-	3	2	-	-	-
E & PS	13	10	14	2	5	4	2	7	4
History	61	71	60	9	6	14	3	3	6
Journ	35	27	43	-	-	-	-	-	-
Ling	1	-	4	1	1	4	-	-	-
Lt Am St	10	15	9	29	27	28	-	1	2
Math & Stat.	18	27	18	10	16	6	5	4	7
F L & L	-	25	18	19	12	3	3	-	-
Phil	9	9	8	4	6	8	-	-	-
Physics	1	7	6	10	11	12	9	14 (1)	9
Pol Sci	94	104	105	-	4	8	4	1	3
Psych	145	157	166	15	15	13	12	8	8
Rel St	3	3	6	-	-	-	-	-	-
Russian St.	4	4	1	-	-	-	-	-	-
Sgn Lng Int	11	13	12	-	-	-	-	-	-
Sociology	32	42	46	2	3	9	3	-	2
Sp & Port	-	39	43	-	13	15	-	4 (2)	6
Other Prog	-	13	18	-	-	-	-	-	-
Total (3)	948	1128	1133	205	236	229	75	82	85

TABLE 7 (continued)

1
Includes Optical Science Ph.D.s

2
Includes both Spanish and Romance Language Ph.D.s.

3
Bachelor's degrees granted with double majors are counted once in each department, so this total will not agree with Table 6.

*
Includes summer, fall and spring graduates.

Data Sources: Bachelors from A&S final graduation lists. Advanced degrees from Graduate Studies final graduation lists.

TABLE 8

ACADEMIC PROBATIONS, SUSPENSIONS AND RELEASES

	1990-91		1991-92		1992-93		1993-94		1994-95	
	No.	%	No.	%	No.	%	No.	%	No.	%
Semester I										
On Probation	194	4.6	144	-25.8	171	18.8	207	21.0	141	31.8
Suspended	49	1.2	55	12.2	74	34.5	63	14.8	60	5.0
Released	63	1.5	53	-15.9	63	18.9	51	19.0	50	1.96
Semester II										
On Probation	111	2.5	170	53.2	141	-17.1	155	9.9	120	22.5
Suspended	72	1.6	60	-16.7	101	68.3	109	7.9	80	26.6
Released	32	0.7	72	125.0	57	120.8	78	36.8	59	24.3

Number of Students Enrolled in Arts and Sciences

Semester I, 1994-95	4564
Semester II, 1994-95	4643

TABLE 9

DEGREES GRANTED WITH HONORS*

Honors in General Studies

Summa Cum Laude	17
Magna Cum Laude	19
Cum Laude	13

Departmental Honors

American Studies	1
Anthropology	4
Biology	8
Chemistry	3
Communication & Journalism	1
Earth & Planetary Sciences	1
Economics	4
English	6
French	2
History	4
Mathematics & Statistics	2
Political Science	12
Psychology	13
Spanish & Portuguese	2

Initiated into Phi Beta Kappa	33
Initiated into Phi Kappa Phi	88

*

Requirements completed Semester I, 1994-95; Semester II, 1994-95; Summer 1994

0220

TABLE 10

NEW RESEARCH AND TRAINING GRANTS, 1994-95

Department	Dollars	Number of Faculty	Number of Grants
Anthropology	$ 190,193	5	18
OCA	2,080,878	0	23
Biology	4,182,685	13	71
Chemistry	3,799,500	12	33
Communication & Journ	274,269	3	6
Comm Disorders	17,500	1	2
Earth & Pl Sciences	1,327,564	10	31
Meteoritics	278,288	1	4
Economics	59,600	3	2
Geography	40,000	1	1
History	341,071	2	5
Linguistics	246,425	2	8
Mathematics & Stats.	920,581	12	19
Physics & Astronomy	2,857,106	13	62
CAS	178,227	3	3
Political Science	902,225	3	10
Psychology	439,252	5	5
Inst Soc Research	691,354	4	16
Arts & Sciences	141,105	1	1
Total	$18,967,823	94	320

TABLE 11

BUDGETED GAs/TAs, RESEARCH AND PROJECT ASSISTANTS, 1994-95

Departments	GAs & TAs	RAs & PAs
American Studies	21	1
Anthropology	31	4
Biology	46	45
Chemistry	50	41
Communication/Journalism	16	6
Communicative Disorders	5	13
Earth & Planetary Sciences	26	38
Economics	17	3
English	71	3
Foreign Lang & Lit	19	0
Geography	4	0
History	24	11
Linguistics	9	6
Mathematics & Statistics	45	10
Philosophy	8	2
Physics & Astronomy	38	60
Political Science	22	12
Psychology	45	44
Sociology	31	15
Spanish & Portuguese	43	3
Maui Project	0	12
TOTAL	571	329

0222

TABLE 12

SUMMER SESSION DATA, 1994 AND 1995

Department	Final 1994 Figures Allocation	%	Final 1995 Figures Allocation	%
American Studies	$ 8,380	1.00	$ 11,982	1.38
Anthropology	30,175	3.59	30,631	3.53
Biology	28,100	3.35	30,975	3.57
Chemistry	50,140	5.97	50,931	5.87
Communication/Journalism	37,090	4.42	39,826	4.59
Communicative Disorders	24,773	2.95	26,166	3.02
Earth & Plan Sciences	27,985	3.33	28,354	3.27
Economics	32,975	3.93	32,140	3.71
English	73,945	8.80	75,387	8.69
Foreign Lang & Lit	84,774	10.09	83,833	9.67
Geography	12,285	1.46	12,418	1.43
History	47,465	5.65	48,157	5.55
Linguistics	21,643	2.58	13,089	1.51
Mathematics & Statistics	108,810	12.95	108,754	12.54
Philosophy	9,600	1.14	11,647	1.34
Physics & Astronomy	32,520	3.87	32,907	3.79
Political Science	29,010	3.45	29,507	3.40
Psychology	43,665	5.20	46,408	5.35
Sociology	30,025	3.57	32,555	3.75
Spanish & Portuguese	36,000	4.29	36,291	4.19
International Programs	39,900	4.75	42,900	4.95
Admin	27,640	3.29	27,206	3.14
Contingency	3,100	0.37	2,257	0.26
Women Studies	0	0.00	12,800	1.48
TOTAL	$840,000	100.00	$867,121	100.00

Linguistic Institute held June 26, 1995 to August 4, 1995
Arts and Sciences allocation $100,000.

TABLE 13

A&S TRAVEL DISBURSEMENTS, 1994-95

Department	General/Departmental Allocations	Special Request Allocations
American Studies	$ 3,000	$ 381
Anthropology	10,000	1,770
Biology	15,000	2,885
Chemistry	10,000	200
Communication & Journalism	8,000	1,277
Communicative Disorders	2,000	600
Earth & Plan Sciences	5,000	0
Economics	9,000	0
English	18,000	1,600
Foreign Lang & Lit	5,000	3,359
Geography	1,500	0
History	12,000	550
Linguistics	5,000	1,350
Mathematics & Statistics	14,000	2,521
Philosophy	5,000	2,550
Physics & Astronomy	14,500	1,430
Political Science	8,000	400
Psychology	10,900	1,841
Sociology	9,000	1,400
Spanish & Portuguese	7,000	3,093
Tenure Promotion Committee members	0	1,700
TOTAL	$171,900	28,907

TABLE 14

A&S DISBURSEMENTS OF SPECIAL COLLEGE FUNDS
1994-95

Department	Reprint Funds	Speakers' Honoraria
Arts & Sciences	$ 300.00	$ 0
American Studies	1069.39	350.00
Anthropology	446.75	300.00
Biology	1646.75	0
Chemistry	0	0
Communication & Journalism	218.00	200.00
Communicative Disorders	0	250.00
Earth & Planetary Sciences	703.50	0
Economics	50.00	0
English	2077.00	850.00
Foreign Lang & Lit	908.33	450.00
Geography	0	0
History	1680.17	1050.00
Latin Amer Inst & Sales	0	0
Linguistics	585.18	0
Mathematics & Statistics	281.63	0
Philosophy	958.92	400.00
Physics & Astronomy	1012.00	0
Political Science	0	0
Psychology	547.74	0
Sigma Xi	0	500.00
Sociology	1601.19	0
Spanish & Portuguese	560.76	500.00
TOTAL	$14,647.31	$ 4850.00

THE REPORT OF THE DEPARTMENT OF AMERICAN STUDIES
COLLEGE OF ARTS AND SCIENCES

July 1, 1994 to June 30, 1995

Vera Norwood, Chair

The American Studies Department completed a major curriculum revision process, successfully recruited two new faculty, and celebrated the promotion of two faculty to the rank of full professor this year. The faculty continued to operate as a committee of the whole in guiding the graduate and undergraduate programs. Continuity in supervision of the graduate program was Provided by Professor Ruth Salvaggio, who served as graduate advisor for the year. Professor Charles Biebel headed a growing undergraduate program by serving throughout the year as undergraduate adviser.

A. Significant Developments

The faculty finalized a major curriculum revision of the graduate and undergraduate course sequences; the new curriculum was approved by the Faculty Senate in late fall 1994. During the spring term, the faculty developed standardized syllabi for the six new 100 level, introductory courses which are now taught by teaching assistants. We also agreed to plan our course offerings for the year in the preceding spring so that graduate students may better plan their course sequence. We participated in the University's effort to increase evening degree options by mounting enough core courses in evening/week-end slots to meet the needs of undergraduate majors or minors. We are now listed as one

of the Arts and Sciences departments offering degrees in the evening for non-traditional students. Finally, we began a review of our graduate degree requirements and changed the ratio of inter and intra-departmental hours required of students.

Each faculty member maintained a high level of professional activity. Professor Charles Biebel was awarded continuation of his grant from the Lilly Endowment, entitled "Evaluating Leadership Education." Prof. Biebel also has a chapter on "Civic Buildings" forthcoming in New Mexico Architecture: Historical American Buildings Survey, 1933-1993. Professor Jane Caputi published book chapters in Signs of Life in the USA: Readings on Popular Culture and Law and Violence Against Women. She gave presentations at the national meetings of the American Studies Association, Popular Culture Association, and Women's Studies Association. Professor Gabriel Melendez gave several conference papers, including a presentation at the Rockefeller Fellows Conference on Hispanic Expressive Culture and Contemporary Public Discourse. He completed his book manuscript on "Spanish Language Print Discourse in the Southwest, 1880-1935." Professor Vera Norwood completed two book chapters on female nature writers which are forthcoming in American Nature Writers and gave several presentations at public meetings, including UNM's "Lecture Under the Stars" series. Professor Ruth Salvaggio and her co-editors completed Early Women Critics: 1660-1820, which is forthcoming from the Indiana University Press. As well as presenting papers at several national and international conferences, she was the President of the Women's Caucus for the Modern Languages, Modern Language Association. Professor M. Jane Young co-edited Songs from the Sky: Indigenous Astronomical and Cosmological Traditions of the World, which is forthcoming from the University of Maryland: Center for Archaeoastronomy. She also published book chapters in Kachinas in the

Pueblo World and Perspectives in Vernacular Architecture. Jane Caputi and Ruth Salvaggio were promoted to the rank of full professor this year.

B. Significant Plans and Recommendations for the Future

With the advent of our new 100-level course sequence, and our commitment to involving graduate students in teaching these courses, we must also provide better supervision and mentoring for our teaching assistants. Professor Salvaggio will be developing a formal series of workshop meetings for teaching assistants on a trial basis in 1995-96. The Dean of Arts and Sciences has been very supportive of our requests to maintain our financial aid levels in the wake of the loss of several teaching assistant lines to the English department. We will continue to press our need to have the last line still outstanding fully restored to our state budget account.

We will continue our review of the requirements for the graduate degrees, in particular considering whether all students should take the Research Methods course as part of their course work. We plan to involve the graduate students in this and other curriculum discussions this year as part of an effort to increase communication and collaboration between the faculty and graduate student body. Other curricular matters to be addressed this coming year include: a revision of the core reading list, development of a new textbook for the AmSt 186: Introduction to Southwest Studies course, and evaluation of the texts selected for the other new 100-level courses. We are particularly excited about the Southwest Studies textbook project. Professors Biebel, Melendez and Young, with the assistance of two graduate students, will develop this anthology and locate an appropriate publisher. This project will be our first attempt at a major faculty/graduate student research and teaching project.

C. Appointments to Staff

The department hired two new faculty this year, Professor Gerald Davis and Professor James Treat, both of whom will begin their appointments in spring 1996. Michelle Martinez joined the office staff in March 1995 as a work study student.

D. Separations from Staff

Angela Hass left her work study position in fall 1994 to pursue a more lucrative job offer at Furrs grocery store.

E. Sponsored Research

Professor Biebel continued his multi-year grant from the Lilly Foundation.

ANNUAL REPORT

Department of Anthropology
University of New Mexico

July 1, 1994 - June 30, 1995

Erik Trinkaus, Chair
August, 1995

1. Significant Developments During the 1993-1994 Academic Year

During the 1993-94 academic year, the Department of Anthropology undertook a major reorganization of the departmental decision making process, with the departmental committees (all previously in existence but few doing much beyond housekeeping chores) taking on significant roles in a variety of areas. In particular, the departmental Advisory Committee became a major force in helping the chair formulate new initiatives for departmental policy and organization, formulating motions to be presented to the full departmental faculty for discussion and approval. The Undergraduate Committee similarly, became a major player in formulating program changes, with the Graduate Committee becoming responsible especially for the organizing the numerous departmental nominations of graduate students for departmental, college, university (especially Office of Graduate Studies) and extramural awards and fellowships. Other committees (Computer, Space, etc.) acted similarly, but more on an ad-hoc basis.

This process was put into place during the 1993-94 academic year, but it really gathered steam during the 1994-95 academic year, with the organizational wrinkles being ironed out of the process, and many of the decision making processes becoming streamlined. As a result, the Department of Anthropology currently has a self-management system in place and operating smoothly, in which decisions (given adequate lead-time from outside offices, when involved) can be made with full representation of the each of the five departmental subfields (Archeology, Biological Anthropology, Ethnology, Human Evolutionary Ecology and Linguistic Anthropology). Combined with this has been the development and implementation of a departmental faculty merit/productivity based system for allocating annual salary increments. This has greatly enhanced departmental well-being and operation.

At the same time, the Department of Anthropology, with the active (and appreciated) support of Provost Coleman and Dean Gordon, hired a member of the National Academy of Sciences, Prof. Jane Buikstra. Prof. Buikstra, who is a specialist in bio-archeology, mortuary practices and human skeletal biology, will be joining the Department of Anthropology at UNM in August 1995. She brings with her one of the foremost archeological field schools, the Center for American Archeology in Kampsville IL, which will operate as a UNM summer field school starting in 1996. Prof. Buikstra is a welcome and eminent addition to the Department of Anthropology, to the College of Arts & Sciences, and to the University of New Mexico as a whole.

Given the ongoing shift of Anthropology from a strictly field discipline to one that combines field and laboratory research, there were also changes in the use of space within the Department of Anthropology buildings. Space previously used as part-time instructor and teaching assistant offices have been used more efficiently, freeing up needed room for allocation to faculty for research space. Given funding through the capital improvement funds, the basement rooms at the east end of the Anthropology Building are being converted into a wet and dry laboratory for use by the Human Evolutionary Ecology program. And capital improvement funds have made possible the extensive remodeling and up-dating of the building at the northeast corner of University and Lomas Blvds. for the Office of Contract Archeology.

Consequently, The Office of Contract Archeology has now vacated the south half of the Anthropology Annex Bldg., which will provide room for Prof. Buikstra and much needed laboratories (for teaching and research) for the Archeology program. This is an ongoing process, given limited funds for remodeling, but the Department of Anthropology has made significant progress in this area during the past year, and we appreciate the ongoing support of Dean Gordon which makes this possible.

In addition, Prof. Erik Trinkaus decided to step down from being chair at the end of the 1994-95 academic year for personal reasons. With enthusiastic support from the departmental faculty, Prof. Marta Weigle agreed to take over the chairship of the department, starting in August 1995.

2. Significant Plans and Recommendations for the Near Future

With the ongoing enhancement of the Department of Anthropology in terms of faculty active in quality research and teaching, the department is making an effort to use the available space in the Anthropology Bldg., Anthropology Annex Bldg. and a portion of Bandelier Hall West to the best of our ability. This has started in a significant way during this past year, with new labs being built and the move of the Office of Contract Archeology to newly remodeled facilities on Lomas Blvd.

Funding has been approved for the remodeling of part of the Anthropology Annex into a ceramics analysis laboratory for the Archeology program during the 1995-96 academic year, and we look forward to having that facility available. Mostly, at this stage, we will be working with the Archeology faculty to further develop the most effective plan for the use of the remaining space vacated by the Office of Contract Archeology, the consequent movement of Archeology faculty from the Anthropology Bldg. to the Anthropology Annex, and the reallocation of that available space within the Anthropology Bldg. This is a domino process for the next several years, but it is one that is essential to the ongoing growth in quality of the departmental programs.

There has also been a low level of faculty turnover within the department. In addition to the appointments and separations (see below), we have sustained vacancies in two critical areas, human biology within the Biological Anthropology program, and language and culture within the Linguistic Anthropology program. A timely replacement within the first will maintain important support for our programs in Biological Anthropology, Human Evolutionary Ecology and Archeology, and the second will both maintain the Linguistic Anthropology program and further its integration with our now strong program in Ethnology.

3. Appointments to Staff

A. *Faculty*

During the 1994-95 academic year, we were joined by one new faculty member and successfully completed the searches for two additional faculty.

Prof. Les Field joined the Department of Anthropology as an Assistant Professor of Ethnology in August 1995, and he has proven to be an important addition to the Ethnology program's expertise in issues of ethnic identity and multicultural systems.

As mentioned above, we completed the negotiations with Prof. Jane Buikstra, currently of the University of Chicago and a member of the National Academy of Sciences, and she will be joining the Archeology program, with affiliation with the Biological Anthropology program, in August 1995. At the same time, the Department of Anthropology and the Maxwell Museum undertook a joint search for a Curator of Osteology and Assistant Professor of Biological Anthropology, with expertise in human skeletal biology and forensic anthropology. The department and museum jointly agreed to offer the position to Prof. Joseph Powell, who will be joining us in August 1995 as a Curator and Assistant Professor.

B. *Support Staff*

There were no new appointments to the departmental staff during the 1994-95 academic year. The existing staff of A.M. Stephens, Y. Nieto, K. Marty, M.K. Day (until her retirement) and E. Gerety provided excellent support to the faculty and students throughout the year.

4. Separations from Staff

A. *Faculty*

The Department of Anthropology saw the retirement in mid-year of Prof. J. Stanley Rhine, forensic anthropologist. Prof. Rhine then remained part-time Curator of Osteology for the Maxwell Museum until the end of June 1995. Prof. Rhine will remain on campus as an emeritus faculty member for the foreseeable future.

B. *Support Staff*

After many years of service to the Department of Anthropology and the *Journal of Anthropological Research*, Mrs. Mary Kay Day retired from the departmental staff on June 1, 1995. She will remain part-time working for the *Journal of Anthropological Research.*

5. Publications

The Department of Anthropology faculty were active in publication during the 1994 year. The departmental faculty published three books (Crown, Ortiz, and Trinkaus), three edited volumes (Lamphere, Leonard, and Wills), fifty-five articles or book chapters, and twenty notes, reviews or comments These publications represent the ongoing commitment of the majority of the departmental faculty, plus our active cohort of departmental adjunct faculty, to publication in appropriate academic media.

6. Outside Professional Activities

In addition to the above publications, departmental faculty were active professionally locally, nationally and internationally. One faculty member (Salvador) was the primary curator for a special exhibit at the Maxwell Museum. Moreover, faculty presented twenty-three

papers at national and international professional meetings and symposia, and gave a total of forty-four invited lectures nationally and internationally. Two faculty, Crown and Lamphere, were recognized for the excellence of their research by the Society for American Archaeology and the Society for the Anthropology of Work, respectively.

7. Outside-sponsored Research

The following extramural research grants were received by departmental faculty and graduate students during this academic year.

A. ***Faculty Extramural Funding***

National Science Foundation		
Trinkaus, E.	Lower limb diaphyseal cross-sectional geometry of Near Eastern Middle Paleolithic hominids (#SBR-9318702)	$27,030
National Geographic Society		
Froehlich, J.W.	The Togian Macaque: Testing predictions of distribution and speciation process	$16,190
Straus, L.G.	South Belgian Paleolithic Project	$15,000
State Legislature, State of New Mexico		
Falsetti, A.B. (PI: C. Clericuzio)	Fetal alcohol Syndrome: Anthropometric Survey	$176.000
NMEH		
Rodriguez, S.	Taos Fiesta, Phase III	$2,000
Wenner-Gren Foundation		
Nagengast, C.	Learning Capitalism in Poland	$20,650
SHRI - Rockefeller Foundation		
Rodriguez, S.	Hispanic Expressive Culture and Contemporary Public Discourse: 1992-94	$9,000
The Nature Conservancy		
Hill, K.	Resource Use in the Mbiracayu Reserve.	$50,000
American Geophysical Union / National Science Foundation		
Straus, L.G.	INQUA: Archeology of the Pleistocene-Holocene Transition	$1,000
MEDTEP for Ethnic Populations		
Hurtado, A.M.	Childhood Asthma Project	$39,000
Earthwatch		
Boone, J.	Archeology in Portugal	$14,000
W.T. Grant Foundation		
Hurtado, M.A.	Maternal and Child Health among Mexican Americans: Women's Work and Father's Absence	$42,000
Lancaster, J.B. & Kaplan, H.	Management and Analysis of the Albuquerque Men data set	$9,800

B. ***Graduate Student Extramural Research Funding***

National Science Foundation		
Baker, B.F. (Faculty: Lamphere)	Transnational Ethnology	$10,000
Berger, T. (Faculty: Straus)	The Natufian Culture	$12,700
Martin, A. (Faculty: Rodriguez)	Narratives and Practices of Everyday Life Among the Taos Lifestyle Migrants.	$6,044
Sosis, R. (Faculty: Hill)	The Collective Action Problem in Male Cooperative	$10,010

	Labor on Ifaluk Atoll	
L.S.B. Leakey Foundation		
Bock, J. (Faculty: Kaplan)	Childhood work in Botswana	$11,500
Pochron, S. (Faculty: Lancaster)	Boboon Ecology in Ruaha National Park	$5,000
Sosis, R. (Faculty: Hill)	The Collective Action Problem in Male Cooperative Labor on Ifaluk Atoll	$6,578
Sigma Xi Foundation		
Pochron, S. (Faculty: Lancaster)	Baboon Ecology in Ruaha National Park	$500
NMEH		
Jackson, P. (Faculty: Nagengast)	Emergence of Ethnicity in Oregon	$1,000
CARE-Irene Levi Sala Foundation		
Berger, T. (Faculty: Straus)	Excavations at Tachtit Hilazon, Israel	$4,200

8. ATTACHMENTS

I. Public Lectures

Department of Anthropology Lectures

Ayabe, T. "The Relationship between Nation-States, Ethnic Groups and Religion" (8/26/94)

M. Bloch "Sex in the Tomb: or, the Origin of the State in Madagascar" (10/21/1994)

Nagengast, C. "Learning Capitalism in Post-Socialist Poland" (10/28/1994)

Tzoc Chinol, J. "We Are All Equal" (11/18/94) co-sponsored by Native American Studies, SOLAS, & Central American Peace Alliance

Goldberg, P. "Micromorphology and Archaeological Research: Implications and Important Issues" (2/12/95)

Simonson, P. "Seriousness or Tiguraje? Class Transformation and Masculinity in a Dominican Community" (4/8/95)

Anthropology/Maxwell Museum Lectures

Froehlich, J.W. "Biodiversity and Biogeography: Wallace's Line and Monkeys as Keystone Species in Indonesia" (10/25/1994)

Rhine, J.S. "The Far Side of Forensic Anthropology" (11/1/1994)

Hilton, C.E. "Locomotion, Burden Carrying, and Mobility in Venezuelan Foragers" (11/22/1994)

Nieman, F. "Architecture and Social Change in the Colonial Chesapeake" (11/28/1994)

Hutchinson, D. "Adaptation, Socio-political Transformation and Health: Using Human Skeletal Remains to Investigate Past Populations." (3/20/95)

Powell, J. "From Clovis to Columbus: New Evidence for Native American Evolution." (3/23/95)

Williams, S. "Ancient DNA: Adapting Molecular Genetic Techniques to Anthropological Problems." (3/27/95)

Kimminau, K. "Forensic Anthropology in Southeast Asia and Biomedical Research." (4/4/95)

Scarborough, V. "The Flow of Power: Water Management in Pre-Industrial Societies" (4/25/1995)

Frieda D. Butler Memorial Lecture

Keckler, C. "Philosophical Darwinism and the Triple Nexus: A New Focus for Anthropology" (11/16/1994)

Ruth E. Kennedy Award Lecture

Franciscus, R.G. "Do We Have a Neandertal Skeleton in our Closet? A Facial Perspective on Modern Human Origins" (4/20/95)

Snead-Wertheim Lecture in Anthropology and History

Lamphere, L. "Bringing Navajo Women into History: Personal Narratives of Eva Price, Navajo Healer." (4/6/95)

Journal of Anthropological Research Distinguished Lecture

Vrba, E. "What Rodent Feet and Human Brains Have in Common: New Ideas and Data on Human Evolution." (4/13/95)

Graduate Ethnology Symposium

DeHaas, J. "The Status of Women in Taiwan in the Past and Present." (4/8/95)

Jackson, P. "From Labor Camp to the Business District: The emergence of Ethnicity in rural Communities of the Northern Willamette Valley, Oregon." (4/8/95)

Ford, C. "Kinship, Class and Capital: Nation-building and State Formation among the Cherokee (1790-1840)." (4/8/95)

Matamoros, I. "Violence and Chiapas." (4/8/95)

Griffin, J. "Health and Human Rights." (4/8/95)

Mikulak, M. "The Social construction of Disposable Children: Street Children in Brazil." (4/8/95)

II. Brown Bag Lectures

Departmental Brown Bag Talk:

Weigle, M. "The "Construction' of Santa Fe: A Scholary and Personal Perspective." (11/17/94)

Biological Anthropology Brown Bag Talks:

Hershkovitz, I. "People in Transition: The Human Biological Consequences of Agriculture in the Levant" (4/21/1995)

Trinkaus, E. "Our Lady of Věstonice" (4/26/1995)

Franciscus, R.G. "Later Pleistocene Nasofacial Variation in Western Eurasia and Africa and Modern Human Origins" (5/1/1995)

Archaeology Brown Bag Talk:

Barrett, T.P. "Tuxlas Obsidian: An Economic Perspective" (10/19/1994)

Penman, S. & Steffen, A. "Surface Investigations of High- and Low-density Records in the Lower Chama" (11/14/94)

Nieman, F. "Evolutionary Theory and Modeling Behavior Processes" (11/29/94)

Kaufman, D. "Problems of the Levantine Mousterian and Transitions to the Upper Paleolithic" (2/8/1995)

Goldberg, P. "Recent Work on the Prehistory of North America: Micromorphology and its Importance to Archaeology" (2/12/95)

Kaufman, D. "The Epipaleolithic of the Levant: Before the Natufian" (2/15/1995)

Gonzalez-Morales, M.R. "Recent Discoveries and Studies of Cantabrian Cave Art" (3/3/1995)

Vrba, E. "Early Hominid Fossil and Artifactual Siotes of the Transvaal (South Africa), Tansania, Kenya and Ethiopia." (4/13/95)

McMillan, G.P. "An Examination of Some Archaeological Assemblage Distance Measures" (4/19/1995)

Ethnology Brown Bag Talks:

Kuroda, E. "The Spread of Protestant Sects in Mexican Indian Villages" (10/11/1994)
Field, L. "Literacy, Publishing and Representation: The Politics of Political Language in Ecuador" (11/3/1994)
Martin, A. "Doing Ethnographic Research on and in American Culture" (2/9/1995)
Calhoun, W. "Hispanic Woodcarvers" (2/23/1995)
Steiner, C. "Bacchus in Benin and other Mythologies from the Age of Discovery" (3/2/1995)
Gingerich, A. "Travel Peripheries, Regional Hegemony, and Female Strategies in Southwestern Arabia" (3/9/1995)
Lefkowitz, D. "Language and Affect in the Struggle Over Power in Israel." (4/6/95)
McReynolds, M.J. "Persistence in Education: Native American Women in College" (4/13/1995)
Miracle, A. "Anthropology of the Locker Room: Myths and Realities of Sport." (4/17/95)

Human Evolutionary Ecology Brown Bag Talks:

Gangestad, S. "Sexual Selection and the Dynamics of Human Mating: The Implications for Trade-Offs" (11/15/94)

III. Bachelor of Arts Degrees Conferred

52 degrees Bachelor of Arts conferred, 3 of them with honors

IV. Bachelor of Science Degrees Conferred

15 Bachelor of Science degrees conferred, 2 of them with honors

Va. Master of Arts Degrees Conferred

Benedict, K.*	Ford, C.	Hill, E.	Jackson, P.
Lowy-Lewis, A.	McNamara, L.	Mesco, A.*	Mikulak, M.
Petri, L.	Rioux, J.*	Sprehn, M.	Varley, K.

(*: with distinction)

Vb. Master of Science Degrees Conferred

Fennell, K.*	Hoff, K.	Kessler, K.	Mahony, M.
Stefan, V.*	Weaver, A.*		

(*: with distinction)

VI. Doctoral Degrees Conferred

Bakhtiar, K.	Doleman, W.H.*	Franciscus, R.G.*
Lycett, M.	Mauldin, R.P.	Mick-O'Hara, L.
Opherk, J.	Satterfield, T.	

(*: with distinction)

VII. Letters of Academic Title

The Department of Anthropology has an active group of affiliated faculty members, some of whom hold other positions in the University of New Mexico community and some of whom are merely affiliated with the department given their involvement in departmental (especially graduate student training) programs.

Four of these individuals hold senior positions within the Office of Contract Archaeology. One, Prof. J. C. Winter, is a professor (part-time) in the Department of Anthropology. Two of them, Dr. R.C. Chapman and Dr. P.F. Hogan, are Research Associate Professor and Research Assistant Professor respectively. The last, Dr. Bruce Huckell of the Maxwell Museum, is a Research Assistant Professor.

In addition, Vice-President for Academic Affairs, Dr. David E. Stuart, remains an Associate Professor (part-time) within the Department of Anthropology. This maintains his academic connections with us, which results in his teaching for the department on a regular basis.

The following individuals continued their statuses as Adjunct Professors of the appropriate rank:

Anna Backer	Thomas M. Becker	László Borsányi
Steven L. Byers	Eileen L. Camilli	Glenna J. Dean
Anthony B. Falsetti	John M. Fritz	Michel Guilbaud
Richard G. Holloway	Daniel Kaufman	Ronald R. Kneebone
Nancy Mithlo	David A. Phillips Jr.	Lynne Sebastian
Robert L. Tompkins	Kathryn M. Trinkaus	Bradley J. Vierra

In addition, Andrew W. Miracle was a visiting scholar in the department during the year.

ANNUAL REPORT OF

THE OFFICE OF CONTRACT ARCHEOLOGY
JULY 1, 1994 - JUNE 30, 1995

by

Joseph C. Winter, Director
Richard C. Chapman, Associate Director
and Patrick F. Hogan, Assistant Director

A. Review of Activities and Achievements

FY 94-95 was another very productive year, with a number of large projects initiated. It was also very productive in terms of research and accomplishments. Details of our research programs, and goals are discussed below. One of our major accomplishments was to move from the Anthropology Annex to a renovated building at the corner of Lomas and University. This building has more office and lab space than our previous location, as well as a secure parking area. By moving from the Annex, we have also provided additional space for Anthropology Department faculty and students.

Results of four projects headed by Richard C. Chapman as principal investigator were published this year. *Class III Cultural Resources Inventory of Portions of the Melrose Air Force Range, Curry and Roosevelt Counties, New Mexico* by Peggy A. Gerow, Camille L. Juliana, Heidi Reed, and Richard C. Chapman summarizes three phases of reconnaisance and survey conducted near Clovis, New Mexico in 1990 and 1991 for the U.S. Army Corps of Engineers, Albuquerque District.

Research Design and Data Recovery Plan for the Excavation of the Sedillo Site (LA 3122) by Bradley J. Vierra (project director) outlined the background and rationale for a data recovery program at a site potentially impacted by construction of storm drain/settling pond in southwest

Albuquerque. This was done as a follow-up to the testing program at that site for the City of Albuquerque Osage-La Media storm drainage project. Carolyn Daniel directed a final phase of exploratory grading nearby the site to identify an archeologically clear tract for construction of the settling pond.

Test Excavation and Data Recovery Plan for LA 102366 by Richard C. Chapman documented the results of a testing program on Sevilleta Wildlife Refuge lands along a dirt road which ran through a Pueblo III campsite. The testing program, directed in the field by Joanne Eakin, indicated that the site was repetitively reoccupied, and yielded evidence of abundant procurement of a wide range of floral species, including maize.

Cultural Resources Inventory of Fort Wingate Depot Activity, New Mexico: Executive Summary by Richard C. Chapman, Carolyn L. Daniel and Jeanne A. Schutt is an abstract of the results of the Fort Wingate archeological survey and ethnographic study being conducted as part of the program to decommission the 22,000 acre property from U.S. Army ownership.

Jeanne A. Schutt (project director), with Richard Chapman as principal investigator, completed the third phase of survey at Fort Wingate Depot Activity near Gallup, N.M. An additional 6452 acres of the depot were inventoried during summer and fall of 1994, resulting in documentation of an additional 261 sites and 566 isolated occurrences representing late Archaic, Pueblo II, early Pueblo III, and historic Navajo occupation of the region. A subsurface testing program targeted 32 sites, and substantial evidence of buried cultural deposits were found in several sites located in floodplain settings. A geomorphological study conducted by Carol Treadwell (UNM Dept. of Earth and Planetary Sciences) revealed a volatile history of floodplain depositional events which may have resulted in burial of sites predating A.D. 950. Another set of flooding events seems to have occurred in the late 1100s, or about the time of the collapse of the southern Chaco system. A fourth and final phase of survey fieldwork was initiated in June of 1995, again under project

direction of Jeanne Schutt. A final draft report summarizing the results of three years of survey was prepared and submitted for review, as was the final draft report summarizing results of a parallel ethnographic study. An abstract of the archeological survey and the ethnographic study results was published (see above).

Excavation fieldwork at three sites in the Navajo Nation's proposed Church Rock Industrial Park, located directly north of the Fort Wingate area, was initiated June, 1995 by Jeanne A. Schutt (project director), with Richard Chapman as principal investigator. One of the sites is a Depression-era hobo camp, and two are Pueblo II pithouse occupations.

Two more phases of fieldwork at the Fernandez Ruin (LA 781) were directed by William H. Doleman (with Richard Chapman and Wirt H. Wills serving as co-principal investigators) to provide additional information concerning the extent, depth and content of the prehistoric midden mass at the site. Analysis of artifacts and samples recovered from the excavations was completed, and a second progress report on this Pueblo IV site was prepared by Doleman.

The final phase of excavation along Alameda Boulevard at the site of the original Alameda Plaza (dating to the early 1700s) was completed under the direction of Kenneth Brown and Marie Brown, with Richard Chapman as principal investigator. Analysis of materials from three sites along the road is nearly complete. Tree-ring samples were taken from vigas used as floor joists in the Nativity of the Blessed Virgin Mary Church. Although the church was constructed between 1907 and 1912, outer rings on the floor joist vigas dated between 1726 and 1815, confirming historical accounts that large construction timbers in the present church had been recycled from two earlier churches in the community.

Test excavations were initiated at the historic town of San Elizario, Texas and the Old Socorro Mission site under the direction of Bradley J. Vierra (with Richard Chapman as principal investigator). Testing in the San Elizario area is targeting sites believed to contain remnants of the

18th century Spanish Colonial San Elizario Presidio which will be impacted by construction of a water and wastewater distribution system. Testing in the vicinity of the Old Socorro Mission is also conducted to identify evidence of 17th through 19th century occupation associated with the mission.

During November 1994, an OCA crew under the direction of Patrick Hogan (principal Investigator) and Janette Elyea (project director) excavation three late Archaic sites on the Hawk Battalion Facility near Bernalillo, New Mexico. Two of the sites had been almost totally destroyed by erosion, but two structures and several scattered hearths and roasting pits were found at the third. Bulk soil samples from these features are now being processed to recover archeobotanical materials, which will hopefully provide information about the subsistence resources exploited by Archaic groups in this part of the Llano de Albuquerque.

In January 1994, OCA began work on cultural resource management program for the Mid-America Pipeline Company's Four Corners Pipeline Loop, a proposed 405 mi long liquid hydrocarbon pipeline running diagonally across New Mexico from southeast to northwest. The first two phases of this program -- project design and background research, and an archaeological survey of the pipeline construction corridor -- were completed between January and June under the direction of Patrick Hogan (principal investigator), Kenneth Brown (project administrator), and R. Jane Bradley (survey project director). A total of 120 sites, ranging in age from late Paleoindian through the historical period, were recorded or re-recorded during the survey. About one-quarter of these sites are slated for additional work during the data recovery phase.

In April 1994, Peggy Gerow (project director), under the direction of Patrick Hogan (principal investigator), completed the second phase of an archaeological survey to document trail remnants, stage stations, and other features associated with the historic Butterfield Trail in south-central New Mexico. Archival research related to this segment of the trail was completed in May and June, and a draft report of the investigation is in preparation.

In June 1994, OCA crews under the direction of William Doleman (project director) and Patrick Hogan (principal investigator) began an archaeological survey of the New Mexico National Guard's Camel Tracks Training Area, which will provide detailed documentation of an extensive series of agricultural terraces, check dams, and other facilities dating primarily to the Pueblo IV period, near Tetilla Peak, New Mexico.

Joseph Winter (principal investigator) helped complete a number of medium - and small - sized projects, including the 1100 acre survey at John Martin Reservoir along the Arkansas River in southeast Colorado (Kenneth Brown, project director), and the Osage-La Media testing program, on the West Mesa of Albuquerque (Brad Vierra, project director). Reports were prepared for these and other completed projects. Winter also initiated the Tome Hill project (Dan Scurlock, project director) near Belen, which involves a study of the Good Friday Pageant and related activities and sites on Tome Hill. Winter additionally wrote the proposal for the El Paso Project, described above, and started the Fort Cummings report (June-el Piper, project director), which involves the preparation of a scholarly report of the history and archeological research at Ft. Cummings, an historic military post in New Mexico. Finally, Winter developed the Huichol Research and Assistance Project, described below under "Scholarly Accomplishments".

Table 1 lists the status of all OCA projects, as of 6/30/95.

2. Financial Statement

Most of our effort in the first part of FY 94-95 concentrated on completing previous projects with the state-wide U.S. Army Corps of Engineers contract, and the state-wide U.S. Bureau of Land Management Contract. After January 1, our work concentrated on the large El Paso and MAPCO projects, and the Huichol project. Table 2 lists the direct costs contracted for in new projects and the new indirect costs represented by them.

Table 1 Summary of OCA Activities 7/1/94 - 6/30/95

PROJECT	SPONSOR	BRIEF DESCRIPTION	STATUS
185-372	Office of Military Affairs	Hawk Missile Excavations	Final report in production
185-400/ 400A/400C	Office of Archaeological Studies, Museum of New Mexico	Valencia Excavation	Draft report in preparation
185-401/401B	Nature Conservancy	Cox Ranch Excavations	Completed
185-412/412B	Wilson & Company	Belen RR Yard Testing	Draft report revised
185-443/ 443A/443B	Bureau of Land Management	MacBeth Data Recovery Phase I	Final report in preparation
185-466	Bureau of Land Management	MacBeth Data Recovery Phase II	Final report in preparation
185-468	Office of Archaeological Studies, Museum of New Mexico	Alameda Boulevard Data Recovery	Final phase of excavation completed; analysis completed; draft report in preparation
185-469B	Bureau of Land Management	Phase II Data Recovery Navajo Pueblitos	Final report in preparation
185-473	U.S. Army Corps of Engineers	Additional Survey Melrose Bombing Range	Completed
185-474A	U.S. Army Corps of Engineers	Survey at Two Rivers	Completed
185-474B	U.S. Army Corps of Engineers	Two Rivers Dam Historic Management Plan	Completed
185-475A	U.S. Army Corps of Engineers	Holloman AFB Historic Management Plan	Completed
185-475C	U.S. Army Corps of Engineers	Holloman AFB Survey	Completed
185-477A/ 185-477E, F, G	U.S. Army Corps of Engineers	Ft. Wingate Survey	Final draft report in review
185-477B/ 477D	U.S. Army Corps of Engineers	Ft. Wingate Ethnology Study	Final draft report in review
185-483	Bureau of Land Management	MacBeth Data Recovery Phase III	Final report in preparation
185-492	Bureau of Land Management	Boyd Data Recovery, Phase I	Draft report in preparation
185-503A	Bohannon-Huston	Osage-La Media Testing	Completed
185-509	Safe-Waste, Inc.	Data Recovery at LA 98670	Analysis completed, report in progress
185-509A	Safe-Waste, Inc.	Supplemental Data Recovery at LA 98670	Analysis completed, report in progress

Table 1 Continued

PROJECT	SPONSOR	BRIEF DESCRIPTION	STATUS
185-509B	Safe-Waste, Inc.	Cut-Bank Stabilization and Monitoring at LA 100659 and LA 100660	Analysis completed, report in progress
185-515	U.S. Army Corps of Engineers	Santa Rosa Fire Road Survey	Completed
185-516	U.S. Army Corps of Engineers	Two Rivers Testing	Completed
185-517	New Mexico National Guard	Excavations at 3 Sites on Hawk Battalion Facility Near Bernalillo	Fieldwork completed, analysis in progress
185-518	U.S. Fish and Wildlife Service	Testing at Popatosa Road Site	Completed
185-519	Bureau of Land Management	Restless Fence Remediation Program	Draft report in preparation
185-520	Bureau of Land Management	Boyd Land Exchange Data Recovery, Phase II	Analysis in progress
185-523A	Sandia National Laboratories	Hazardous Waste Analog Study, Phase II	Fieldwork and analysis completed; final report in preparation
185-524A	U.S. Army Corps of Engineers	John Martin Reservoir Survey (1100 Acres)	Completed
185-525	U.S. Army Corps of Engineers	Fort Wingate Depot Activity Survey - 4817 Acres	Fieldwork completed, draft final report in review
185-526	Bureau of Land Management	Three Rivers Survey	Completed
185-531	U.S. Bureau of Land Management	Ft. Cummings Report	Completed
185-533	U.S. Army Corps of Engineers	Fort Wingate Depot Activity Testing Program	Fieldwork completed, draft final report in review
185-537	U.S. Army Corps of Engineers	Ft. Wingate Additional Survey (1743 Acres)	Fieldwork completed, draft final report in review
185-537A	U.S. Army Corps of Engineers	Fort Wingate Additional Survey Extension	Fieldwork completed, draft final report in review
185-539A	Valley Improvement Association	Tome Hill Cultural Resources Management Program	Draft interpretive report in preparation
185-540	Bureau of Land Management	Clay Allotment Fence Damage Assessment	Completed
185-541	Bureau of Land Management	Butterfield Trail Survey -- Phase II	Draft report in preparation

Table 1 Continued

PROJECT	SPONSOR	BRIEF DESCRIPTION	STATUS
185-542	Bohannon-Huston, Inc.	Data Recovery Plan for Osage-LaMedia Storm Drain	Completed
185-543A	Navajo Nation	Data Recovery of 3 Sites in Church Rock Industrial Park	Fieldwork in progress
185-545A	El Paso County Lower Valley Water District Authority	Phase III Archeological Testing at Socorro and San Elizario	Fieldwork in progress
185-547A	Mid-America Pipeline Company	Office Support and Gear-Up Phase - Four Corners Pipeline Loop Project	Completed
185-547B	Mid-America Pipeline Company	Survey Fieldwork Phase -- Four Corners Pipeline Loop Project	Completed
185-548B	New Mexico Department of Military Affairs	Archeological Survey of Camel Tracks Training Area	Fieldwork in progress
185-550	U.S. Army Corps of Engineers	Trinidad Colorado 1995 Survey	Fieldwork completed
185-551	U.S. Army Corps of Engineers	Ft. Wingate Archeological Survey (4823 Acres)	Fieldwork in progress
185-555	U.S. Army Corps of Engineers	Corrales Levee HAER Documentation	Preliminary documentation initiated

Table 2 Summary of New OCA Contracts Awarded in FY 1994-1995

PROP. #	ACCOUNT #	AGENT	PROJECT	AMOUNT	OVERHEAD
185 537	3 29096- (additional)	U.S. Army Corps of Engineers, Albuquerque District	Ft. Wingate Additional Survey (1743 Acres)	$130,693.00	$40,498.00
OCA-041	1 23490- (041)	Central New Mexico Electric Coop.	Golden Survey (NM 14)	$1,036.00	N/A
185-540	3 26788-	Bureau of Land Management, Las Cruces District	Damage Assessment - Clay Allot.	$4,171.47	$1,352.91
185-541	3-26789-	Bureau of Land Management, Las Cruces District	Butterfield Trail Survey, Phase II	$9,485.23	$3,076.29
185-542	3-29099-	Bohannan-Huston, Inc.	Data Recovery Plan for Osage-LaMedia	$6,216.00	$2,016.00
185-537A	3-29096- (additional)	U.S. Army Corps of Engineers, Albuquerque District	Ft. Wingate Additional Survey Extension	$19,706.00	$6,106.00
OCA-042	1-23490-(042)	Paul Parker Construction	Borrow Pit Survey-Espanola	$1,225.00	N/A
185-539A Revised	3-26017-	Tome Hill Project	Valley Improvement Association	$34,942.00	$7,210.00
185-545A	3-43711-	El Paso County Lower Valley Water District Authority	Phase III Archeological Testing for the El Paso Project	$365,119.00	$118,417.00
185-543A	3-43712-	Navajo Nation Division of Economic Development	Data Recovery at 3 Archeological Sites in Churchrock Industrial Park	$88,311.00	$28,307.00
185-547A	3-43021-	Mid-American Pipeline	Office Support and Gear-Up for Four Corners Pipeline Loop	$182,034.55	$59,038.23
185-550	3-43713-	U.S. Army Corps of Engineers, Albuquerque District	Trinidad Colorado 1995 Survey	$24,058.00	$7,455.00
185-548B	3-43022-	New Mexico Department of Military Affairs	An Archeological Survey of the Camel Track Training Area, Santa Fe County New Mexico	$178,126.61	$57,770.79

Table 2 Continued

PROP. #	ACCOUNT #	AGENT	PROJECT	AMOUNT	OVERHEAD
185-551	3-29096 (Addendum)	U.S. Army Corps of Engineers, Albuquerque District	Archeological Survey of Fort Wingate Depot Activity (4823 Acres)	$341,298.97	$105,757.00
185-555	3-43714	U.S. Army Corps of Engineers, Albuquerque District	Corrales Levee HAER Documentation	$14,133.98	$4,379.00
185-547B	3-43021-(supplement)	Mid-America Pipeline Company	Four Corners Pipeline Loop -- Survey Fieldwork Phase	$404,457.15	$131,175.29

0247

3. Scholarly Accomplishments

In addition to the research reports mentioned above, OCA staff made a number of scholarly accomplishments, in the form of papers presented at professional meetings, classes taught, and so on. Joseph Winter, OCA Director, taught one UNM course in FY 94-95 (Cultural Resource Management), and also taught in the New Mexico Endowment for the Humanities summer history institute for teachers. He also presented a number of papers concerning Native American tobacco at professional meetings, including the Navajo Studies Conference, the California Indian Conference, and the Ethnobiology Conference. His major accomplishment was the initiation of the Huichol Project, which provides technical, medical and educational assistance to the Huichol Indians in Mexico. In return, UNM faculty, staff, and students are allowed to carry out education and research. The project began on January 1, with initial funds for a 6-month planning period provided by the Associate Provost for Research, the Office of Contract Archeology, the College of Arts and Sciences, and the Anthropology Department. During this period Winter took a leave from his duties as Director of OCA, so he could focus all of his efforts on developing the Huichol project. He also made four trips into the Sierra Madres in Mexico to design the project, and received two UNM grants to help with the transportation costs. The Faculty Research Allocation Committee provided funds for two trips, while funds for another were provided by the Research Opportunity Program (which also paid for a Native American student to work with Winter on the research project).

Winter completed the six month planning period on June 30. He is now waiting to hear on a number of large proposals, including ones submitted to the Ford, MacArthur, and National Science Foundations.

William Doleman at OCA completed his PhD dissertation (Human and Natural Landscapes: Archaeological Distributions in the Southern Tularosa Basin) at UNM, using data generated by

several large OCA projects. Bradley Vierra of OCA had a book proposal accepted for publication by Arizona State University.

Richard Chapman (OCA Associate Director) served as OCA Director during Winter's research leave. Chapman taught a National Science Foundation sponsored Chautauqua Short Course for college teachers entitled "Prehistoric Cultural Development in the Southwestern High Desert"; and delivered a presentation on preliminary results of the Sandia National Laboratories sponsored hazardous waste analog project at LA 781 at the 67th Annual Pecos Conference. Chapman also served as Convener of the UNM Board of Archaeologists during the FY 95 term.

Ronna J. Bradley presented a paper at the 60th Annual Meeting of the Society for American Archaeology, Minneapolis, Min. "A Comparison of Shell Ornament Production Strategies in the North American Southwest".

4. Public Outreach

Patrick Hogan continued as President of the New Mexico Archaeological Council (NMAC) in 1994. Hogan also organized OCA's display at NMAC's public Archeology Fair, in Albuquerque. Joseph Winter taught and presented workshops at a number of meetings with Native American groups in California, involved in tobacco education and control. Winter additionally taught in a special seminar organized by the Albuquerque Archaeological Association. Peter Eschman hosted meetings at OCA for the Clipper (computer software users group) association of New Mexico.

Richard Chapman delivered a slide-illustrated talk on results of the Fort Wingate project as one of the "People of the Southwest" lectures sponsored by the Maxwell Museum of Anthropology. He also discussed archeology as a career for the Hoover Middle School Career Day, served as a guide at the Archaeology Fair during New Mexico Historic Preservation Week, and presented a slide show

on the Fort Wingate survey and Ethnography project to the Fort Wingate Depot Activity base closure intergovernmental Commission.

B. Plans, Problems, and Recommendations

One of our major challenges this year will be to adjust to our new location, to the north of the main campus, along Lomas Ave. Our newly renovated building has more office and lab space, but its location means that we will have far less contact with Anthropology Department faculty and students. Overcoming this challenge is a major goal.

Another challenge is to continue the Huichol Project. If possible, we also want to initiate other forms of grant funding, to replace the nation-wide decrease in federally-funded contracts.

C. Staff Appointments and Separations

See Table 3 attached.

Table 3 Staff Appointments

HIRING OF NEW OCA EMPLOYEES
7/1/94 - 6/30/95

EMPLOYEE	START DATE	POSITION
Arms, George	4/3/95	Crew Member
Brown, Stanley	4/3/95	Crew Member
Desruisseaux, Danielle	4/3/95	Crew Member
Hays, Bruce	6/27/95	Assistant Crew Member
Hiatt, Kathleen	6/27/95	Crew Member
Hughes, Patricia	6/27/95	Crew Member
Pacheco, Noel	6/27/95	Assistant Crew Member
Parker, Kathyrn	3/20/95	Human Resources Rep.
Persky, Lauren	6/27/95	Crew Member
Pezzetti, Stephen	6/27/95	Crew Member
Polk, Harding	4/3/95	Crew Chief
Rhoades, Randall	4/3/95	Crew Member
Rhoades, Thea	6/27/95	Crew Member
Sheppard, John Mark	6/22/95	Crew Chief
Spence, Nicholas	4/3/95	Crew Member
Sullivan, Richard	4/3/95	Crew Chief
Walth, Cherie	4/3/95	Crew Member
Yoder, Tom	4/3/95	Crew Member

OCA CURRENT PERMANENT STAFF

EMPLOYEE	POSITION
Brown, Kenneth L.	Project Administrator
Brown, Marie E.	Faunal Analyst
Chapman, Richard C.	Associate Director
Daniel, Carolyn L.	Crew Chief
Doleman, William H.	Project Director
Elyea, Janette M.	Project Director
Eschman, Peter N.	Analyst Programmer II
Gerow, Peggy A.	Project Director
Hogan, Patrick F.	Assistant Director
Lasusky, Donna K.	Administrative Assistant
Schutt, Jeanne A.	Project Director
Stauber, Ronald L.	Cartographer
Vierra, Bradley J.	Project Director
Winter, Joseph C.	Director

OCA ON-CALL EMPLOYEES THAT SHIFTED TO PERMANENT STATUS
7/1/94 - 6/30/95

EMPLOYEE	START DATE	POSITION
Bargman, Byrd	4/3/95	Crew Member
Bradley, Ronna J.	1/17/95	Project Director
Corbett, Charlie	5/1/95	Crew Member
Gustafson, Hansene	6/27/95	Crew Member
Hubley, Patricia	4/3/95	Crew Chief

OCA On-Call Employees That Shifted to Permanent Status (Cont.)

Kramer, Kathryn	4/3/95	Crew Member
McEnany, Timothy	4/3/95	Crew Chief
Medlock, Raymond	4/3/95	Crew Member
Romero, Louis	3/1/95	Crew Member
Stipe-Davis, Robin	4/3/95	Crew Member
Weeth, Janet	4/3/95	Crew Member

OCA ON-CALL STAFF

EMPLOYEE	START DATE	END DATE	POSITION
Franklin, Hayward	10/1/94	9/30/95	Archeologist II
Gish, Jannifer	2/28/95	2/27/96	Palynologist
Ward, Donna	1/1/95	1/1/96	Clerical Spec. II

STUDENT EMPLOYEES
7/1/94 - 6/30/95

STUDENT	START DATE	POSITION
Boudreaux, Jennifer	5/22/95	Assistant Crew Member
Earley, Amber	5/22/95	Assistant Crew Member
Estes, John R.	7/18/94	Crew Member
Fowler, Emily	1/16/95	Assistant Crew Member
Hurt, Teresa	5/10/95	Assistant Crew Member
Kessler, Karen	5/22/95	Assistant Crew Member
King, Valerie	6/5/95	Crew Member
Loehman, Rachel	5/20/94	Assistant Crew Member
Mack, Steven	5/22/95	Crew Member
McCoy, Mark	2/1/95	Assistant Crew Member
Pierce, Kathy	5/1/94	Crew Member
Powell, Melissa	5/26/95	Assistant Crew Member
Saxe, Victoria	5/11/95	Crew Member

OTHER STAFF

EMPLOYEE	DEPARTMENT
Garcia, Antonio	Geology
Hudspeth, William	Anthropology
Ogilvie, Marsha	Maxwell Museum
Treadwell, Carol	Geology

SEPARATION OF OCA EMPLOYEES

EMPLOYEE	END DATE	POSTION
Backer, Anna	7/25/94	Crew Member
Chapin, Nicholas	8/5/94	Crew Member
Eakin, Joanne	4/6/95	Crew Member
Folmer, Todd	6/30/95	Crew Member

Separation of OCA Employees (Cont.)

Herder, Eric	10/7/94	Crew Member
Klein, Kelly	6/30/95	Project Coordinator
Krakawska, Ewa	6/30/95	Crew Member
Medlock, Linda	4/25/95	Crew Member
Ramirez, David	5/8/95	Data Prep Operator
Spence, Jennifer	6/30/95	Assistant Crew Member
Wellman, Kevin	4/6/95	Crew Member

Annual Report 1994-95
Journal of Anthropological Research

Lawrence G. Straus, Editor

Professor Lawrence G. Straus was named Editor beginning January 1, 1995 and changes were made in the Editorial Board and Associate Editors. The new Editorial Board members (UNM faculty) are Professors Jeffery W. Froehlich, Louise Lamphere, and Robert Santley and the new Associate Editors are Professors Raymond Demallie (Indiana University), Jane Hill (University of Arizona), Paula Rubel (Barnard College), Jeremy A. Sabloff (University of Pennslyvania), Bruce Smith (Smithsonian, National Museum of Natural History), Marc J. Swartz (University of California, San Diego), and Stephen A. Tyler (Rice University).

The Book Review Editor for Ethnology and Linguistic Anthropology is Professor Philip K. Bock (UNM) and the Book Review Editor for Archaeology and Biological Anthropology is Professor Patricia Crown (UNM).

The staff has remained stable, with the following individuals continuing: Dr. Patricia Nietfeld, Copy Editor; Margaret Colclough, Business Manager; and Mary Kay Day (part-time), Copy and disk file preparation.

During the 1994-95 year, 68 manuscripts were received for review, 19 were published resulting in an acceptance rate of 28%. Pages produced over the four annual issues totalled 389.

The Journal of Anthropological Research generated $46,556.99 in revenues, well exceeding the $37,043.00 advanced by the College of Arts and Sciences. These revenues were derived from 1,356 subscribers and reprint requests.

A full page advertisement in Current Anthropology and a direct-mail campaign have resulted in an increase in subscribership.

Volume 50, our half-century anniversary volume, was published under Professor Philip Bock's editorship, closing out his successful 12-year term. His last issue was devoted to articles on "the future of anthropology," with articles solicited through a contest for the best manuscripts on this provocative subject.

Under Dr. Straus, two issues of Volume 51 have come out, the first on a diversity of anthropological topics and the second on the archaeology of gender in the American Southwest, guest-edited by Dr. Katherine Spielmann of Arizona State University. Volume 51, No. 3 is currently being prepared for printing and No. 4 is being assembled.

JAR inaugurated a Distinguished Lecturers Series at UNM. The first Lecturer was Professor Elisabeth Vrba, who spoke on macro-evolutionary trends in hominid evolution. Her lecture will be published in JAR. Dr. Vrba, a paleontologist, is Chair of the Department of Geology at Yale. Lecturers chosen for this academic year include Professors Jean and John Comaroff of the University of Chicago Anthropology Department.

Report of the Maxwell Museum of Anthropology

July 1, 1994 - June 30, 1995

Garth Bawden, Director

The year 1994-1995 was probably the most eventful for the Maxwell Museum in the last decade, bringing several major disruptions as well as positive occurences, and ultimately affording the rare opportunity for a comprehensive assessment of the museum's present situation and needs for an effective future.

On the positive side, two major appointments, a major expansion and several important projects highlight the year. In November, following a national search, Dr. Bruce Huckell, a renowned paleo-archaeologist, commenced his position as the Senior Research Assisstant Professor in the Department of Anthropology. Dr. Huckell's responsibilities are directed toward facilitating access and use of the research collections and the generation of museum-based anthropological research and have already borne positive fruit in this regard. At the end of the year following another national search Dr. Joseph Powell came to UNM as Assistant Professor of Anthropology and Curator of Physical Anthropology in the Maxwell Museum, replacing the retired Dr. Stanley Rhine who had filled this position for many years. Dr. Powell, although at the beginning of his career, has already created a fine reputation in skeletal biology as applied to prehistoric populations and we have every expectation that this important teaching and research wing of the museum will flourish under his care.

Equally positive, during the first half of 1995, the Maxwell Museum in collaboration with UNM central administration and Facilities Planning, has been planning a new outreach store. This is located in the San Felipe Plaza in Old Town Albuquerque and is expected to open in late Fall 1995. The new facility, which will contain a store and gallery, will support the mission of the Museum and the University in several ways. It represents major UNM community outreach and a venue by which some of the Maxwell's finest collections can be brought into the public arena. It also provides a supplemental funding source for the institution.

Of the public projects completed this year the major exhibition Cuando Hablan los Santos deserves special mention. With the support of a new Hispanic Arts Advisory Council, and with significant help from the Vice President for Student Affairs, the museum worked for over a year with a large number of Northern New Mexican wood carvers to accomplish what was truly a

major university-community collaboration. Over the next few years this exhibition, with its accompanying book, will travel throughout the country, bringing the traditional Santero art and UNM to a national public. Also worthy of note, the ongoing UNM-funded NAGPRA (Native American Graves and Properties Repatriation Act) compliance project, continued throughout the year, and is now approaching completion of its second phase. The project involves the creation of a specialized inventory of the Maxwell's total Native American collections, its distribution to all groups having claim to osteological, burial and sacred materials, and the establishment or a permanent structure through which affected items can be returned to the tribes. This immense task is being very successfully accomplished; indeed the Maxwell is among the small number of museums in this country that have met present NAGPRA deadlines. Moreover, in June 1995 we hosted a two-day conference of regional museum personnel, federal agency officials, and tribal representatives, to discuss the complex issues surrounding this process. While inevitably somewhat contentious at times the conference allowed the sharing of ideas by the diverse interest groups and in part paved the way for the establishment of the effective relationships that are essential for the NAGPRA process to continue productively. The conference also rightly placed the Maxwell and UNM at the forefront of regional efforts to successfully negotiate this difficult intercultural responsibility.

However, while these accomplishments and appointments must be positively recognized, in other ways 1994-5 was also an extremely difficult year. It was bracketed by the death of two long-time staff members Maria Jorrin (Osteological Assistant) in early 1994 and Dr. Krisztina Kosse (Curator of Collections) in July 1995 and punctuated by serious injury to the Administrative Coordinator, Katherine Pomonis, that removed her from the museum for several months. In addition, problems internal to the Board of Directors of the Maxwell Museum Association, the institution's public support body, ultimately led to major split in that body and wholesale resignation. This was followed by related persistent and unjustified outside accusations to the university Regents, Provost and Dean of Arts and Sciences of administrative, personnel, and financial mismanagement on the part of the museum administration, with resulting disruption and unavoidable tension among the staff. This situation was only resolved after a series of investigations including a complete audit of the museum's financial and administrative records that occupied much of the rest of the year.

This difficult period is now happily essentially in the past. However, in order to expedite resolution of residual stress and to use this to open an avenue to future productive development, the museum administration has requested that a Human

Resources Training and Development specialist, Fred Youberg, initiate a process of internal assessment and planning with the entire staff. Preliminary planning for this process occured during the Spring and it will continue through the coming year. We see this as useful and necessary at several levels:

A. To provide personnel with better procedures for inter-staff communication and thus facilitate collaborative work.

B. To facilitate realistic strategic planning in which all personnel can be appropriately involved.

C. To evaluate the organizational structure of the museum and if necessary make changes. The Maxwell has grown considerably over the past 10 years (addition of the following divisions: Public Programs, Publicity, Archaeology, Photographic Archives, Clark Field Library Support, Research). While this was necessary in order to effectively fulfill al responsibilities of a research/public museum, it was accomplished by seizing opportunities for funding where and when they arose rather than through systematic planning backed by a solid financial base. In addition, although some re-classification of staff positions has occured this has been accomplished within the pre-existing personnel system rather than addressing the new needs of the expanding institution. The result is a large, complex institution that in some areas lacks a satisfactory organizational structure to effectively utilize its potentials. Thus the ongoing process will assess organizational needs, suggest changes where necessary, and help to implement them.

D. To assess financial and spatial needs and realistically plan for their resolution. The Maxwell critically needs storage space, especially for the archaeological collections which inevitably grow through the field projects of UNM's Office of Contract Archaeology and Anthropology Department Field School. While temporary storage is necessary to alleviate the immediate need, the planning phase addresses the long term solution. We must reassess our collections policy to ensure maximum control over future intake and plan for an additional research-storage facility. This will hopefully be undertaken in conjunction with the National Park Service which has collections and curatorial staff at UNM and shares in the collections management mission. This issue will also be coordinated with the Dean, Provost, and Vice President for Business and Finance whose support is necessary if resolution of the problem is to be attained.

In summary, planning for 1995-1996 includes the following:
1. Strategic planning for the next 3-5 years.

2. Assessment of organization needs in the staffing complement.
3. Institutional team building.
4. Planning for long-range alleviation of storage needs.

Appointments to staff

Bruce B. Huckell
10/1/94
Senior Research Coord.

Laura Valdez
10/1/94
Curator I

Charles Hilton
10/3/94
Osteology Asst.

Francine Stewart
04/17/95
CSV

Joseph Powell
08/01/95
Curator of Physical Anthropology

Separations from staff

Frieda Stewart
10/03/94
Admin. Asst.

Stanley Rhine
12/31/94
Curator of Physical Anthropology

Janet Hevey
01/03/95
CSV

Krisztina Kosse
04/ /95

Publications

Marian Rodee
One Hundred Years of Navajo Rugs published in Spring 1995 by UNM Press.

Mari Lyn Salvador
"Historic mola" in CREATIONS'S JOURNEY: NATIVE AMERICAN IDENTITY AND BELIEF. National Museum of the American Indian. Tom Hill and Richard Hill Sr. eds. Smithsonian Institution Press: Washington DC. 1994.

Mari Lyn Salvador
"The Kuna Way" :Museums, Exhibitions and the Politics of Representation. MUSEUM ANTHROPOLOGY, vol. 18, #3, 1994 American Anthropological Association: Viginia.

Wills, W.H. and Bruce B. Huckell
1994 Economic Implications of Changing Land-Use Patterns in the Late Archaic. In "Themes in Southwestern Prehistory", edited by George J. Gumerman, pp.33-52. School of American Research Press, Santa Fe.

Huckell, Bruce B.,Lisa W. Huckell, and Suzanne K. Fish
1994 "Invtigations at Milagro, a Late Preceramic Site in the Eastern Tucson Basin." Technical Report No. 94-5. Center for Desert Archaeology, Tucson.

Geib, Phil R. and Bruce B. Huckell
1994 Evidence of Late Preceramic Agriculture at Cibecue, East Central Arizona. "The Kiva" 59(4): 433-454.

Garth Bawden
1994 Nuevas Formas de Ceramica Moche V Procedentes de Galindo, Valle de Moche, Peru. In Moche Propuestas y Perspectivas. ed. S. Uceda and E. Mujica, 207-223. Trujillo.

Garth Bawden
1994 La Paradoja Estructural: La Cultura Moche como Ideologia Politica. In Moche Propuestas y Perspectivas. ed. S. Uceda and E. Mujica, 389-415. Trujillo.

Garth Bawden
1994 Comments of Seeking an Ethical Balance in Anthropological Practice in Ecuador. Journal of Anthropological Research 50(2): 183-187.

Outside professional activities of staff members.

Marian Rodee - completed exhibit in conjunction with Zuni Pueblo as well as a book on Zuni Jewelry. Spoke at several out-of-state museums on fetishes.

Mri Lyn Salvador - worked with the staff of the museumof the

American Indian and with Kuna participants on their interpretation of the Kuna collections of the American Museum of Natural History. Serves on the editorial/advisory council of the Museum Anth;ropology and on the long-range planning committee of the Council for Museum Anthropology.

Bruce Huckell - attended professional meeting for the Society for American Archaeology where he presented a paper and attended the Pecos Conference.

Mary Smith - Council for American Indian Interpretation and Environmental Educators Association of New Mexico.

Ian Wagoner - built cases for the Cnter for Southwest Research Library in order to cover various expenses not in yearly budget.

Brenda Dorr - NAGPRA consultant to several museums. Participant in several federal museum meetings, presenting papers on NAGPRA.

Garth Bawden - invited to international conference in Chiclayo, Peru on Andean Anthropology.

Outside-sponsored research

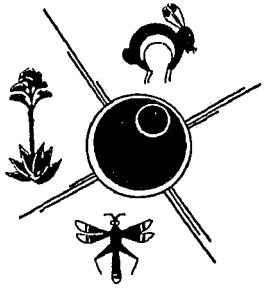
Mari LYn Salvador - field researcher and collaborator with the Kuna participants at the Festival of American Folklife in DC.

Mary Smith - Albuquerque Community Foundation Grant.

Kathy Liden - New Mexico Arts Division Grant.

Garth Bawden - Fulbright REsearch Grant ($16,000) for work in Southern Peru and Chile.

ANNUAL REPORT OF THE DEPARTMENT OF BIOLOGY



July 1, 1994–June 30, 1995
J. David Ligon,
Chair, August 1991–July 1995

FY 1994–95 Annual Report by:
Terry L. Yates,
Chair, August 1, 1995

TABLE OF CONTENTS

EXECUTIVE SUMMARY 1

INTRODUCTION 2

DEVELOPMENTS AND ACHIEVEMENTS 2
- Graduate Program 2
  - Honors and Awards 3
  - Service on Committees 3
  - Outside Funding 3
  - Professional Accomplishments 3
- Graduate Program Review 3
- Faculty 4
  - Scholarly Activities 4
  - Sponsored Research 5
  - Faculty Honors 5
- Core Facilities 5
  - The Museum of Southwestern Biology 5
  - Long-term Ecological Research Program 5
  - Molecular Biology Facility 5
  - Sevilleta Field Station 5
- Financial Contributions 6
- Personnel 6
  - Faculty 6
  - Staff 6
  - Adjunct Faculty 6
  - Museum Associates 6
- Curricula 6
- Special Events 6
  - Research Day 6
  - Departmental Seminar Series 6
- Affiliated Organizations 6
  - Biological Society of New Mexico 6
  - National Biological Service 7
- Affirmative Action 7

CONCLUSIONS 7

APPENDICES
- A. Biology Department Active Contracts/Grants, FY 1994-95
- B. Annual Report: Museum of Southwestern Biology

C. Biology Faculty Scholarly & Professional Achievements, CY 1994

1. Scholarly Activities C-1
   a. Books authored C-1
   b. Books edited C-1
   c. Chapters in books, major synthetic reviews C-1
   d. Articles in refereed journals C-4
   e. Book reviews C-7
   f. Articles, non-scholarly journals C-8
   g. Quasi-public reports C-8
   h. Abstracts (refereed or invited) C-9
   i. Abstracts (contributed) C-12
   j. Other C-15
2. Professional Public Activities C-16
   a. Colloquium presentations C-16
   b. Seminar presentations C-18
   c. Invited and plenary talks C-21
   d. Contributed talks C-23
   e. Attendance at professional meetings C-26
   f. Testimony in a scholarly capacity C-30
   g. Presentations to general audiences C-30
   h. Service in a scholarly capacity C-31
   i. Editor of scholarly journal C-34
   j. Editorial board of scholarly journal C-35
   k. Office in professional organization C-36
   l. Papers refereed in professional journals C-37
3. Grants C-40
   a. Submitted to all agencies C-40
   b. Awarded with 1994 start date C-45
   c. In force from previous years C-48
4. Graduate Education C-52
   a. Masters degrees awarded C-52
   b. Doctoral degrees awarded C-54
   c. Graduate courses taught C-54
   d. 551, 599, 699 students C-57
   e. Service on graduate student committees C-60
   f. Professional accomplishments of graduate students C-61
5. Undergraduate Education C-65
   a. Undergraduate courses taught C-65
   b. 400, 499 students C-69
6. Departmental Highlights C-71
   a. Symposia, workshops, etc. hosted C-71
   b. Individual honors C-72
   c. Distinguished visitors hosted C-73
   d. Curators, advisors, directors, etc. C-74
   e. Committee service C-76
      1. Departmental committees C-76
      2. College/University committees C-79
   f. Other C-80

D. Outside Review Committee's Graduate Program Report & Departmental Response
E. Faculty and Graduate Students, Biology, FY 1994-95
F. Annual Report: Long-Term Ecological Research Program
G. Professional and Technical Support Staff
H. Ancillary Faculty
I. Museum of Southwestern Biology Associates
J. All Course Offerings, Biology, FY 1994-95
K. Program of the Fourth Annual Biology Research Day
L. Departmental Seminar Series
M. BSNM Annual Newsletter, Vol. 10, 1994
N. Annual Report: National Biological Service
O. Research Proposals Submitted, Biology, FY 1994-95
P. Biology Graduation Program

THE UNIVERSITY OF NEW MEXICO

DEPARTMENT OF BIOLOGY

ANNUAL REPORT
FY 1994-95

EXECUTIVE SUMMARY

The Department of Biology continued past trends of growth in this fiscal year, in terms of program development, graduate and undergraduate teaching, and research. The number of faculty FTEs, however, actually decreased by one due to the department's failure to successfully fill an arthropod ecology position left vacant by the retirement of Dr. Cliff Crawford. Despite this fact, the department experienced increased enrollment, increased extramural funding, continued research productivity, and expanded success in development and enhancement of our core facilities.

The number of undergraduate majors in the Department of Biology continues to spiral upwards at a rate of approximately 20% per year. Response by the department has been to continue our efforts to re-engineer undergraduate education by expanding opportunities for biology students in the research arena, thus further integrating formal instruction with hands-on experience. During the past year, major outside funding was acquired by biology faculty for two new programs that involve integration of students into research. Drs. Ann Evans and Robert Parmenter were successful in acquiring funding for a Research Experiences for Undergraduates (REU) site at the Sevilleta Long-term Ecological Research (LTER) site south of Albuquerque. Funding for this program was acquired from the National Science Foundation (NSF) and provides support for undergraduates for the next four years. Drs. Donald Natvig, Mary Anne Nelson, Maggie Werner-Washburne and Robert Miller also received a three-year NSF award, called the "Neurospora Genome Project," that primarily supports undergraduates. These projects, along with the previously awarded Howard Hughes Medical Research grant awarded to Dr. Kate Vogel, programs associated with the Museum of Southwestern Biology, and numerous student additions to other existing research grants, all serve to engage our undergraduate students in biological research early in their education.

Outside funding for programs in Biology also maintained an upward trajectory during the past academic year. Total number of grant dollars increased from $3,569,699 in FY 1994 to $4,237,119 in FY 1995. This represents an increase of $667,420 (15.75%) over the previous year. From July 1994 through June 1995, members of The Department of Biology submitted 91 research proposals totaling $26,417,669. Many of these are still under review.

Products resulting from these research activities were also numerous. During the past year, biology faculty authored, edited or contributed chapters to 23 books and published 41 articles in scholarly journals. An additional 14 articles were authored by biology graduate students exclusive of those which involved faculty. In addition, these 32 faculty authored 12 popular articles and 60 abstracts, most of which involved presentation of a scholarly presentation at a national or international meeting. Invited seminars and plenary presentations were given by these same scientists at 56 additional institutions during this same time period. Biology faculty also served on the editorial boards of 12 different scientific journals during the past year.

Three departmental core facilities, The Sevilleta Field Station, The Museum of Southwestern Biology, and the Molecular Biology facility, experienced major new developments during the year beyond the unprecedented productivity all experienced through normal research and teaching activities. The field station was awarded a development grant from the National Science Foundation that will greatly enhance the current infrastructure of this facility. This grant will upgrade the station's computer facility to state-of-the-art high status,

allow the purchase of two new 4 x 4 one-ton field vehicles, and provide an automated correction beacon for the station's geographic positioning system.

The Museum of Southwestern Biology (MSB) signed a major cooperative agreement and Memorandum of Understanding (MOU) with the National Biological Service (NBS), which resulted in a transfer of the research collections of the Midcontinent Ecological Science Center in Fort Collins, Colorado, along with their personnel, to the MSB. The combined size of these core facilities will solidify and enhance the world-class status of these collections. In addition, the MSB received several major grants in the area of emerging infections such as Hantavirus and has become the national repository for specimens and tissues resulting from research related to public health issues centered around zoonotic diseases. With the awards came major enhancements to the MSB's computer facilities and frozen tissue collections along with numerous new staff positions.

The Molecular Biology Facility experienced major successes as well. Of special note was the acquisition of funding for the department's first automated DNA sequencing machine. The facility also acquired funding for an academic coordinator, Dr. Seogchan Kang, and support for numerous students.

INTRODUCTION

The Department of Biology experienced another exceptional year. As expressed in the outside graduate review teams report, "By any customary measure of scholarly accomplishment—discovery, teaching, integration and application of new information—the department excels on an absolute scale and in relation to other biology units nationwide." The past fiscal year saw high levels of productivity by all sections of the department and major increases in outside funding (Appendix A), core facility development (Appendices B, C.3.), research productivity (Appendix C.1.), and graduate and undergraduate education (Appendices C.5, D, C.3.). The department had an exceptional year and FY 1996 promises to be even better.

The Biology Department currently employs more than 440 individuals if the student payroll is included, has more than 110 graduate students, more than 100 adjunct faculty, 72 staff, and what is now approaching 1,000 undergraduate majors. The department again led the college in outside grant support. Despite these numbers, the department currently employees only 32 FTE faculty. These individuals, however, along with the departments exceptional staff and students, managed another incredible year, the details of which are provided below. This narrative provides only the highlights, however, of the diverse and numerous accomplishments achieved; the reader is referred to the appendices for more details.

DEVELOPMENTS AND ACHIEVEMENTS

GRADUATE PROGRAM

The graduate program, like the undergraduate program, continued to expand during the previous year. We received one hundred eighty-seven applications (compared to 81 in 1990) for our graduate program, but were only able to accept 23 (12%)into our program. At the same time, the department awarded 19 graduate degrees to the following students:

Master Degrees

Raymond K.G. Chan–Drs. Lowery & Natvig
Rayna J. Gonzales–Dr. Toolson
Mark Jordan–Dr. Snell
Keith Gido–Dr. Molles
Kenneth L. Conwell II–Dr. Stricker

Doctoral Degrees

Samuel R. Loftin-Dr. Gosz
Michael J. Patrick-Dr. Duszynski
Rebecca T. Kimball-Dr. Ligon
Robert J. Cabin-Dr. Marshall
Jean-Luc E. Cartron-Dr. Brown
Greg H. Farley-Dr. Ligon
Robert L. Harrison-Dr. Crawford
Timothy H. Keitt-Dr. Milne
Douglas A. Kelt-Dr. Brown
Yorgos Marinakis-Dr. Milne
Shahroukh R. Mistry-Dr. Brown
Shawn E. Nordell-Dr. Kodric-Brown
Edwardo Palma-Dr. Yates
Paul A. Stone-Dr. Snell

GRADUATE STUDENT AWARDS/ACCOMPLISHMENTS

HONORS AND AWARDS: Biology graduate students received numerous awards and honors during the past year (Appendix C.4.f.). Two students where awarded outstanding teaching awards by the department for FY 1995. They were Pascale Leonard and Michael Patrick (Fall 1994). In addition, Doug Kelt was awarded the prestigious Shadle Fellowship by the American Society of Mammalogists, John Hnida received the Certificate of Excellence Award from the American Association of Zoo Keepers, Patricia Dolan received a Graduate Studies Award from UNM, and Sandra Merino and Edwin Weeber were awarded Patricia Roberts Harris Fellowships.

SERVICE ON COMMITTEES: Graduate students served the department on the following committees during FY 1995: Computer Use (Shahroukh Mistry); Undergraduate Policy (Mark Jordon); Space (Debra Tull); Graduate Policy (David Gray); Graduate Student Research Allocation (Patty Ashby, Bob Cabin, Brian Enquist, David Gray); Graduate Student Selection (Tim Keitt); Recycling Committee (David Mehlman, Debra Tull). Rob Taylor and Patty Wilbur represented graduate students at faculty meetings.

OUTSIDE FUNDING: Several Graduate Students received outside funding. Both Sandra T. Merino and Edwin Weeber received Patricia Roberts-Harris Fellowships and Douglas Kelt received the Alma M. and Albert Shadle Fellowship in Mammalogy. Jorge Salazar-Bravo received a $20,750 doctoral dissertation improvement grant from the National Science Foundation.

PROFESSIONAL ACCOMPLISHMENTS: In addition to sharing numerous accomplishments with their major professors, our graduate students were again highly productive on their own. During FY 1995, our students published an additional 14 scholarly papers in refereed journals and gave 29 presentations at meetings. Two of our students received three national awards for their publications. These were the Certificate of Excellence Award given to John Hnida by the American Association of Zoo Keepers and the James H. Nakano Citation and the Charles S. Shepard Science Award, both awarded to Jennifer Frey by the Centers for Disease Control and Prevention.

GRADUATE PROGRAM REVIEW

During the Spring semester the department underwent an outside review of our graduate program. The outside review committee's full report is included in Appendix D. The committee was highly complementary of the department and rated almost all aspects of our graduate program as nationally competitive.

The areas recognized as being most in need of improvement were the following:

1) Faculty salary support, especially for associate and full professors;
2) Faculty were over-burdened;
3) Lack of space;
4) Limited staff support;
5) Lack of a strategic plan.

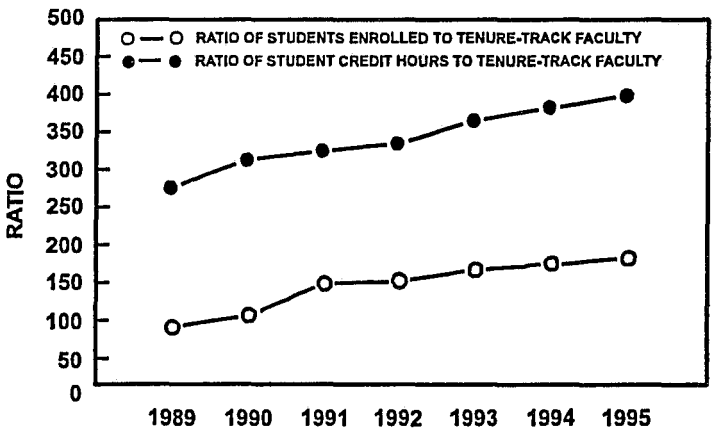
The department's response to this review is provided in Appendix D. In general, we are in agreement with the review team's suggestions and hope to be able to affect improvements in these areas in the near future.

UNDERGRADUATE PROGRAM

Enrollment in biology courses and the number of declared majors continued to increase during the past year as did the ratio of students to FTE faculty (Figure 1). Departmental efforts to re-engineer undergraduate education also continued during FY 1995. Three major externally funded programs again served to integrate our undergraduates into the mainstream of the biological sciences. Thanks to a Research Improvement in Minority Institutions grant from the NSF, support from the Howard Hughs Medical Institute, and an REU site grant from the NSF, large numbers of undergraduates have been introduced to basic research as part of the educational experience at UNM. In addition to these specific program, many additional undergraduates were actively involved in research projects in the department through support from the dozens of regularly funded research projects that were active in the department. Many more gained research experience through the departments core facilities such as the MSB, the molecular biology facility, and the confocal microscope facility.

FIGURE 1.

THE NUMBER OF STUDENTS PARTICIPATING IN OUR PROGRAMS CONTINUES TO INCREASE RELATIVE TO AVAILABLE FACULTY



FACULTY

A list of FTE faculty and their graduate students for FY 1994-95 can be found in Appendix E.

SCHOLARLY ACTIVITIES: During the past calendar year, Biology faculty authored 136 scholarly works and presented more than sixty papers at scientific meetings. Invited talks were also given at 56 institutions by our faculty, who served as editors for 12 scientific journals during 1994.

SPONSORED RESEARCH: Departmental success at obtaining outside funding continued during the past fiscal year with FY 1995 funds increasing by more than 15%. The department registered 4.23 million dollars in outside grant support for FY 95 and, as of June 1995, had more than $20,000,000 in current outside research support.

FACULTY HONORS: Several Biology faculty received special honors during 1994. These are detailed in Appendix C.6.b. Of special note are the following: Dr. Oswald Baca was elected President of the American Society for Rickettsiology and Rickettsial Diseases. Dr. James Brown was awarded to Joseph Grinnell Medal by the University of California-Berkeley; this is only the second time in history that this award has been given. Dr. Donald Duszynski was nominated to fill a vacancy on the International Commission of Zoological Nomenclature. Dr. Duszynski's course in tropical biology was used by NASUGLC as an example of new innovations in science education for their presentation to the US Congress. Dr. Sam Loker was appointed a UNM Regent's Lecturer and a Blankenbaker Lecturer by Montana State University. Dr. Margaret Werner-Washburne was awarded the UNM Alumni Foundation award for teaching and service to students and was elected to the Board of Directors of the Society for Advancement of Chicanos and Native Americans in the Sciences.

CORE FACILITIES

THE MUSEUM OF SOUTHWESTERN BIOLOGY: The Museum of Southwestern Biology (MSB), like the department in general, had another productive year (Appendix B). Material from the various museum divisions was used in more than one-third of the department's classes and a similar proportion of graduate students used the various MSB facilities in their research. These important facilities formed the basis for literally hundreds of research papers published last year by UNM researchers and those from other institutions worldwide.

During the past fiscal year, the MSB served as a repository for all Sevilleta LTER voucher material and was designated the national repository for the Centers for Disease Control and Prevention. The MSB also signed a major cooperative agreement with the Midcontinent Ecological Research Center of the National Biological Service, which led to the signing of an official Memorandum of Understanding by UNM with this organization. The extremely valuable research materials of the latter unit have been transferred to UNM from Fort Collins and are being integrated with out collections. All of these activities have served to solidify the MSB's position as one of the most significant such University facilities in the world.

The MSB experienced significant success in attracting outside funding during this period (Appendix B). Research grants were received from the NSF, CDC, IHS, Forest Service, Fish and Wildlife Service, Bureau of Reclamation and BLM, to name only a few. Museum research teams were active on most continents and were especially active in Latin America. In addition, significant support was provided by MSB divisions to Albuquerque Public School, the Rio Grande Zoological Park and the State.

LONG-TERM ECOLOGICAL RESEARCH PROGRAM (LTER): The Sevilleta LTER Program received a major financial boost in the form of a 3.8 million dollar grant renewal from the NSF. In addition, the REU site proposal was funded for three more years, which provides summer support for our undergraduates. The LTER, along with the MSB, continued to receive international publicity for its role in better understanding emerging infections.

MOLECULAR BIOLOGY FACILITY: The department's newly established molecular biology facility had an outstanding year in terms of education, research and external funding. More than 60 students conducted research in the facility in FY 95 and three papers were published based on research made possible by the facility. The directors of the facility recently received a $500,000 grant from the NSF in support of a new project to be conducted there.

SEVILLETA FIELD STATION: Biology's new field station in the heart of the Sevilleta National Wildlife Refuge continued to develop and prosper during the past year. Hundreds of students and faculty utilized the stations

facilities, including visitors from numerous other countries and institutions (Appendix F). A third facilities support grant was received from the NSF in support of the purchase of high-end computer equipment, field vehicles, GPS enhancements and other station equipment.

FINANCIAL CONTRIBUTIONS

The department owns a variety of restricted and unrestricted accounts at the UNM Foundation. We also have established several endowments there. All did well during the past fiscal year.

PERSONNEL

FACULTY: Drs. Astrid Kodric-Brown and Terry Yates were promoted to full Professor, and Drs. Timothy Lowrey and Margaret Werner-Washburne were promoted to Associate Professors. Dr. Robert Miller was hired as an Assistant Professor, beginning the Spring semester, 1995.

STAFF: All appointments to our staff during the fiscal year, noted in bold face, and all separations from our staff during the fiscal year are noted in Appendix G.

ADJUNCT FACULTY: A complete list of Biology adjunct faculty is provided in Appendix H.

MUSEUM ASSOCIATES: A list of museum associates is provided in Appendix I.

CURRICULA

A complete list of Biology course offerings for FY 94, along with a summary of student credit hours, is provided in Appendix J.

SPECIAL EVENTS

RESEARCH DAY: The department held its Fourth Annual Research Day on April 7, 1995. The event was made possible by funding from the La Jolla Cancer Research Foundation, in addition to help from UNM, VWR Scientific, and Beckman Instruments. The day-long event focused on undergraduate and graduate research being conducted at UNM and was attended by hundreds of students and faculty. Biology students presented 48 papers and posters. The Research Day program can be found in Appendix K.

DEPARTMENTAL SEMINAR SERIES: The primary seminar series for the department again featured an outstanding group of scientists. A complete listing of invited seminars for last year is provided in Appendix L. The department also hosted numerous other more specialized series in cell/molecular biology, ecology, botany, and systematics.

AFFILIATED ORGANIZATIONS

BIOLOGICAL SOCIETY OF NEW MEXICO: The Biological Society of New Mexico (BSNM)is a tax-exempt organization whose expressed purpose is to support the activities of the UNM Department of Biology. Last year, the BSNM raised funds for the department's various endowments and other accounts and provided financial support for a variety of departmental activities. These included aiding our graduate student recruitment efforts by flying into Albuquerque the top four graduate student applicants and covering their expenses during the course of their stay, and providing cash awards and certificates to the two most outstanding undergraduates, Maria Gonzales and Rachel Palmer, at the department's graduation ceremonies in May. The BSNM also provided funding for the department's outstanding Teaching Assistant Awards for 1994 and contributed funds to our Annual Research Day. The BSNM produced and funded the annual newsletter (Appendix M), which was mailed to more than 2,100 alumni and supporters of the department. This activity alone cost more than $1,300.

NATIONAL BIOLOGICAL SERVICE: The Midcontinent Ecological Science Center of the National Biological Service (NBS) operates the Albuquerque field station through a cooperative agreement with department's Museum of Southwestern Biology. During the past year, the MSB began the process of integrating its Western Collections of Vertebrates into those of the MSB. Dr. Michael Bogan, Curator in charge of the NBS collections, and Ms. Cindy Ramotnik, Collections Manager, serve as active members of the MSB curatorial organization. Dr. Bogan is an adjunct professor in the department. During the past year, the NBS provides much valuable material to the department's research collections through the 15 currently funded projects they have in force. A list of NBS 1994 publications and other research products is provided in Appendix N.

AFFIRMATIVE ACTION

It is the policy of the Department of Biology to provide equal opportunity in all personnel actions; institutionally-sponsored education, training, tuition assistance, social and recreational programs and advancement, without regard to race, color, religion, national origin, sex, handicap, age, weight or veteran's status.

Hiring procedures for Biology Department faculty and staff are conducted within Affirmative Action guidelines with respect to advertising, search committees, interviewing and selection. Student employee, work-study and other job opportunities are advertised on campus and within the department.

Job descriptions are periodically reviewed and revised for accuracy in relation to actual functions and duties; reclassifications are now in process for two staff employees. Employees are also encouraged to upgrade their skills through participation in university-sponsored seminars and training programs.

CONCLUSIONS

The Department of Biology continued its previous trend of growth in almost all areas of scholarly activity. The rate of growth in terms of overall research productivity and grant funding, though still strongly positive, has slowed considerably over the past three years. Given the continuing increases in students requesting access to the department's programs, both at the graduate and undergraduate levels, this finding may be cause for concern. These data strongly suggest that the department may be close to or beyond the limit at which the current faculty and staff can functionally operate. Strong support for the department by the state of New Mexico at this time in terms of human and other resources will help insure that the Department of Biology at The University of New Mexico will continue to be a world leader in this field.

APPENDICES

FY 1994-95

ANNUAL REPORT

DEPARTMENT OF BIOLOGY

APPENDIX A

BIOLOGY DEPARTMENT, ACTIVE CONTRACTS & GRANTS, FY 1994-95

ACCOUNT NUMBER	PI Name	Agency	Title	Account Base	Account Curr. Yr.	Access Y=Post Transactions	Start Date	End Date
0-00000	AVAILABLE			0.00	0.00	Y		
0-11392	YATES,T		REVENUE: American Society Of Mammologists (Deposits Only)	37.00	0.00	Y		
0-11422	SNYDER,A		REVENUE: Biology Of SW Fish Studies (Deposits Only)	56.00	0.00	Y		
1-01320	KUBLER,S	UNM	BIOLOGY DEPARTMENT	0.00	0.00	Y		
1-02375	NATVIG,D	UNM	RAC=NATVIG:Prof Virginia Shipman,Simpson Hall, Rm #112=RAC Requires CO	6500.00	6500.00	Y	03/20/95	09/30/95
1-02377	TRUJILLO,J	UNM	RAC=TRUJILLO:Prof Virginia Shipman,Simpson Hall, Rm #112=RAC Requires	962.40	962.40	Y	04/10/95	09/30/95
1-18074	NATVIG,D-A&SPI	A&S	A&S P.I. Account. Balance As Of 10/31/94 FRS Per D. Weeke.	2657.59	0.00	Y	10/31/94	
1-18074	GOSZ,J	A&S	A&S PI ACCOUNT	0.00	0.00	Y		
1-18220	KUBLER,S	UNM	BIOLOGY DEPARTMENT OVERHEAD - Maps To 0-16908	0.00	0.00	Y		
1-18221	PARMENTER,R		Biology -Miscellaneous Overhead For Grant	55594.00	0.00	Y	07/01/95	07/01/96
1-18326	KUBLER,S	UNM	BIOLOGY DEPARTMENT - Maps To 0-16963	0.00	0.00	Y	09/01/91	
1-18679	CRAWFORD ET AL	NSF	Sevilleta Field Station - Maps To 0-17059	480000.00	0.00	Y	08/01/90	07/31/95
1-22236	MEHLHOP,P		Natural Heritage	101900.00	0.00	Y	08/01/90	
1-23215	WERNER/FROST	Biology	OLIGO 1000 DNA SYNTHESIZER - Maps To 0-17491	0.00	0.00	Y	08/01/94	
1-23378	GANNON,W-SCCR	Public Service Acct	Southwest Center For Chiropteran Research - Maps To 0-17729	4000.00	4000.00	Y	06/10/94	
1-23412	CRAWFORD,C	PSA	Plants & Insects Research (Replaces 0-11396; 9-00544) Old 1-17122	0.00	2524.77	Y	02/17/93	
1-23413	MEHLHOP,P	PSA	NM Heritage Program (Replaces 0-11418; 9-00543) Old 1-17121	0.00	4694.05	Y	02/17/93	
1-23414	HOLLOWAY,R	PSA	Archeobotany Research (Replaces 0-11393; 9-00542) 1-17120	0.00	0.00	Y	02/17/93	
1-23417	HOLLOWAY,R	PSA	Pollen Analysis Research (Replaces 0-11421; 9-00541) Old 1-17121)	0.00	1617.24	Y	02/17/93	
1-23419	YATES,T	PSA	MSB=Museum SW Biology (Replaces 0-11372; 9-00528) Old 1-17101	0.00	4881.89	Y	02/17/93	
1-23422	BARTON,L	PSA	Iron Nutrition (Replaces 0-11391; 9-00530) Old 1-17104	0.00	4873.39	Y	02/17/93	
1-23424	ROOT,M	PSA	NMOS=NM Ornithological Society (Replaces 0-11394; 9-00531) Old 1-17105	0.00	84.98	Y	02/17/93	
1-23428	ALTENBACH,S	PSA	Bat Research (Replaces 0-11401; 9-00532) Old 1-17106)	0.00	5447.55	y	02/17/93	
1-23429	WELFORD,A	PSA	Electronmicroscopy Lab (Replaces 0-11402; 9-00533;) Old 1-17107)	0.00	2715.08	Y	02/17/93	
1-23431	YATES,T	PSA	Electrophoresis Lab (Replaces 0-11403; 9-00534) Old 1-17108)	0.00	-14.68	Y	02/17/93	
1-23434	BACA,O	PSA	Biology Research (Replaces 0-11424; 9-00537) Old 1-17111	0.00	1014.09	Y	02/17/93	
1-23437	BOUCHER,R	PSA	Media Prep Lab (Replaces 0-11427; 9-00538) Old 1-17112)	0.00	1501.65	Y	02/17/93	
1-23439	LOWREY,T	PSA	Nat'l Wildflower Res. (Replaces 0-11435; 9-00539) Old 1-17114	0.00	858.21	Y	02/17/93	
1-23440	WHITE,C	PSA	Biology Annex Lab (Replaces 0-11400; 9-00540) Old 1-17116	0.00	5194.84	Y	02/17/93	
3-11421	MARSHALL,D	NSF	Non-Random Seed Paternity In Wild Radish Raphanus Satisvus	182000.00	0.00	N	06/30/89	
3-12341	MARSHALL,D	NSF	Presidential Young Investigator Award	290533.00	37500.00	Y	11/15/89	03/31/96
3-12348	MARSHALL,D	NSF	REU PYI: Plasticity/Gene Flow/Diff. Plant Reproduction(Amd.#6)	2812.00	2812.00	Y	11/15/92	
3-12349	MARSHALL,D	UNM Foundation	PYI Matching Funds	75000.00	10000.00	Y	11/15/89	03/31/96
3-13581	RIEDESEL,M	NASA	Glycerol-Induced Hyperhydration (Supp.#5-6)	297052.00	80000.00	Y	11/01/93	01/01/95
3-13671	WERNER,M	NSF	Gene Regulation In Starvation-Induced Arrest	552931.00	99000.00	Y	05/17/93	04/30/95
3-13672	WERNER,M	NSF	GENE REGULATION IN STARVATION-INDUCED YEAST	120002.00	120002.00	Y	05/15/95	04/30/96
3-13678	WERNER,M	NSF	REU COMPONENT: GENE-REGULATION IN STARVATION-INDUCED YEAST	8500.00	8500.00	Y	05/15/95	04/30/96
3-13679	WERNER,M	NSF	REU SUPPLEMENT: GENE REGULATION IN STARVATION-INDUCED YEAST	16500.00	0.00	Y	11/15/89	04/30/95
3-15454	VOGEL,K	NIH	Proteoglycan Structure, Metabolism And Role In Tendon 9th Yr. Of Grant	1417150.00	376440.00	Y	09/01/92	12/31/95
3-16894	LOKER,E	NIH	Role Of Lectins In Snail-Tremadtode Assn	0.00	0.00	Y	12/01/93	11/30/94

DB Name:	Data Base Description:	Index Name:	Index Description:	Number of Accounts: 175	Y=Post Transactions to this acct
ACCOUNTS	LIST OF ALL ACCOUNT ID's & PI's	ACCTID	ACCTID		

0275

0276

ACCOUNT NUMBER	PI Name	Agency	Title	Account Base	Account Curr. Yr.	Access Y=Post Transactions	Start Date	End Date
3-16895	LOKER,E	NIH	Role Of Lectins In Snail-Tremadtode Assn	914228.00	191780.00	Y	12/01/93	11/30/95
3-16895	LOKER, E	DHHS	Preaward: Trematode-Induced Immunsuppression In Snails	0.00	0.00	Y	12/01/86	11/30/94
3-18522	BROWN,J	NSF	Long-Term Monitoring/Manipulation Of Desert Granivore System-Preawd.	227245.00	73330.00	Y	01/06/93	08/31/96
3-18528	BROWN,J	NSF	REU Supplement: Long-Term Monitoring And Manipulation Of Desert Grani	17830.00	8915.00	Y	01/06/93	08/31/96
3-18529	BROWN, J	NSF	REU, Amd. #1:Long-Term Monitoring/Manipulation Desert Granivore System	0.00	0.00	Y	01/06/93	06/30/93
3-19991	PARMENTER,R	NSF	LTER - Sevilleta	2672187.00	478454.00	Y	10/15/88	10/15/95
3-19998	PARMENTER,R	NSF	LTER	152197.00	4570.00	Y	10/15/88	10/14/95
3-19999	PARMENTER,R	NSF	LTER	196368.00	74913.00	Y	05/11/93	10/14/95
3-20081	TOOLSON,E	NSF	Natural/Sexual Selection & Cactiphilic Drosophila-Epicut. Hydrocarb.Sy	68883.00	0.00	Y	03/01/90	02/28/94
3-20281	YATES, T	NSF	Mammalian Diversity In Bolivia	144986.00	47120.00	Y	03/28/90	05/31/95
3-20289	YATES,T	NSF	Mammalian Diversity In Bolivia- The Yungas & Valles REU	99855.00	10000.00	Y	05/01/92	05/31/95
3-20485	YATES,T	NMF&G	Genetic Variations - Cutthroat Trout(Yr.5 #94-816-32)	9000.00	0.00	Y	09/13/93	06/30/94
3-21111	WERNER,M	NSF	Admendment #3: PYI Year 4 Base ($25,000)&Yr.3 Match ($37,500)	288625.00	62500.00	Y	07/01/90	07/31/96
3-21281	CRAWFORD/MOLLES	NSF	Fractal Analysis Of Landscapes; PYI 4th Yr.Base/3rd Year Matching	262940.00	62500.00	Y	07/15/90	12/31/95
3-21853	ALTENBACH,S	EMNRD	Evolution Bat Pop & Bat Habital Res.(Amd. 1)	5000.00	0.00	N	07/01/92	06/30/93
3-21854	ALTENBACH,S	NMEMNRD	Evolution Bat Pop. & Bat Habital Res.	5000.00	5000.00	Y	07/01/93	06/30/94
3-21931	SNYDER,A	USBR	Coop. Agreement: Ichthyofaunal Studies Fed. Listed Species, Pecos Rive	185000.00	0.00	Y	12/02/91	06/18/94
3-22371	DAHM,C/CAMPANA	NSF	Stream Hyporheic Zones; REU Amd. #4	568909.00	12000.00	Y	03/01/91	02/28/95
3-22379	DAHM,C/CAMPANA	NSF	Stream Hyporheic Zones; REU	89000.00	10000.00	Y	06/03/91	02/18/95
3-22651	CRAWFORD/MOLLES	USFW	Effects Of Annual Flooding On Rio Grande Bosque	428061.00	70000.00	Y	04/16/91	04/15/96
3-22702	GOSZ,J/ET AL.	NSF	REU "" -LTER (20% IDC)	150098.00	100698.00	Y	05/01/92	04/30/95
3-22703	EVANS,A	NSF	Preaward: REU:LTER: Ecological Studies In A Biome Transition Zone	153000.00	40585.00	Y	05/01/95	08/01/95
3-23051	GOSZ,J/PARMENTE	USNPS	El Malpais Nat'l Monument: Survey Of Biological Resources	88907.00	20000.00	Y	06/15/91	06/14/96
3-23431	SNELL,H/PAINTER	NMG&F	Effect Of Shinnery Oak Removal On The Sand Dune Lizard	82353.00	38000.00	N	03/21/91	12/31/96
3-23432	SNELL, H	NMGF	Dunes Sagebrush Lizard, Effect Of Shinnery Oak Removal	74217.00	74217.00	Y	07/01/95	12/31/97
3-23461	MILNE,B	NSF	Phase Transitions & Critical Phenomena In Woodland Ecotones	300000.00	0.00	Y	08/01/91	01/31/95
3-23923	PARMENTER,R	NPS	Coop.Agrmt, Mod. 1, Subagrmt 3: LTER-Bandelier Nat'l Monument	18166.00	0.00	Y	08/12/92	07/30/94
3-23924	WHITE,C	NPS	Coop. Agmt, Subagrmt 4, Mod. 1: Nitrogen Cycling - Bandelier Monument	13999.00	6000.00	Y	08/06/92	06/30/95
3-23926	PARMENTER,R	NPS	Pecos Nat'l Historic Park: Survey Of Animal Resources	55642.00	0.00	Y	09/18/92	07/31/95
3-23928	WHITE,C	NPS	Variation Soil Cryptogamic Cover - Bandelier Nat'l Park	12793.00	12938.00	Y	08/18/93	06/30/94
3-23929	MEHLHOP,P	NPS	NM Rivers Assessment Database (Subagrmt.No. 9 (IDC 15%)	10000.00	10000.00	Y	09/30/93	09/29/94
3-24271	MUSICK,B	NASA	Wind Erosion - Semiarid Landscape	112500.00	0.00	Y	12/01/91	04/30/94
3-24571	DEGENHARDT,W	NMG&F	MS Prep. For Book "Amphibians & Reptiles Of NM"	9257.00	1000.00	Y	02/12/92	06/30/95
3-24581	DAHM,C	EAP/San Diego	Harbinger Anthropogenic Ecosys. Stress: Cycorrhizal Fungi 2nd Payment	55756.00	3500.00	N	09/15/91	05/31/94
3-24671	MILNE,B	EPRI	Fractal Indicators Of Ecological Responses To Climate Change-Yr.2	112500.00	0.00	Y	01/01/93	12/31/94
3-24691	NELSON,M	NIH	Molecular Analysis Of Sexual Development In Neurospora	425268.00	110106.00	Y	05/01/92	04/30/96
3-24761	SNYDER,A	USBR	San Juan River Drift Studies (FY 95 Funds Due In Jan. '95; Cannot Spen	218987.00	44737.00	Y	03/18/92	09/30/97
3-24871	PLATANIA, S	NMG&F	San Juan River Larval Fish Studies	10000.00	0.00	Y	04/02/92	06/30/93
3-25041	SNYDER,A	USBR	Coop. Mgmt.: RG Silvery Minnow	199000.00	0.00	Y	05/15/92	06/18/94
3-25101	BRUNT,J	NSF	Env. Info./Analysis: Ecosystem To Biosphere Scales	47760.00	0.00	Y	04/01/92	11/30/94

DB Name:	Data Base Description:	Index Name:	Index Description:	Number of Y=Post Transactions
ACCOUNTS	LIST OF ALL ACCOUNT ID's & PI's	ACCTID		

ACCOUNT NUMBER	PI Name	Agency	Title	Account Base	Account Curr. Yr.	Access Y=Post Transactions	Start Date	End Date
3-25121	LOWREY,T	NSF	CRB:Coll.Res.:Evol. Genetics Adaptive Radiation In Tetramolopium	0.00	77969.00	Y	05/15/92	12/31/95
3-25129	LOWREY,T	NSF	REU:Evolutionary Genetics Of Adaptive Radiation In Tetramolopium	20000.00	10000.00	Y	04/19/94	12/31/94
3-25451	DAHM,C	NMWRRI	Quantative Analysis Carbon Amendment On Bioremed.	24861.00	0.00	N	07/01/92	06/30/93
3-25471	GOSZ,J	NSF	Preaward: Ecosys. Recovery-Livestock Grazing	25245.00	0.00	N	06/30/92	01/31/94
3-25842	YATES,T	AGFD	Mexican Vole Genetic Analysis	5000.00	5000.00	Y	06/25/92	02/28/95
3-25871	SNELL,H	NSF	Natural/Sexual Selection-Evolution Of Sexual Dimorphism	189997.00	59995.00	Y	08/18/92	02/29/96
3-25879	SNELL,H	NSF	Roles Of Natural Sexual Selection	12580.00	0.00	Y	08/18/92	08/31/94
3-25931	WERNER,M	NSF	RIMI: Establishment Of A Molecular Biology Facility	321000.00	37290.00	Y	09/15/92	09/15/95
3-25939	WERNER,M	NSF	Yr. 2 - UNM Cost Share (MWW Budget Memo 2/22/94)	309700.00	100566.00	Y	09/15/92	09/15/95
3-25971	PARMENTER, R	AF/NSF	Supplement To Sevilleta	50000.00	50000.00	Y	09/08/92	09/09/99
3-25981	NELSON, M	UBC	Sexual Dev. In Filamentous Fungi	43237.00	0.00	N	09/01/92	08/31/93
3-25982	NELSON,M	HFSP	Sexual Dev. Filamentous Fungi (Yr. 2)	47763.00	47763.00	Y	09/01/93	08/31/94
3-25983	NELSON,M	HFSP	Sexual Dev. Filamentous Fungi (Yr. 3)	44000.00	44000.00	Y	09/01/94	08/31/95
3-26161	STRICKER,S	NSF	Confocal Microscopy Facility	178823.00	0.00	Y	10/01/92	09/30/97
3-26261	YATES, T	NSF	Evolutionary Relationships-Genus Thylamys	17900.00	0.00	Y	10/20/92	11/30/94
3-26431	CRAWFORD ET AL.	NSF	Sevilleta Field Station: Constr. Of Desert-Plant Lath House/Shop/Stora	74820.00	0.00	Y	12/01/92	05/31/95
3-26871	BRUNT/RASURE	NSF	Software For Collaboration In Ecological Science	30000.00	30000.00	Y	02/01/93	07/31/95
3-27031	BACA,O	NIH	Phosphates As A Virulence Factor In Q Fever	611159.00	203432.00	Y	03/08/93	03/31/96
3-27211	SNYDER, A	NMG&F	Secondary Channel Fish Study	44825.00	44825.00	Y	03/30/93	03/30/96
3-27391	MILLER,G	NSF	Dynamics Of Subcolony Size In The Adelie Penquin	32693.00	32693.00	Y	05/01/93	11/30/94
3-27421	SNYDER,A	NMG&F	Pecos Bluntnose Shiner	4200.00	4200.00	Y	03/02/93	06/30/94
3-27431	PARMENTER, R	Nature Consv/DOD	Nature Conservancy	56091.00	0.00	Y	03/01/93	12/31/93
3-27591	BROWN/MARQUET	NSF	Diss. Imprv.:Regional Structure Species Assembl. & Conserv.Sml.Animals	10000.00	10000.00	Y	05/03/93	10/31/95
3-27941	EVANS,A	NSF	Evol Ecophysiology Of Adaptations To Low Water/Nutrient Availability	16363.00	0.00	Y	08/01/93	06/30/95
3-28251	BARTON,L	NMSU/WERC	WERC Grant 1993-1994 Funding Cycle (Actual Amt. Unknown)	0.00	2200.00	Y	02/20/93	08/31/94
3-28391	BARTON,L	DOE/WERC	Control Of Uranium Migration By Microbial Action	79547.00	19867.00	Y	02/20/93	02/19/96
3-28501	BARTON,L	WERC/DOE/NMSU	Dev. Biosensors For Monitoring Env. Waste Systems	9552.00	9552.00	Y	02/20/94	02/19/96
3-29341	MUSICK,B	USDA/ARS	Analysis Of Laser Scanner Imagery	2050.00	2050.00	Y	08/23/93	06/01/94
3-29421	PARMENTER/BRUNT	NSF	Career Enhancement/Training Environmental Biology(IDC Waived)	245000.00	245000.00	Y	10/01/93	03/31/98
3-29451	YATES,T	USF&WL	Coop.Agreemt:(15% IDC) Response Of SW MT Mammal Comm.-Global Change	150000.00	50000.00	Y	09/02/93	09/30/98
3-29581	BARTON,L	Clark AtlantaU	Microbial Mats For Constr. Of Barriar Sys.-Mgmt. Hazardous Wastes	30232.00	5500.00	Y	07/30/93	12/31/94
3-29621	LOKER,S	USAID	Impact Of Crayfish On Schistosomiasis Transmission -Kenya	150000.00	150000.00	Y	09/08/93	08/31/96
3-29711	SNELL,H	NMGF	Constr. Of Database Of Reptiles/Amphibians At Museum Of SW Biology	6000.00	6000.00	Y	10/15/93	10/01/95
3-29911	BROWN,J	NSF	Anatomy Of Geographic Range:Spatial Variation In Abundance	170000.00	170000.00	Y	01/01/94	03/31/96
3-30691	DAHM,C	NSF	Intergovernmental Personnel Act Agreement	73253.00	73253.00	Y	08/22/94	08/21/95
3-37871	GOSZ,J/BRUNT	NSF	US-China Workshop International Data Mgmt. Training	64269.00	0.00	Y	05/28/92	06/30/94
3-38711	GOSZ, J	NSF	NSF Directorship	93734.00	93734.00	N	01/01/93	12/31/94
3-38712	GOSZ,J	NSF	Yr. 2 NSF Directorship	97385.00	97385.00	Y	01/01/94	12/31/94
3-40231	KODRIC-BROWN,A	NSF	Video-Imaging Technique - Analysis Of Mate Choice In Guppies	120000.00	120000.00	Y	05/01/94	04/30/96
3-40431	CRAWFORD ET AL	NSF	Sevilleta Field Station:Library/Computer Center/Housing(Cost Share)	175000.00	175000.00	Y	01/01/94	06/30/96

DB Name:	Data Base Description:	Index Name:	Index Description:	Number of Accounts: 175	Y=Post Transactions to this acct
ACCOUNTS	LIST OF ALL ACCOUNT ID's & PI's	ACCTID	ACCTID		

0277

ACCOUNT NUMBER	PI Name	Agency	Title	Account Base	Account Curr. Yr.	Access Y=Post Transactions	Start Date	End Date
3-40441	MILNE/KEITT	USFWL	Coop. Agmt.:Landscape Analysis Of Mexican Spotted Owl	29279.00	29279.00	Y	02/16/94	02/15/95
3-40511	YATES,T	NMDH	Prof./Tech.Svs.Contr:Monitoring 4-Corners Hanta Virus In Mammals	175853.00	0.00	Y	02/24/94	12/20/94
3-40512	YATES,T	NMDH	Prof./Tech.Svs.Contr:Monitoring 4-Corners Hanta Virus In Mammals	155000.00	155000.00	Y	12/21/94	09/29/96
3-40531	LOWREY/REED	EMNRD	Prof. Svs. Agrmt.:Electrophoretic Studies Opuntia Viridiflora	8000.00	8000.00	Y	02/28/94	06/30/94
3-40681	WHITE,C	USDA Forest Svs	Effect On Water Quality Of Forest Rd. 12	8256.00	8256.00	Y	03/22/94	08/29/94
3-40881	BROWN/MEHLMAN	NSF	Spatial Distribution Of Abundance:Analysis Of Geographic Range	5000.00	5000.00	Y	04/01/94	09/30/96
3-40911	WATSON,P	NSF	Courtship Energetics & Heritability Of Metabolic Competence	60165.00	60165.00	Y	06/15/94	06/30/96
3-40919	WATSON,P	NSF	REU Supplement: Behavioral Energetics And Metabolic Competence	5000.00	5000.00	Y	06/15/94	06/30/96
3-41131	WHITE, C	USDA	Coop. Agrmt.: Ecology Of Cobble Mulch Gardens-Soil Moisture	22625.00	22625.00	Y	05/09/94	06/01/95
3-41151	MEHLHOP,P	NMEMNR	Rare Plant Database Development	2000.00	2000.00	Y	04/06/94	06/30/94
3-41241	MEHLHOP,P	USAED	Rare Bird Survey On The Rio Grande	25000.00	25000.00	Y	05/26/94	08/26/94
3-41251	MULDAVIN/MEHL	NMED	Dev. Riparian/Wetland Vegettion Community-Type Classification	84410.00	84410.00	Y	05/19/94	06/30/95
3-41291	MEHLHOP,P	NMG&F	N.M. Rivers Directory And Database	3500.00	3500.00	Y	05/24/94	10/31/94
3-41491	VALETT,M	NSF	SGER: Experimental Flooding Bosque Del Apache	24995.00	24995.00	Y	07/01/94	09/30/96
3-41499	VALETT/CAMPANA	NSF	REU Supplement To SGER: Flooding Of Bosque Del Apache	10000.00	10000.00	Y	07/01/94	09/30/96
3-41531	EVANS, ANN	NSF	Seed Bank - Evolution Of Post-Germination Traits	180903.00	180903.00	Y	07/12/94	06/30/96
3-41539	EVANS,A	NSF	REU SUPPLEMENT: REQUEST FOR NSF DEB-9318433	5000.00	5000.00	Y	07/01/94	06/30/96
3-41571	MULDAVIN,E	USFS	Vegetation Studies - Rio Grande Basin	25000.00	25000.00	Y	07/08/94	06/30/95
3-41611	MULDAVIN, E	Nat.Bio.Survey	Vegetation Map Unit Descriptions	2000.00	2000.00	Y	06/01/94	08/01/94
3-41681	PARMENTER ET AL	Nat.Bio.Survey	Arthropod Biodiversity Bandelier Nat'l Monument	7596.00	7596.00	Y	07/11/94	06/30/95
3-41682	PARMENTER ET AL	NBS	L-T Studies Arthropod Biodiv.- Bandelier (15% IDC)	7596.00	7596.00	Y	07/28/95	06/30/96
3-41711	MEHLHOP/RUNYAN	Earth Tech.	Woodrat Survey	1638.00	1638.00	Y	07/23/94	08/18/94
3-41761	PARMENTER/BRUNT	SNL	Scientific Res. Exp. For Minority Undergrad. Students	40000.00	40000.00	Y	07/11/94	09/30/98
3-41771	PARMENTER ET AL	Nat'l Park Svs	Petroglyph Nat'l Monument: Survey Biol. Resources(15%IDC)	33908.00	33908.00	Y	08/02/94	12/31/95
3-41941	PARMENTER,R	NPS	Coop. Agmt. Subagreemt No. 12-Natural Res. Mgmt Assistance	10234.00	10234.00	Y	08/22/94	09/30/95
3-42001	PARMENTER,R	SNL	REU (No IDC Per Goldberg)	40000.00	40000.00	Y	05/31/94	09/30/98
3-42061	GANNON,W	NMG&F	Acoustic Survey Of The Bats Of NM	5000.00	5000.00	Y	08/16/94	06/30/95
3-42201	MEHLHOP/ELLIOT	USFS	U.S. Forest Service Contract	5000.00	5000.00	Y	08/24/94	06/30/95
3-42231	MEHLHOP,P	NBS	Coop. Agreement: National Biological Survey	7889.00	7889.00	Y	09/30/94	02/28/95
3-42361	JOHNSON,G	USDA	Plant Growth Chamber (Equipment Only - See Cost Sharing)	8575.00	8575.00	Y	09/05/94	09/30/95
3-42381	MEHLHOP/RUNYAN	DOD/US ARMY	White Sands Woodrat Survey	5000.00	5000.00	Y	10/17/94	12/31/94
3-42431	YATES/S.BRAVO	NSF	Biogeography & Systematic Relationships Of S.A. Hurid Rodents	20750.00	20750.00	Y	10/15/94	09/30/96
3-42461	MILNE, ET AL	NSF	Sevilleta LTER II: Biome-Level Constraints On Pop./Ecosys. Responses	3780000.00	580000.00	Y	10/15/94	01/31/96
3-42469	MILNE ET AL.	NSF	REU Supplement: Sevilleta LTER II: Biome-Level Constraints On Pop./Ec	20000.00	20000.00	Y	02/15/95	01/31/96
3-42471	VALETT,M	USFS	Nutrient Retention In Rio Grande Continuum	40000.00	40000.00	Y	08/15/94	09/30/95
3-42491	YATES, T	PHS-Ind.Hlth	Hanta Virus Research (Get Title And Proposal)(26%)	4968.00	4968.00	Y	08/22/94	01/31/95
3-42551	MOLLES, M	USFS	Interaction Ecosystem Processes Rio Grande Basin(26%CoopAgreement)	17000.00	17000.00	Y	06/21/94	08/31/96
3-42561	CRAWFORD, C	USFS	Comparison Avian Foraging - Vegetation(26%CostShare)	12000.00	6000.00	Y	09/15/94	05/31/97
3-42741	MILNE,B	USDA-Forest Svs	Analysis Of Change In Pinyon-Juniper Woodlands Of SW U.S.	12500.00	12500.00	Y	09/12/94	03/31/95
3-42781	PARMEN/MULDAVIN	TNC	DEV OF A GEO INFO SYS FOR THE MELROSE BOMB RANGE, CANNON AFB	162410.00	-15000.00	Y	12/01/94	09/30/96

DB Name:	Data Base Description:	Index Name:	Index Description:	Number of Accounts: 175	Y=Post Transactions to this acct
**CCOUNTS	LIST OF ALL ACCOUNT ID's & PI's	ACCTID	ACCTID		

ACCOUNT NUMBER	PI Name	Agency	Title	Account Base	Account Curr. Yr.	Access Y=Post Transactions	Start Date	End Date
3-42782	PARMEN/MULDAVIN	TNC	DEV OF A GEO INFO SYS FOR THE MELROSE BOMB RANGE, CANNON AFB	15000.00	15000.00	Y	12/01/94	09/30/96
3-42881	MILLER, R	NIH	ISOLATING THE SCID MOUSE DNA REPAIR GENE	169712.00	169712.00	Y	12/01/94	11/30/95
3-43291	VALETT,M	NSF	STREAM/GROUND WATER ECOTONES: HYDROLOGY, BIOGEOCHEMISTRY, AND ECOLOGY	225000.00	225000.00	Y	02/01/95	01/31/96
3-43299	VALETT/CAMPANA	NSF	REU & RAMHSS SUPPLEMENT: STREAM/GROUNDWATER ECOTONES	16000.00	16000.00	Y	02/01/95	07/31/96
3-43311	MEHLHOP,P	DOD	VEGETATION MAP AND CLASSIFICATION OF FORT BLISS	325246.00	0.00	Y	09/28/94	09/28/96
3-43312	MEHLHOP,P	DOD	VEGETATION MAP AND CLASSIFICATION OF FORT BLISS	55362.00	0.00	Y	01/20/95	09/28/96
3-43381	YATES,T	PHS-IND HLTH SVC	LONGITUDINAL STUDIES OF RODENT CARRIERS OF HANTAVIRUS	23924.00	23924.00	Y	02/01/95	04/30/95
3-43581	LIGHTFOOT,D	NMSU	THE EFFECTS OF SMALL MAMMALS ON SPATIAL AND TEMPORAL PATTERNS OF VEGET	106029.00	15750.00	Y	11/01/94	10/31/95
3-43751	BRUNT,J	SANDIA	LTER Data Interface Development I And II	29986.00	29896.00	Y	04/11/95	04/14/96
3-43831	LOWREY,T	NMEMNR	Genetic Comparison Of Townsendia Gypsophila & T. Pendleri	3000.00	3000.00	Y	02/06/95	06/30/95
3-43871	MILLER,R	ENV TRUST	MHC VARIATION IN ESCHICHTIUS ROBUSTUS (GRAY WHALE)	2625.15	2625.15	Y	04/11/95	04/10/96
3-43911	DEBRUIN, ELLEN	NMEM&NR	Rare Plant Database Development	2000.00	2000.00	Y	03/31/95	06/30/95
3-43931	SMITH, FELISA	NSF	Microevolutionary Responses Of Woodrats To Climate Change Since The L	18000.00	18000.00	Y	05/01/95	04/30/96
3-44031	YATES,T	IHS	LONGITUDINAL STUDIES OF RODENT CARRIERS OF HANTAVIRUS	3225.00	3225.00	Y	05/01/95	05/12/95
3-44051	GANNON,W	HARDING LAWSON ASSOC	CAMP ROBERTS BAT SURVEY	7520.00	7520.00	Y	05/01/95	11/30/95
3-44061	MEHLHOP,P	NMG&F	RIVERS ASSESSMENT DATABASE DEVELOPMENT	3500.00	3500.00	Y	04/17/95	12/31/95
3-44241	WHITE,C	SANTA FE NATL FOREST	ASSESSMENT OF CURRENT WATER QUAL STATUS & POTENTIAL FOR NITRATE LOSS F	15000.00	15000.00	Y	06/06/95	06/30/96
3-44281	YATES, T	IHS	LONGITUDINAL STUDIES OF RODENT CARRIERS OF HANTAVIRUS	95700.00	95700.00	Y	06/01/95	05/14/96
3-44331	NATVIG/NELSON/W	NSF	RIMI: NEUROSPORA GENOME PROJECT AT UNM	322142.00	322142.00	Y	06/01/95	05/01/98
3-44601	DUSZYNSKI	NSF	Preawards #1 & #2: Historical Biodiversity Of Parasites - Small Mammal	25000.00	25000.00	Y	07/01/95	10/01/95
3-44781	DUSZYNSKI, D	NSF	Preaward: Coccidia Of The World	15000.00	15000.00	Y	08/01/95	09/30/95
3-44841	LOKER, E	MED.SCI.INTERNAT'L	Molecular Studies Of Schistosome Snail Interactions	45056.00	45056.00	Y	03/01/95	02/29/96
3-44931	GANNON, W.	BLM	Bat Survey Of Area Near Chama, NM	8690.00	8690.00	Y	08/07/95	09/30/96
3-44971	PARMENTER/BRUNT	NSF	Sevilleta Field Station: Enhancements - Computation/Info./Transportati	123120.00	123120.00	Y	09/01/95	08/31/97
3-55550	MITCHELL, R	NSF	Postdoctoral Research Fellowship (Inst. Allowance)	4800.00	0.00	Y	08/01/92	01/31/95
3-55620	FUGE,W	NIH	Fellowship Transfer To UNM	28600.00	0.00	Y	04/01/93	03/31/94
3-55621	FUGE/BROWN	NIH	Supp.- Modulation By AppppA Of Cellular Responses To Stress	14300.00	14300.00	Y	04/01/94	09/30/94
3-55650	SMITH/BROWN	NSF	Postdoctoral Research Fellowship 36 Mos. Inst. Allowance	7200.00	7200.00	Y	08/01/93	07/31/96
3-55680	LIGON, J.D.	Lovelace Inst.	Research Assistantship For Yue-Mei Geng	7401.00	7401.00	Y	02/01/94	09/30/94
3-55681	LIGON, J. D.	Lovelace Inst.	R.A. Contract For Yue-Mei Geng	0.00	11102.00	Y	10/01/94	09/30/95
3-55750	JOHNSON,N	NSF	Postdoctoral Fellowship - Institutional Allowance FY 94-95	4800.00	0.00	Y	06/01/94	11/30/97
3-55770	PECK, V	NSF	Fellowship - Bcyl C-Terminal Functions In Stationary Phase Yeast	28600.00	28600.00	Y	11/01/94	10/31/95
3-64221	CAPRIOGLIO, D	NSF	Isolation & Char.- Mutants In Transcription In Saccharomyces	70000.00	0.00	Y	07/01/91	09/30/93
3-64441	VOGEL,K	H.HUGHES	Undergraduate Curriculum Education Initiative	1062500.00	0.00	Y	07/01/92	08/31/97
3-77002	MARSHALL,D	Ross-Brown	Ross-Brown Endowment (Potter Chair)	6872.00	0.00	Y	07/01/92	07/01/96
3-83004	THORNHILL,R	UNM Regents'Professr	Regents' Professorship - 3 Yrs. 8-1-93 To 8-1-96 @ $8,300/Yr. (Res)	24900.00	8300.00	Y	08/01/93	07/31/96
7-05600	PARMENTER,R		PARMENTER	5000.00	0.00	N	04/01/91	03/31/92
9-10284	JOHNSON,G	UNM Foundation	Iron Nutrition Symposium 1993 Expenditures	2364.35	2364.35	Y	01/01/88	
9-10436	KERKOF,P		Expenditures Only	0.00	0.00	Y		
9-10753	SNELL,H		SNELL,H Expenditures Only	0.00	0.00	Y		

DB Name:	Data Base Description:	Index Name:	Index Description:	Number of Accounts: 175	Y=Post Transactions to this acct
ACCOUNTS	LIST OF ALL ACCOUNT ID's & PI's	ACCTID	ACCTID		

0280

ACCOUNT NUMBER	PI Name	Agency	Title	Account Base	Account Curr. Yr.	Access Y=Post Transactions	Start Date	End Date
9-11013	DICKERMAN,R	UNH Foundation	BIOLOGY-ORNITHOLOGY	10370.00	0.00	Y	09/30/93	
9-99999	BIOLOGY		AVAILABLE	0.00	0.00	Y		

Active grants, contracts, revenue accounts, etc. $7,140,190
Fiscal Year 1994-1995 contracts/grants received $5,950,339

DB Name:	Data Base Description:	Index Name:	Index Description:	Number of	Y=Post Transactions to this acct
ACCOUNTS	LIST OF ALL ACCOUNT ID's & PI's	ACCTID	ACCTID	Accounts: 175	

APPENDIX B

ANNUAL REPORT: MUSEUM OF SOUTHWESTERN BIOLOGY

Museum of Southwestern Biology, Division of Arthropods

ANNUAL REPORT, 1994-95

Dr. Manuel Molles, Curator

Introductory Comments

Currently, the Insect Collection contains at least 25,000 labeled specimens. Most are insects, but we have an extensive spider collection as well. A large proportion of the specimens have been identified to the family and genus level. Many specimens have been sent out for identification to the species level. In addition, the collection includes a fairly comprehensive unit of insects organized for teaching and demonstration purposes. Finally, there are also voucher collections and special collections that reflect the ongoing and completed research and other activities. The current assistant curator is M.J. Mund-Meyerson, who has held the position for two years.

Number of Visitors

Approximately 25 individuals from outside of the University visited the collection and 15 individuals within the university. We identified approximately 20 insects for individuals in the greater Albuquerque community.

Accessions

Two voucher collections were accessioned into the Division. One voucher collection contained fleas from a Ph.D. dissertation from Michael Patrick, and one voucher collection contains insects collected off of *Larrea* by Kristine Ernest at the Sevilleta National Wildlife Refuge. Additional collections were donated by: Irwin Leeuw, Dick Fagerlund, Lonnie Smith and Patricia Ashby.

Loans

One loan was sent out to another institution and five loans were sent out within the University of New Mexico. In addition to the loan of insect collections, seven books, field equipment (nets, killing jars, collection cases, and vials) and pinning equipment (pins, pinning blocks, labels, and pens) were loaned to faculty and staff of UNM.

Research

Several students working on graduate degrees have done extensive insect collecting and research: M.J. Mund-Meyerson, Sandy Brantley, Fred Heinzelmann, Natalie Runyan and Tim Haarmann. Substantial additions to the collection are expected when the students finish their research and identification. In addition, arthropods have been routinely collected by the on-going research at the Bosque del Apache National Wildlife Refuge, Bosque Biology 407/507 at the Rio Grande Nature Center, and by David Lightfoot at the Petroglyph National Monument.

LTER

Over the past six years, the Sevilleta Long Term Ecological Research (LTER) Project has added significantly to the Division of Arthropods. Supervised by Robert Parmenter and Sandy Brantley, the LTER has processed approximately 110,000 individual specimens, identifying 15 orders, 104 families, and more than 800 species. The collection, primarily stored at the Sevilleta National Wildlife Refuge, occupies over 40 standard CalAcademy drawers. Many of the Research Experience for Undergraduate (REU) students have utilized the insect collection at the Sevilleta in their projects.

Public Service

Most of the public service was performed in the way of answering questions about local insects through phone calls. One hundred and thirty-five phone calls were returned, primarily by the assistant curator, M.J. Mund-Meyerson. Seven letters were also answered by M.J. Mund-Meyerson. In addition, 12 school groups visited the collection from Kit Carson Elementary (two groups), St. Mary's Elementary, Rio Rancho Homeschoolers, Mitchell Elementary (three groups), Bel-Air Elementary, Stapleton Elementary, and UNM Day Care (three groups). M.J. Mund-Meyerson lectured at the Albuquerque Children's Museum and helped them establish an insect exhibit. Sandy Brantley lectured at the Rio Grande Nature Center and Fred Heinzelmann spoke to summer camp groups at the Rio Grande Zoological Park.

Current Projects

Dr. Cliff Crawford donated 120+ books and journals to the Museum, which are currently being organized into a library for the collection. The collection has been catalogued into a card file, which is being currently updated and will soon be computerized. The extensive collections donated by Dick Fagerlund have precipitated the need for more storage, so a new cabinet is being built and additional drawers ordered. All of the scientists who have identified specimens for the Museum in the past are being cataloged into the computer to develop an "expert list."

MUSEUM OF SOUTHWESTERN BIOLOGY

Division of Birds

Annual Report July 1994 - June 1995

This year the bird collection became fully computerized. The collection of Dr. Amadeo M. Rea has been nearly fully curated (catalogued and incorporated) into the collection; 3499 specimens to date. It should be noted that the Rea collection is already proving to be invaluable in providing well identified and annotated material for use in identifying New Mexico specimens of geographically variable species. Late in this report period another small box of skeletons still in a fumigation freezer was found and awaits sorting, and small collections from Belize, Mexico and Venezuela await disposition. Exchanges of the liquid preserved specimens have been completed. These were divided amongst University of Michigan, University of Kansas, Carnegie Museum and the National Museum of Natural History. In token exchanges we received 34 historical specimens from New Mexico of distributional interest, including a Gray Vireo taken in 1886; 8 are the first specimens taken in the state! Upon completion of these exchanges, two boxes of skeletons of corvids and a few falconids from the Old World were sent to the National Museum in a similar exchange arrangement.

During calender year 1994, 3738 specimens were catalogued. Through the efforts of Michele Merola and Patrick Zwartjes all specimens catalogued up to about 1 June 1994 have been entered to the computerized data base. This resource has been used repeatedly - in curatorial routines and for a few requests from outside researchers for data by taxa or geography. The data base still needs minor revision. Fields have been added for disposition of specimens (exchanges etc.) to pull that information out of the remarks field, and a field is to be added for cryogenic tissues.

During the last two report periods 19 new Delta Design cases have been incorporated into the collection. This has necessitated having narrow isles, and there is no space for additional expansion in the current facilities.

A Memo of Understanding has been prepared for signing by the University administration and the National Biological Survey (now Service). After this has been signed work can begin on the incorporation of the 3100-odd specimens of that collection as per the last annual report.

During the spring semester Christopher M. Milensky was employed with outside funds as curatorial aid. With his able assistance great progress was made in the preparation of a backlog of frozen material.

About 90 frozen salvaged birds were received from National Wildlife Refuges in coastal Texas; these included our first adult White-tailed Kite, US subspecies of Chachalaca and Olive Sparrow and a wealth of skeletal material.

Personnel:

Dr. Terry Yates, Curator Mammalogy and Ornithology
Dr. Robert W. Dickerman, Curatorial Associate MSB; Acting Curator, Ornithology
Mr. Gregory H. Farley, Curatorial Assistant
Ms. Julie Hagelin, Graduate Student

Ms. Michele Merola, Curatorial Assistant
Mr. Scott Norris, Curatorial Assistant
Mr. Patrick Zwartjes, Curatorial Assistant

Ms. Melissa Chaves, Student Assistant

Mr. Christopher M. Milensky, "Curator I" (=curatorial assistant)

Dr. Eleonora H. Trotter, Volunteer

Graduate students Daniel Albrecht, Laura Gonzales-Guzman, David Gray and Kelly M. Gordon (all working under Dr. Astrid Kordic-Brown) continued to use museum facilities and specimens, and material on loan from other institutions in their research.

Mr. Damian Scott and others, as part of their duties in the Mammal Division, processed avian material through the dermestid colony.

Publications:

Campbell, Irene and Dickerman, R.W. 1994. California Scrub Jay forages on mule deer. Western Birds 25:206.

Dickerman, R.W. 1994. On the importance of accurate data. N.M. Ornith. Soc. Bull. 22:61-62.

Dickerman, R.W. 1994. Undescribed subspecies of Red-tailed Hawk from Baja California. Southwestern Nat. 39:375-395.

Dickerman, R.W. 1994. Notes on birds from Africa with descriptions of three new subspecies. Bull. Brit. Ornith. Club. 114:274-278.

Dickerman, R.W., Cane, W.P., Carter, M.F., Chapman, A., and Schmitt, C.G. 1994. Report on three collections of birds from Liberia. Bull. Brit. Ornith. Club. 114:267-274.

Dickerman, R.W. and Hubbard, J.B. 1994. An extinct subspecies of Sharp-tailed Grouse from New Mexico. Western Birds 25:128-136.

Gray, D.A. and Hagelin, J.C. submitted. Song repertoires and sensory exploitation: reconsidering the case of the common grackle, Quiscalus quiscula. Anim. Behav.

Merola, Michele. 1994. A reassessment of homozygosity and the case for inbreeding depression in the cheetah Acinonyx jubatus: implications for conservation. Conserv. Biol. 8(4):961-971.

Merola, Michele. 1995. Fruit in the diet of nestlings on the Puerto Rican Tody, a tropical insectivore. Wils. Bull. 107(1):181-182.

Merola, Michele. 1995. Observations on the nesting and breeding behavior of the Rock Wren. Condor 97:585-587.

ANNUAL REPORT (FY 1994-95)
MUSEUM OF SOUTHWESTERN BIOLOGY
DIVISION OF FISHES

I. COLLECTION ACTIVITY: 24,506 catalogued lots 1,299,305 catalogued specimens

A. Accessions: Various ongoing projects continue to deposit fishes in the MSB fish collection. These are: U.S. Bureau of Reclamation San Juan River Recovery Implementation Program for 7 years and New Mexico Game and Fish San Juan Secondary Fish Study and Rio Grande Silvery Minnow research (NMGF). The U.S.F.W.S. Fisheries Resource Office is another important contributor, depositing significant numbers of fishes from the Pecos River and its tributaries. Secondly, MSB Division of Fishes expeditions have contributed significant numbers of specimens. These surveys include: Rio Grande silvery minnow habitat sites, Rio Chama, Las Animas, and Rio Seco.

1.	Expeditions (MSB):	2,290 lots	95,349 specimens
2.	Gifts:	3,803 lots	184,678 specimens
3.	Loans rec'd.:	2 lots	11 specimens
4.	Exchanges:	0	0
	TOTAL	6095	280,038

B. Transactions: A majority of our specimen loans were to student projects and classes. Fishes were loaned to the General Vertebrate Zoology and Ichthyology classes in the Department. (Although the teaching collection of fishes contain many good examples, it is often necessary to loan catalogued specimens for supervised student examination.) We are very pleased by this form of "in-house" loan activity; this is an indication that more students in the Department are becoming aware of the collection as a resource **for their use** and that our attempts to make students aware of the utility of systematic collections has increased this awareness. We also provide equipment and library loans to Biology students and other members of the Department. Another shift in "how we do business" has been the Division's increasing role in expediting transfers of important Southwestern fishes and tissues between government biologists and other academic departments that are cooperating in programs on endangered fishes. Frankly, we are the "only show in town" when comes to a **museum** collection of fishes. Therefore, we can provide museum services to outside researchers in the form of quality packaging and shipping of specimens and tissues as well as important paperwork involved to insure that specimens arrive safely. Requests for loans of specimens from other museums by government biologists are being handled by the Division as well accessioning the loan when it arrives.

1.	Loans of specimens:	93 lots	864 specimens
2.	Loans returned:	9 lots	384 specimens
3.	Gifts sent:	1 lot	10 specimens
4.	Exchanges:	0	0
5.	Transfers as a museum service:	3 lots	11 specimens
(6.	Loans of equipment/library:	10 transactions)	
	TOTAL	106 lots	1,269 specimens

C. Specimen identification services: 6,073 lots 284,825 specimens

The Division of Fishes continues to sort and identify the thousands of specimens deposited in the collection by the various government agencies involved in surveys of the San Juan River and the Rio Grande. This is a crucial service provided by the Division to the outside agencies, dependent on our final determinations of species of fishes they collect. Many of the specimens are larval forms and eggs and these have proved important in determining the continued existence of the San Juan squaw fish, *Ptychocheilus lucius*. Expertise in this area of identification can only be provided by this Division. All identifications were done by Christopher S. Altenbach, Gregory M. Lein, Keith B. Gido, Steven P. Platania, Nancy M. Johnston, and W. Howard Brandenburg.

D. Visitors to the fish collection: TOTAL 19

Visitors to the collection included researchers from U.S.F.W.S. in New Mexico, tour group for New Mexico State University, Las Cruces, National Biological Service in Ft. Collins, CO. and UNM Biology students involved in various projects.

E. Requests for information/services from the fish collection: TOTAL 13

A total of 8 hours were spent responding by phone or mail to questions ranging from, "How extensive are your holdings of *Cycleptus elongatus* larvae?" to "Can I include tuna in my kosher diet?" Our computer catalogue program generates complete lists of specific species and/or drainages; this query option can sort through thousands of records with 50 or more variables per record. Therefore, requests for lists of holdings are increasing annually. The Division gladly answers all queries generated from the public and academia. If we are unable to respond to questions we refer the individual to the correct authority. Because of our "open door" existence, we often have visitors requesting information on insects and other invertebrates. These numerous requests are not included in the above total although we give them equal attention in our responses.

F. Volunteers in the fish collection: TOTAL 1

From September to December 1994, we had a Biology undergraduate student from the University of New Mexico, Michelle Sharpe, volunteering in the collection. Her primary task was to re-alcohol, label and phylogenetically organize the teaching collection of fishes in the GVZ lab of Biology. She was given the job of determining which families of fishes were unrepresented or under represented and chose appropriate examples from the collections uncatalogued (no locality data) holdings and insert these into the collection. She accomplished her duties well before the Spring semester when Ichthyology would be offered.

G. Publications based on MSB fishes: 0

II. MSB DIVISION OF FISHES PERSONNEL

Manuel Molles, Ph.D. Curator of Fishes. Draft completed for the Ecology Textbook, McGraw-Hill, Inc. GRANTS & AWARDS: USFWS 1995-1996 ($70,000) w/C.S Crawford: *The effects of annual flooding on the Rio Grande Bosque.* NSF May 1994-May 1995 ($25,000) w/H.M. Valett, C.S. Crawford and M.E. Campana: *Experimental flooding at Bosque del Apache National Wildlife Refuge, New Mexico.* USDA Forest Service Aug. 1994-Aug. 1995 ($17,000): *Interaction of ecosystem processes in the Rio Grande basin.*

Steven P. Platania, M.S. Associate Curator, Program Director. Rio Grande silvery minnow habitat and population studies; San Juan River drift net studies and larval identifications. Member of the San Juan River Research group and the Rio Grande Recovery team. Member of the American Society of Ichthyologists and Herpetologists Board of Govenors.

Alexandra M. Snyder, B.A. Collection Manager. Processing and cataloguing 1994 San Juan River seine and drift net collections received from the U.S. Bureau of Reclamation. Chair of the American Society of Ichthyologists and Herpetologists Subcommittee on Supplies and Resources; co-author, *Guide to Ichthyological Collections Care and Management,* still in writing stage. Commitment of one day a week to the Division of Herpetology in care and management of those collections started Spring 1995.

Gregory M. Lein, M.S. Field Biologist. Field crew coordinator for Rio Grande silvery minnow habitat and population studies. Stomach and gonad analyses of Rio Grande silvery minnow, identification services to the U.S.F.W.S. Fisheries Resource Office of Pecos River fishes.

Keith B. Gido, M.S. Graduate Student (Molles). Primary research on San Juan River fishes, stream ecology. Larval fish identification services to the U.S. Bureau of Reclamation San Juan River survey.

John P. Sherrod, B.S. Biological Illustrator and Field Assistant. Distribution maps on Rio Grande silvery minnow localities; light trap larval study, April 1995-July 1995. San Juan River drift net study; San Juan River drift net study, July 1995-September 1995. Continuing work in natural history illustrations, ornithology and entomology.

Christopher S. Altenbach, undergraduate Biology. Primary responsibility in larval identifications for U.S. Bureau of Reclamation, New Mexico Game and Fish, and U.S.F.W.S. Fisheries Resource Office. Field crew member for Rio Grande silvery minnow habitat and population studies.

John P. Larson, undergraduate Education. Primary responsibility as curatorial assistant on San Juan River study processing adult and larval fish specimens. Supplies inventory and storage. Field crew member for Rio Grande silvery minnow habitat and population studies.

Nancy M. Johnston, undergraduate Biology. Primary responsibility as research assistant to the Rio Grande silvery minnow food habit study; field assistance for Rio Grande survey; San Juan River drift net study, June 1995-August 1995. Fish sorting and identification.

W. Howard Brandenburg, undergraduate Biology. Primary responsibility to San Juan River drift net study, June 1995-August 1995. Fish sorting and identification.

Laura Gonzales-Guzman, Ph.D. student Biology (Brown). Computer data entry and record editing. General lab assistance and fish sorting and identification. Cataloguing the San Juan River 1994 Survey specimens.

MSB Curatorial Associates:
Steven P. Platania, M.S. Department of Biology, University of New Mexico.
David L. Propst, Ph.D. New Mexico Department of Game and Fish, Santa Fe.

MSB Research Associates:
Astrid Kodrick-Brown, Ph.D. Professor of Biology, University of New Mexico.
Brooks M. Burr, Ph.D. Professor of Zoology, Southern Illinois University.

PRESENTATIONS

Gido, Keith B. Spatial and temporal variation of fish communities in secondary channels of the San Juan River, New Mexico and Utah.
Desert Fishes Council, October 1994 Death Valley, CA.
American Society of Ichthyologists and Herpetologists, June 1995 Edmonton Canada.

Molles, Manuel C. Ecological restoration of a riparian forest: limnology and biogeochemistry of manipulative flooding, Rio Grande. North American Benthological Society, June 1995 Keystone, CO.

The effects of experimental flooding on the ground arthropod community of the middle Rio Grande riparian forest. Ecological Society of America, August 1995 Snowbird, UT

Platania, Steven P. Reproductive biology of a guild of plains stream cyprinids. American Society of Ichthyologists and Herpetologists, June 1995 Edmonton Canada.

ABSTRACTS, PAPERS AND REPORTS

Molles, M.C., Jr., C.S. Crawford and L.M. Ellis. 1995. The effects of an experimental flood on litter dynamics in the middle Rio Grande riparian ecosystem. Regulated Rivers Research & Management. (In press)

Heinzelmann, F., C.S. Crawford, M.R. Warburg, and M.C. Molles, Jr. 1995. Microhabitat selection by *Armadillidium vulgare* in a riparian forest: lack of apparent influence by leaf litter food quality. *In* M.A. Alikhan (ed), Terrestrial isopod biology. A.A. Balkema, Rotterdam.

III. SUMMARY OF FY94-95 ANNUAL REPORT

Currently, the Division of Fishes holdings exceed the fish collection of the Texas Natural History Collection at the University of Texas, Austin, a peer institution and considered an "important collection" by the latest survey of USA and Canadian fish collections (Poss, S.G. & B.B. Collette 1995. *Second survey of fish collections in the United States and Canada.* Copeia (1):48-70). I bring this information to your attention in order to show the rate at which we are growing. When the survey was conducted (1991/92) the MSB collection was listed as having 7700 catalogued lots or 400,000 catalogued specimens. We are now archiving over a million fishes in the **same amount of space** we have had since that survey was conducted. Although the ranking of fish collections in this survey is not based on size but on many other factors including type collections, future surveys may include the MSB collection as an important collection based on its holdings of larvae and eggs and historically important collections of fishes. We have become a focal collection for government biologists in the state, a repository as well as a service for their collections. We have become a "clearing house" for tissues collected for analyses on the Gila trout, the various species of chubs, and other cyprinids of interest to molecular research. Therefore, we are facing a serious lack of space for both the collections and this increase in collection activity.

We are pleased to have more students using the collections for a variety of projects or as a source of information. Both long-term projects and class projects have found support and help from members of the Division. We have helped in project design and appropriate specimen selection for students. The small Division "library" and Platania's private library are used frequently by graduate students.

The collection has also become an important resource to outside researchers due to our having the complete catalogue electronically captured. Although only 25% of the records are edited for standards and mistakes, we can easily answer a variety of questions and then send edited records in response.

We have purchased the permanent number tags from the National Tag Group (Paxar) and continue to produce permanently inked jar labels for the incoming collections. We have not been able to find inexpensive steel shelves to increase the amount of space for jars on each unit. Space and proper storage of the fish collections has become an increasing concern. A storage solution may involve setting aside sections of the collection in sealed boxes and placing them in permanent storage elsewhere. The "elsewhere" is unknown.

The Divisions of Herpetology and Fishes will share the Collection Manager position one day a week in an effort to give some continuity to the care and maintenance of the herp collection. This has been made possible by the Department of Biology's cost-sharing agreement with the U.S. Bureau of Reclamation to assume the Collection Manager's salary fringe benefits. An important aspect of this position sharing agreement between the two Divisions will be a reduction in the duplication of tasks and efforts that the two wet collections have in common.

UNM HERBARIUM ANNUAL REPORT (FISCAL YEAR 1994-1995)

The vascular plant holdings of the herbarium now exceed 89,400 specimens. All of our administrative activities such as loan requests, generation of specimen labels, and general record keeping have been computerized. Each new specimen accessioned has its label information captured in the computer database. We are working toward computerizing our collection holdings and have over 19,000 specimens in our database (21% of the collection).

Taxonomic Composition

Vascular Plants		Mounted Sheets
Pteridophytes		1,500
Gymnosperms		2,000
Angiosperms		85,900
Asteraceae	9,500	
Fabaceae	5,900	
Poaceae	11,800	
Cactaceae	3,650	
Other		Lots
Seeds		500
Mosses		200
Lichens		1,300
Fungi		200
Total		**91,600**

We submitted a proposal to the National Science Foundation in 1995 titled: The Consortium of Herbaria in Arizona & New Mexico (CHAZNM): Development of a Computerized, Network-Accessible, Inter-Institutional, Herbarium Specimen Database. This proposal is for the establishment of a coordinated herbarium database for the holdings of the major herbaria in Arizona and New Mexico. The database administration will be based at UNM. The requested amount of funding is $1,051,679.00 for three years. Dr. Tim Lowrey is the PI.

A number of Federal, State, and private agencies continue active associations with the herbarium. The New Mexico office of the Nature Conservancy continues to use the UNM Herbarium as the repository for specimens collected for the Heritage Program Database of Threatened and Endangered Plants. The plant specimens collected for the Sevilleta LTER are being deposited in the herbarium, and data from all the collections are entered in the database. The curator continues his efforts on the NM Plant Recovery Team.

The Herbarium continues to serve as an important training facility for both undergraduate and graduate students in plant taxonomy and herbarium techniques. During the year we have one undergraduate work-study student per term working in the herbarium. We also have a graduate student R.A. working in the herbarium every term.

The UNM herbarium's lichen, moss and fungi collection are fully catalogued and curated. The herbarium library of over 700 volumes and journals are catalogued and assigned Library of Congress Call numbers, this database is soon to be available over the departments computer networks. A teaching collection (over 700 specimens) are catalogued and housed in room 19. In addition, we are continuing the process of identifying the backlog and revising nomenclature of specimens in the collection.

The Castetter Laboratory for Ethnobotanical Studies (CLES) continues to be extremely productive. The CLES is one of the few such research groups in the entire U.S that does both contract and original research. See end of report.

The long term goals of the herbarium remain to initiate and complete basic systematic research on Southwest and Pacific Basin vascular plant groups, to complete full computerization of the collection, provide a comprehensive representation of the floristic diversity in New Mexico, provide taxonomic services to researchers, to confirm identifications of research organisms, and provide botanical research material for students in the UNM Biology Department.

Summary of Curatorial Activities

Number of specimens accessioned: 2,592

Incoming materials: A total of 2115 specimens were received into the UNM Herbarium.

Gifts received: (20 comprising 1,489 specimens)
Loans received: (6 comprising 151 specimens)
Exchanges received: (4 comprising 475 specimens)

Transactions: A total of 3551 specimens housed in the UNM Herbarium were sent to various institutions/researchers.

Loans sent: (32 comprising 2217 specimens)
Loans returned (19 comprising 1149 specimens)
Gifts sent: (4 comprising 11 specimens)
Exchanges sent: (1 comprising 174 specimens)

Visitors: Over 473

369 Professional
114 Public/students

Information requests:

Over 65 requests for information were given to academics (25), professionals (22) and the public (18)

UNM Herbarium Personnel, Graduate Students and Associates

Personnel

Chris Frazier, Ph.D. Graduate student (T. Lowrey) TA Fall 1994, Spring 1995, 10 hrs/week, Summer 10 hrs/wk - Specimen identification, nomenclature updates.

Timothy K. Lowrey, Ph.D. Assoc. Professor & Curator. Botanical Inventory of Taiwan project administered by the Missouri Botanical Garden. Contributing author, Flora of Singapore Project. Continuing research on an NSF-funded project on the Evolutionary Genetics of *Tetramolopium.* Survey for *Astragalus kerrii* in the Capitan Mountains. T. Lowrey P.I. Genetic analysis of *Opuntia viridiflora.* T. Lowrey P.I.

Jane Mygatt, B.S. Collection manager. Editor of international electronic-mail databases: Plant Taxonomists (PTO), and Collection Managers (CMO). Processing and cataloguing herbarium specimens.

Huong Tran, Undergraduate, work-study 20 hrs/week. Processing herbarium specimens and data entry.

Graduate students

Patricia Barlow-Irick, Ph.D. Graduate student (T. Lowrey) *Cirsium* in Vascular Plants of Arizona. Taxonomic revision of the *Cirsium arizonicum* complex. Description of *Cirsium ochrocentrum* ssp. *martinii.* Compositae Database.

Dixie Daniels, M.S. Graduate student (T. Lowrey) Thesis title: Isozyme analysis of *Townsendia eximia* and *T. formosa* in New Mexico and Colorado.

Chris Frazier, Ph.D. Graduate student (T. Lowrey) Fitness and Evolutionary Significance of Hybrids in *Nepenthes.*

Stephen Reed, M.S. Graduate student (T. Lowrey) Thesis title: Isozyme analysis of rare species of *Erigeron* in New Mexico. Survey for *Astragalus kerrii* in the Capitan Mountains. T. Lowrey P.I. Genetic analysis of *Opuntia viridiflora.* T.K. Lowrey P.I.

Volunteers

Amelia Lea (Summer 1995) 10 hrs/week
Data entry and processing vascular plant collections.

Research and Curatorial Associates

Jack Carter, Ph.D. Research Assoc. Professor of Biology (Senior Status) The Colorado College, Research Grant - Trees and Shrubs of New Mexico - Southwest Studies Program

David Deardorff, Ph.D. Research Assoc. Biologist, NM State Lands Office

Ellen DeBruin, M.S. Research Assoc. Botanist, New Mexico Natural Heritage Program

William Dunmire, M.S. Curatorial Assoc. Nature Conservancy (retired); Ethnobotany of the Southwest (1995 in press)

William Hevron, M.S. Research Assoc. Botanist, Navajo Natural Heritage Program

R. DeWitt Ivey, M.S. Research Assoc. APS (retired); Botanical Author.

Charles "Chick" Keller, Ph.D. Research Assoc. Director, Institute of Astrophysics, Los Alamos Scientific Laboratories

Karen Lightfoot, M.S. Research Assoc. Botanist, Energy, Minerals & Natural Resources Dept., Forestry & Resources Conservation Division.

Esteban Muldavin, Ph.D. Research Assoc. Ecologist, New Mexico Natural Heritage Program

Robert Sivinski, M.S. Research Assoc. Botanist, Energy, Minerals & Natural Resources Dept., Forestry & Resources Conservation Division.

Presentations and Meetings Attended by Herbarium Personnel

Chris Frazier (1995). American Institute of Biological Sciences, San Diego, California.

Timothy K. Lowrey (1994). American Institute of Biological Sciences. Knoxville, Tennessee.

Timothy K. Lowrey (March 1995). New Mexico Plant Recovery Team Meeting. Albuquerque, New Mexico.

Timothy K. Lowrey, D. Read, R. Chan, & R. Whitkus (1995). Presented: Duplication of Cytosolic NADP-IDH in Hawaiian and Cook Island *Tetramolopium.*

Timothy K. Lowrey (1995). American Institute of Biological Sciences, San Diego, California.

Jane Mygatt. June 1995. Toronto, Ontario. Society for the Preservation of Natural History Collections (SPNHC). Managing the Modern Herbarium.

Publications and Reports based on UNM Herbarium specimens

Dunmire, William W. & Gail D. Tierney. 1995. Wild Plants of the Pueblo Province, exploring ancient and enduring uses. Museum of New Mexico Press. 290 pp.

Lightfoot, K. , Sivinski, R. , Clayton, P. and A. Cully. 1994. Recovery plan for the Sacramento prickly poppy (*Argemone pleiacantha* ssp. *pinnatisecta*). U.S. Fish and Wildlife Service, New Mexico Ecological Services State Office, Albuquerque, New Mexico.

Lowrey, T.K. and H.T.T. Tan. *Nepenthes.* In, Flora of Singapore. Singapore Botanic Garden. Submitted.

Lowrey, T.K. 1995. Phylogeny, adaptive radiation, and biogeography in Hawaiian *Tetramolopium* (Asteraceae). In Hawaiian biogeography: evolution on a hot spot archipelago. W.L. Wagner and V. Funk eds. Smithsonian Institution Press. Washington, D.C.

Lowrey, T.K. and P.J. Knight. 1994. *Townsendia gypsophila* (Compositae; Asterae): a new species from northern New Mexico. Brittonia 46(3): 194-199.

Sivinski, R., T. Lowrey, & R. Peterson. 1994. Additions to the native and adventive flora of New Mexico. Phytologia 76(6):473-479.

Sivinski, R. 1994. A Review of *Cryptantha fulvocanescens* (Boraginaceae) and Re-evaluation of Greene's *Oreocarya nitida.* Madrono 41(4):243-253.

Sivinski, R. 1994. Flora Neomexicana: Gypsophilous plants. Native Plant Society of NM, Newsletter 19(2):1-2.

Sivinski, R. and K. Lightfoot. 1994. Inventory of the Rare and Endangered Plants of New Mexico, 2nd edition. NM Forestry Division, Misc. Publ. No. 3, Santa Fe, 45 pp.

Sivinski, R. 1994. A botanical inventory of Pecos National Historical Park, New Mexico. National Park Service, SW Regional Office, Santa Fe, NM.
Committee Workshop.

Wipff, J.K. & S. Hatch. 1994. A Systematic Study of *Digitaria* sect. Pennatae (Poaceae: Paniceae) in the New World. Systematic Botany. 19(4):613-627.

Grants Awarded

Chris Frazier (1995) Graduate Research Allocation Committee Grant ($250), Student Research Allocation Committee Grant ($150) and the Wayne P. Springfield Scholarship in Plant Ecology ($2000)

Tim Lowrey (1995) Genetic Analysis of *Townsendia gypsophila* and *T. fendleri.* New Mexico State Dept. of Energy, Minerals, and Natural Resources. ($3,000)

Students utilizing the UNM Herbarium for Research

Nell Backus
Dixie Daniels
Paula Durkin
Chris Frazier
Jan Gish
Laura Gonzalez-Guzman
Quinfeng Guo
Colleen Hatfield
Pat Barlow-Irick
Josh Leffler
Mary Jean Mund
Stephen Reed
Dov Sax
Mary Stuever
Rob Taylor

Courses using the UNM Herbarium

Biology 260 -Introduction to Botany
Biology 363 - Flora of New Mexico
Biology 499 - Undergraduate problems
Biology 563 - Advanced plant taxomony

Outside agencies using the UNM Herbarium

Navajo Natural Heritage Program
New Mexico Natural Heritage Program, The Nature Conservancy
N.M. Dept. of Forestry
New Mexico State Land Office
U.S. Forest Service
U.S. Fish and Wildlife Service
U.S. Bureau of Land Management

CASTETTER LAB FOR ETHNOBOTANICAL STUDIES (CLES)

401 Holloway, R.G. Pollen Analysis of Samples from La 26272 and La 85183, Projects 93-Sjc-025 and 93-Sjc-026, San Juan County, New Mexico. MS on file Cultural Resources Management Program, San Juan College, Farmington NM 87402. Meredith Matthews, Proj. Dir. July 1994

402 Holloway, R.G. Pollen Analysis of Samples from La 47047 and La 82989, Projects 93-Sjc-033 and 93-Sjc-038, San Juan County, New Mexico. MS on file Cultural Resources Management Program, San Juan College, Farmington NM 87402. Meredith Matthews, Proj. Dir. July 1994.

403 Holloway, R.G. Pollen Analysis of Samples from La 85369, Project 93-Sjc-027, San Juan County, New Mexico. MS on file Cultural Resources Management Program, San Juan College, Farmington NM 87402. Meredith Matthews, Proj. Dir. July 1994.

404A Holloway, R.G. Pollen Analysis of Site La 81694, a Multicomponent Archaic/Anasazi/Historic Period Site near Navajo Reservoir, San Juan County, New Mexico. MS on file, Navajo Nation Archaeology Dept. 609 S. Behrend Ave. Farmington, NM 87401, Douglas Dykeman, Project Director.

404B Holloway, R.G. Pollen Analysis of Site La 71781, a Multicomponent Archaic/Protohistoric Navajo/Historic Period Site near Navajo Reservoir, San Juan County, New Mexico. MS on file, Navajo Nation Archaeology Dept. 609 S. Behrend Ave. Farmington, NM 87401, Douglas Dykeman, Project Director.

405 Holloway, R.G. Flotation Analysis from Sites 5mf2725 and 5mf2726, Moffat County, Colorado. MS on file, Alpine Archaeological Consultants Inc. P.O. Box 2075 Montrose CO 81402 Paul Tickner Project Director., 4 pages, October 1994.

406 Holloway, R.G. Pollen Analysis of Four Samples from La 89898, San Juan County, New Mexico, San Juan College Project 94-Sjc-022, MS on file, San Juan College, 4601 College Blvd. Farmington, NM 87402-4609, John D. Carter, Project Director.

407 Holloway, R.G. Pollen Analysis of Two Sites near Datil, Catron County, New Mexico. Ms on file, Office of Archaeological Studies, Museum of New Mexico, Yvonne Oakes Proj. Dir. January 1995.

408 Holloway, R.G. Intensive Systematic Microscopy of Samples from Site La 86774, Dona Ana County, New Mexico. Ms on file, Office of Archaeological Studies, Museum of New Mexico, James L. Moore, Project Director. January 1995.

409 Holloway, R.G. Pollen and Flotation Analysis of Site La 104940, San Juan County, New Mexico. Ms on file, Southwest Archaeological Services Inc. 119 North Church Ave. Aztec, NM 87410, Susan Barnett Proj. Dir., December 1994.

410 Holloway, R.G. Intensive Systematic Microscopy of Suspected Agricultural Fields from Sites La 83116, La 83117, and La 83151, Ojo Caliente Valley, Rio Arriba County, New Mexico. Ms on file, Office of Archaeological Studies, Museum of New Mexico, John Ware, Proj. Dir., April 1995.

411 Holloway, R.G. Pollen Analysis of Historic Age Sediments from an Early 20th Century Homestead in Roswell, Chaves County, New Mexico, Ms on file, Office of Archaeological Studies, Museum of New Mexico, Santa Fe, NM, Jeff Boyer Proj. Dir, February 1995.

412 Holloway, R.G. Excavation and Recovery of Botanical Materials from Archaeological Sites. IN: Archaeological Field Methods, Hester and Shafer (eds). Mayfied Press. February 1995

413 Holloway, R.G. Pollen Analysis from LA 103919, Santa Fe County, New Mexico. Ms on file, Office Archaeological Studies, Museum of New Mexico, Santa Fe NM, Stephen C. Lent Proj. Dir. May 1995.

414 Holloway, R.G. Charcoal Analysis from Boyd Land Exchange. Ms on file, OCA, Dept. Anth., UNM, May 1995

415 Holloway, R.G. Pollen Analysis of Two Sites, La 49873 and La 71849, Rio Arriba, New Mexico, Crmc Project 93-194. Ms on file, Cultural Resources Management Consultants Inc., Farmington, NM 87499, June 1995.

416 Holloway, R.G. Pollen Analysis of Site, La 79025, San Juan County, New Mexico, Crmc Project 94-023. Ms on file, Cultural Resources Management Consultants Inc., Farmington, NM 87499, June 1995.

417 Holloway, R.G. Pollen Analysis of Several Sites along U.s. Highway 180, Reserve to Luna, Catron County, New Mexico, Phases Mnm 41.453 and Mnm 41.492. Ms on file, Office of Archaeological Studies, Museum of New Mexico, Santa Fe NM, Yvonne Oakes, Proj. Dir. June 1995.

November 1994: Presented Paper "The use of Bleach for extraction of arid Southwestern Pollen Samples". Presented at the 27th Annual Meeting, American Association of Stratigraphic Palynologists, College Station, TX. November 1-5 1994.

1994-1995 ANNUAL REPORT OF THE DIVISION OF HERPETOLOGY MUSEUM OF SOUTHWESTERN BIOLOGY THE UNIVERSITY OF NEW MEXICO

Don S. Sias and Howard L. Snell

COLLECTION GROWTH AND USE

Accessions -- 17 lots, totaling over 861 specimens were accessioned in 1994-1995.

Catalog -- 2140 specimens were cataloged in 1994-1995, bringing the total collection size to 59508 specimens.

Loans -- 10 loans totaling 160 specimens were made during 1994-1995.

Guests -- 31 guests visited the museum in 1994-1995. In addition, the museum was visited by several groups of school children. Several Distinguished herpetologists used the collections for research this year, including Drs. Hobart Smith and Roger Conant.

Phone inquiries -- Approximately two hundred inquiries from the public regarding museum functions and herpetology were answered in 1994-1995.

PERSONNEL:

Curator
Howard L. Snell

Curatorial Associate
Charles W. Painter
Norman J. Scott, Jr.
James N. Stuart

Curator Emeritus
William H. Degenhardt.

Curatorial Assistant
Don S. Sias

Research Associates
Roger Conant
Thomas H. Fritts
Lee A. Fitzgerald
Randy D. Jennings (nominee)

Graduate Students
Marco Altamirano
K. Thalia East
William G. Gorum
Mark A. Jordan
Leland J. Pierce
Don S. Sias

Collections Manager
Alexandra Snyder

Museum Staff
Tara Armijo-Prewitt
David A. Stricker
Robert Urish

RESEARCH:

The following personnel used the Herpetology collection on a regular basis for research activities in 1994-1995.

Marco A. Altamirano, Graduate Student
Chris S. Altenbach, Lab Tech (Ichthyology)
Richard Anderson, Masters Student
Tara Armijo-Prewitt, Undergraduate Student
Marie Brown, OCA/UNM (Archaeological Bone ID)
Ken Brown, OCA/UNM (Archaeological Bone ID)
Roger Conant, Adj. Prof., Research Associate
William G. Degenhardt, Curator Emeritus
Lee Fitzgerald, Adj. Assist. Professor, Research Associate
Thomas H. Fritts, Adj. Assoc. Prof., National Biological Service, Research Associate
Jen Grace, Undergraduate Student
Randy D. Jennings, Ass. Prof., Dept. of Nat. Sciences, Western New Mexico University
Mark A. Jordan, Graduate Student
Charles W. Painter, N.M. Game & Fish, Curatorial Associate
Lee Pierce, Graduate Student
Steven P. Platania, N.M. Game & Fish (Ichthyology)
Cindy A. Ramotnik, National Biological Service
Norman J. Scott, Jr., Adj. Assoc. Prof., National Biological Service, Curatorial Associate
Don Sias, Graduate Student, Curatorial Assistant
Heidi M. Snell, Science Applications International, Inc.
Howard L. Snell, Assoc. Prof., Curator
Paul A. Stone, Graduate Student
David A. Stricker, Undergraduate Student
James N. Stuart, National Biological Service
Paul Stone, Graduate Student
Robert Urish, Undergraduate Student

STUDENT TRAINING:

During 1994-1995 the following students were involved in research under the direction of faculty associated with the Herpetology Division.

Marco A. Altamirano, M. S.
Richard Anderson, M.S.
Tara Armijo-Prewitt, B.S.
Yvonne Chauvin, B.S.
K. Thalia East, M. S.
Jen Grace, B.A.
Billy Gorum, M. S.
Mark A. Jordan, M. S., Ph. D.
Lee Pierce, M.S.
Don Sias, Ph. D.
Paul Stone, Ph. D.
David Stricker, B.S.
Robert Urish, B.S.

DISSERTATIONS AND THESES:

Jordan, M. A. 1994. The Relationship of Metabolic Rate to Body Mass in the Galápagos Land Iguana (Conolophus subcristatus). Master's Thesis.

Stone, P. A. 1995. Sexual Selection in Galápagos Lava Lizards (Tropidurus). Dissertation.

GRANTS:

Proposals Submitted

Jordan, M. A. Determinants of Egg Success in Lava Lizards. Latin American Institute , Tinker Foundation, $2200.

Snell, H. L., L. A. Fitzgerald, L. W. Gorum, and D. S. Sias. Status of Sceloporus arenicolus in Southeastern New Mexico. $80,000.

Proposals Funded

Beck, D., and R. D. Jennings. 1995. The Gila Monster in Southwestern New Mexico: Habitat Selection Study. New Mexico Department of Game and Fish, $6,000.

Fitzgerald, L. A. 1994-1997. Science Advisor for Tupinambis programs in Paraguay and squamate conservation problems in general. TRAFFIC(USA)/World Wildlife Fund/CITES/government of Paraguay. $160000.

Jennings, R. D. 1995. Investigations of Recently Viable Leopard Frogs Populations in New Mexico: Rana chiricahuensis and Rana yavapaiensis. New Mexico Department of Game and Fish, $15,000.

Jennings, R. D. 1995. Differential Habitat Use By a Southwestern Lizard Fauna. Western New Mexico University Faculty Research Grant, $660.

Jordan, M. A. Determinants of Egg Success in Lava Lizards. Latin American Institute , Tinker Foundation, $1665.

Ramotnik, C. A., and N. J. Scott, Jr. Studies of the Effects of Logging in the Sacramento Mountain Salamander, Aneides hardii U.S. Forest Service, August 1994, $4000.

Ramotnik, C. A., and N. J. Scott, Jr. Studies of the Effects of Logging in the Sacramento Mountain Salamander, Aneides hardii U.S. Forest Service, August 1995, $4000.

Snell, H. L., L. A. Fitzgerald, L. W. Gorum, and D. S. Sias. Status of Sceloporus arenicolus in Southeastern New Mexico. July 1995, $80,000.

Snell, H. L., and Donald B. Miles. The Roles of Sexual and Natural Selection in the Evolution of Sexual Size-Dimorphism. National Science Foundation. June 1992 - December 1996, $212,000, approximately $67,000 a year.

Snell, H. L., Research and Conservation in the Galápagos Islands. Established this Fund in the UNM Foundation with a $30,000 Package of Donations and Matching Grants From IBM Corporation.

AWARDS, SCHOLARSHIPS, AND FELLOWSHIPS:

Altamirano, M. A. US AID Scholarship to attend the University of New Mexico, 1994-1996

Altamirano, M. A. US AID Scientific Grant, $4885, 1995.

Altamirano, M. A. Latin American Institute Grant (LAI), $1160, 1995.

PAPERS PRESENTED AT MEETINGS:

Jordan, M. A., and P. A. Stone. 1994. North American Turtle Assemblages. Department of Biology Noon Seminar, University of New Mexico, 28 September 1994.

Jennings, R. D., D Bradford, and B. R. Riddle. 1995. Rana onca in Southern Nevada: Populations Trends and Phylogenetic Relationships. Presented at the Annual Meeting of the Southwestern United States Working Group of the Declining Amphibian Population Task Force, January.

Ramotnik, C. A. 1995. Collections on the Move: A Case Study of the Peregrinations of a Federal Collection of Vertebrates. Annual Meeting of the Society for the Preservation of Natural History Collections, Toronto, Canada.

INVITED PRESENTATIONS:

Altamirano, M. A. 1995. Diversity and Relative Abundance of Herpetofauna from Sinangue, Sucumbios Province, Cayambe - Coca Ecological Reserve, Ecuador. Scientific Reports of ECOCIENCIA Foundation. New Mexico Herpetological Society, February 1995.

Fitzgerald, L. A. 1994. The Conservation Biology and Ecology of South American Tupinambis Lizards. Invited Seminar at the Institute of Arctic Biology and Department of Biology and Wildlife Sciences, University of Alaska, Fairbanks. August 1994.

Fitzgerald, L. A. 1994. Urban Cowboys, Rattlesnake Roundups, and the Unregulated Trade in Rattlesnakes. Invited Seminar at the University of Alaska Museum. August 1994.

Pierce, L. A. 1994. Reptiles and Amphibians of Los Alamos National Laboratories. New Mexico Herpetological Society, Albuquerque, NM, November.

Snell, H. L. 1995. Population Dynamics and Galápagos Reptiles: Allometry of the Effects of Introduced Predators. The Royal Society, London, April.

Snell, H. L. 1994. The Roles of Sexual and Natural Selection in the Evolution of Sexual Dimorphism in Size: Measures of Selection in Galápagos Lava Lizards. Department of Biology, New Mexico State University Seminar Series, October.

Snell, H. L. 1994. Covarying Allometries of Predators and Prey: Which Came First, the Gape or the Girth? Department of Biology, Ecology Brown Bag Seminar Series, University of New Mexico, Albuquerque, NM, September.

Snell, H. L. 1994. Myths and Realities About Sustained Use and Development, and the Contribution of Basic Research. Charles Darwin Foundation for the Galápagos Islands Sponsered Symposium "Conservation and Research in the Galápagos Islands", Universidad Catolica, Quito, Ecuador, November.

Stuart, J. N. 1995. Inventory and Monitoring of Amphibians and Reptiles. Seminar presented at the U.S. Fish and Wildlife Service (Region 2) Biologists Workshop: Inventory and Monitoring on Refuges. South Padre Island and Laguna Atascosa National Wildlife Refuge, Texas, 10-14 April.

MANUSCRIPTS, ABSTRACTS, AND REPORTS:

Submitted:

Bermudez, F. C., J. N. Stuart, J. K. Frey, and R. Valdez. Distribution and status of the Virginia opossum (Didelphis virginiana) in New Mexico. Submitted to Southwestern Naturalist.

East, K. T. Sexual Dimorphism and Feeding Behavior of the Galápagos Lava Lizard (Microlophus albemarlensis) on Isla Daphne Major. Submitted to Ecology.

East, K. T., M. East, and C. Daugherty. Ecological Restoration and Habitat Relations of Reptiles on Stephens Island, New Zealand. Submitted to New Zealand Journal of Zoology.

Fitzgerald. L. A., D. S. Sias., H. L. Snell., and C. W. Painter. 1995. Distribution Survey of the Dunes Sagebrush Lizard, Sceloporus arenicolus, in Southeastern New Mexico. Submitted to New Mexico Department of Game and Fish.

Jennings, R. D., B. R. Riddle, and D. Bradford. 1995. Rediscovery of Rana onca, the Relict Leopard Frog, in Southern Nevada with Comments on the Systematic Relationships of some Southwestern Leopard Frogs (Rana pipiens complex) and the Status of Populations Along the Virgin River. Submitted to multiple funding agencies.

Jordan, M. A., and H. L. Snell. The Relationship Between Metabolic Rate and Body Mass in the Galápagos Land Iguana (Conolophus subcristatus). Submitted to Physiological Ecology.

Miles, D. B., L. A. Fitzgerald, H. L. Snell. Morphological Correlates of Locomotory Performance in Juvenile Marine Iguanas (Amblyrhynchus subcristatus). Submitted to Oecologia.

Pierce, L. and H. L. Snell. Maternal Care By Female Leopard Geckos: Nest Defense Limited to Conspecific Females. Submitted to Copeia.

Ramotnik, C. A., and N. J. Scott, Jr. 1994. Studies of the Effects of Forest Management Practices on the Sacramento Mountain Salamander, Aneides hardii. Annual Report Submitted to the U.S. Forest Service, Alamogordo, NM.

Snell, H. L., and H. M. Snell. Informe Final del Primer Año: El Velero de Investigación Prima en Las Islas Galápagos, Ecuador.

Snell, H. L, L. W. Gorum, L. A. Pierce, and T McBride. 1995. Results of the Fourth Year Research on the Effects of Shinnery Oak Removal on the Dunes Sagebrush Lizard, Sceloporus arenicolus. Submitted to New Mexico Department of Game and Fish.

Stuart, J. N., and G. H. Farley. 1994. Use of Riparian Revegetation Sites by Terrestrial Vertebrates in the Rio Grande Valley, New Mexico: 1993 Field Studies. Final Report to U.S. Fish and Wildlife Service, Bosque del Apache National Wildlife Refuge, New Mexico.

Stuart, J. N., G. H. Farley, E. W. Valdez, and M. A. Bogen. 1995. Studies of Vertebrates in Selected Riparian and Aquatic Habitats on Bosque del Apache National Wildlife Refuge,

New Mexico. Final Report Submitted to the U.S. Fish and Wildlife Service, Region 2, Albuquerque, NM.

In Press:

Bermudez, F. C., J. N. Stuart, J. K. Frey, and R. Valdez. Distribution and Status of the Virginia Opossum (Didelphis virginiana) in New Mexico. Southwestern Naturalist: In Press.

Degenhardt, W. G., C. W. Painter, and A. H. Price. Amphibians and Reptiles of New Mexico. University of New Mexico Press: In Press

Enquist, B. J., M. A. Jordan, and J. H. Brown. Connections Between Ecology, Biogeography, and Paleobiology: The Importance of Range Position on Local Abundance and Temporal Persistence in a Molluskan Assemblage. Evolutionary Ecology: In Press.

Fitzgerald, L. A. The Interplay Between Life History and Environmental Stochasticity: Implications for Management of Exploited Lizard Populations. American Zoologist: In Press.

McAllister, C. T., J. N. Stuart, and S. J. Upton. Coccidia (Aplicomplexa: Eimeriidae) From the Big Bend Slider, Trachemys gaigeae (Testudines: Emydidae), in New Mexico. Journal of Parasitology: In Press.

Snell, H. M., P. A. Stone, H. L. Snell. A Summary of Geographical Characteristics of the Galápagos Islands. Journal of Biogeography: In Press.

Stuart, J. N. Notes on Aquatic Turtles of the Rio Grande Drainage, New Mexico. Bulletin of the Maryland Herpetological Society: In Press.

Stuart, J. N. Observations on Formalin-Induced Darkening of Herpetological Specimens. Collection Forum: In Press.

Published:

Altamirano, M. A, et. al. 1994. Diversity and Relative Abundance of Herpetofauna from Sinangue, Sucumbios Province, Cayambe - Coca Ecological Reserve, Ecuador. Scientific Reports of ECOCIENCIA Foundation.

Altamirano, M. A, et. al. 1994. Diversity and Relative Abundance of Herpetofauna from Sinangue, Sucumbios Province, Cayambe - Coca Ecological Reserve, Ecuador. Scientific Reports of ECOCIENCIA Foundation.

Altamirano, M. A. and A. M. Velasco. 1994. Diversity and Relative Abundance of Herpetofauna from Charco Vicente and Salto del Bravo, Esmeraldas Province, Cotacachi-Cayapas Ecological Reserve, Ecuador. Scientific Reports of ECOCIENCIA Foundation.

Altamirano, M. A. 1994. Effects of Miner Exploitation on Diversity of Vertebrates Fauna from San Juan, Chimborazo Province, Ecuador. Technical Reports of Environment Division - Ministry of Energy and Mines.

Cayot, L. J., H. L. Snell, W. Llerena, and H. M. Snell. 1994. Conservation Biology of Galápagos Reptiles: Twenty Five Years of Successful Research and Management. Pages 297-305 in J. B. Murphy, K. A. Adler, and J. T. Collins, eds., Captive Management and Conservation of Amphibians and Reptiles. SSAR, New York.

Ellis, L. M., G. H. Farley, J. N. Stuart, and N. J. Scott, Jr. 1994. Bird Assemblages in Revegetated Cottonwood Forests of the Middle Rio Grande. New Mexico Ornithological Society (NMOS) Bulletin 22(2):38 (abstract).

Farley, G. H., and J. N. Stuart. 1994. Atypical Nesting Sites of the Cactus Wren. Texas Journal of Science 46(2):193-195.

Farley, G. H., and J. N. Stuart. 1994. Natural History Note: Sceloporus spinosus spinosus; Behavior. Herpetological Review 25(1):27.

Farley, G. H., L. M. Ellis, J. N. Stuart, and N. J. Scott, Jr. 1994. Birds of Restored and Mature Riparian Woodlands in the Middle Rio Grande Valley. New Mexico Ornithological Society Bulletin 22(2): 25-33.

Farley, G. H., L. M. Ellis, J. N. Stuart, and N. J. Scott, Jr. 1994. Birds of Different-Aged Stands of Riparian Woodland in the Rio Grande Valley, New Mexico. New Mexico Ornithological Society Bulletin 22(2):25-33.

Farley, G. H., L. M. Ellis, J. N. Stuart, and N. J. Scott, Jr. 1994. Avian Species Richness in Different-Aged Stands of Riparian Forest Along the Middle Rio Grande, New Mexico. Conservation Biology 8(4): 1098-1108.

Fritts, T. H., and R. D. Jennings. 1994. Distribution, Habitat Use, and Status of the Desert Tortoise in Mexico. Pages 49-56 in R. B. Bury and D. J. Germano, eds., Biology of North American Tortoises. National Biological Survey, Fish and Wildlife Research 13.

Fitzgerald, L. A. 1994. Tupinambis Lizards and People: a Sustainable Use Approach to Conservation and Development. Conservation Biology 8:12-15.

Fitzgerald, L. A., and C. W. Painter. 1994. Conservation of North American Rattlesnakes. Report Submitted to TRAFFIC(USA)/World Wildlife Fund.

Fitzgerald, L. A., G. Porini, and V. Lichtschein. 1994. Aspectos históricos, estado actual, y perspectivas futuras del manejo de Tupinambis en Argentina. Interciencia 19:166-170.

Jordan, M. A. and G. H. Rodda. 1994. Identification of Sex in Boiga irregularis: Implications for Understanding Population Dynamics in Guam. Journal of Herpetology 28:381-384.

Landwer, A. J., and G. W. Ferguson. 1994. Effects of the Incubation Environment on the Size and Incubation Time of Sceloporus undulatus consobrinus Hatchlings. Texas Journal of Science 46:115-120.

Snell, H. L., H. M. Snell, and P. A. Stone. 1994. Accelerated Mortality of Opuntia on Isla Plaza Sur: Another Threat from an Introduced Vertebrate? Noticias de Galápagos 53:19-20.

Stone, P. A., H. L. Snell, and H. M. Snell. 1994. Behavioral Diversity as Biological Diversity: Introduced Cats and Lava Lizard Wariness. Conservation Biology 8:569-573.

Snell, H. M., P. A. Stone, H. L. Snell. 1995. Geographic Characteristics of the Galápagos Islands. Noticias de Galápagos 55: 18-24

Stuart, J. N. 1994. Book Review: Snakes, Lizards, Turtles, Frogs, Toads, and Salamanders of New Mexico by M. A. Williamson et al. Bulletin of the Chicago Herpetological Society 29(12): 275-276

Stuart, J. N. 1995. Natural History Note: Rana catesbeiana (Bullfrog); Diet. Herpetological Review 26(1): 33.

Stuart, J. N. 1995. Geographic Distribution: Trachemys scripta scripta (Yellowbelly Slider). Herpetological Review 26(2): 107.

Stuart, J. N., and C. W. Painter. 1994. A Review of the Distribution and Status of the Boreal Toad, Bufo boreas boreas, in New Mexico. Bulletin of the Chicago Herpetological Society 29(6):113-116.

Stuart, J. N., and D. T. Scott. 1995. Geographic Distribution: Bufo punctatus (Red Spotted Toad). Herpetological Review 26(1): 41-42.

Sugg, D. W., L. A. Fitzgerald, and H. L. Snell. 1995. Growth Rate, Timing of Reproduction and Size Dimorphism in the Southwestern Earless Lizard (Cophosaurus texanus scitulus). Southwestern Naturalist 40(2): 193-202.

SERVICE:

Lee A. Fitzgerald

Section Editor, Herpetological Review

Conservation Committee, Society for the Study of Amphibians and Reptiles

IUCN/SSC Crocodile Specialist Group

William G. Gorum

President, New Mexico Herpetological Society

Project Leader, Tebuthiron and Dunes Sagebrush Lizard Study

Randy D. Jennings

American Society of Ichthyologists and Herpetologists, Copeia, Peer Review.

Southwestern Association of Naturalists, The Southwestern Naturalist, Peer Review.

International Society for the Study and Conservation of Amphibians, Alytes, Peer Review

Society for the Study of Amphibians and Reptiles, Herpetological Review, Section Editor (1992-1994)

Mark A. Jordan

Graduate Research Allocations Committee. 1995.

Committee for the Graduate Student Computer Grant Proposal, Biology Graduate Student Association. 1994.

Committee for the Organization of the Third Annual Research Day of the Department of Biology. 1994.

Leland J. S. Pierce

Graduate Research Assistant (GRA) for Los Alamos National Laboratories, for the Biological Resource Evaluation Team, Environmental Management-8. In charge of the monitoring of reptiles and amphibians of the labs.

Field Assistant in Mescalero Sand Dunes Lizard Project.

Howard L. Snell

Service in a scholarly capacity as member of local, state or national panel, committee, or commission, for purpose of reviews of public policy issues, scientific evaluations, awards of grants or fellowships or prizes, etc.

Associate Editor of Noticias de Galápagos.

Vice President of the Charles Darwin Foundation

Organizer of the Symposium of the Charles Darwin Foundation for the Galápagos Islands, "Conservation and Research in the Galápagos", Quito, Ecuador.

*Liaison with the Latin American Institute.

Graduate Policy Committee.

Main Campus Animal Care and Use Committee.

Latin American Institute Travel Grant Review Committee.

Animal Physiologist Search Committee

James N. Stuart

Served as an outside reviewer for herpetological manuscripts submitted to The Southwestern Naturalist.

ANNUAL REPORT: DIVISION OF MAMMALS, MUSEUM OF SOUTHWESTERN BIOLOGY
DEPARTMENT OF BIOLOGY UNIVERSITY OF NEW MEXICO
ALBUQUERQUE, NM 87131: **1 JULY 1994 TO 30 JUNE 1995**

Prepared by William L. Gannon, Collections Manager

YEAR'S HIGHLIGHTS

As last year, the Division was very active. The projects driving this activity included the Hantavirus research (and other, related emerging viruses projects), the Long-term Ecological Research Project at the Sevilleta, a New Mexico Bat Project, mammal class expeditions (this year was to Veracruz, Mexico), and several South American expeditions. Two major grant applications were made (see Grants and Awards below), two MSB publications were sent to press, the Curator (Yates) became Chair of the Department of Biology, full-time staff (5; Parmenter, Smith, Dunnum, Milner, and Campbell) were hired to conduct field work associated with the Hantavirus monitoring program, a full-time field technician was hired (Friggins) to assure quality and continuity with the LTER data, the collections manager is three months from finishing his Ph. D. (Gannon), the Associate Curator left for several South American field trips (Salazar-Bravo).

Again, as in years past, we have not been able to adequately serve public school teachers' requests for a field trip to the museum. The department very much needs to hire a staff person (a student, TA, etc) to conduct tours. We have turned 4x the students away that we have given departmental and museum tours to. This is a very valuable service that is also a cheap way to recruit new students to the Biology department and to the University.

Despite the relief of an answering machine, the Division answers the phone approximately 50 times per day (almost 250 per week!) from the community, University, and within the department.

A) COLLECTION USE

I) NUMBER OF VISITORS, PUBLIC SERVICE, AND NEWS

The Division of Mammals hosted 512 people who used the collection for one purpose or another (see Visitor's Log attached) during a total of 268 days; about the same as last years' use. We continued the more efficient system of handling the large number of requests for tours by teachers of school-aged kids. Approximately 1020 kids toured the collection last year. Visitation by professionals was comparable with past years (76 in 1989, 184 in 1990-1, 171 in 1991-2, 174 in 1992-3, 166 in 1993-4, and 140 in 1994-5).

Visitors represented the countries of Japan, Mexico, Brazil, Bolivia, Poland, France, Italy, and Atlanta. Common users included ones from the National Biological Survey, American Museum of Natural History (New York), University of Nebraska, University of Alaska, University of Nevada (Las Vegas), University of California (Davis), Illinois Natural History Survey, the Centers for Disease Control, and others. Locally six pueblos, the New Mexico Department of Game and Fish, the New Mexico Museum of Natural History, the Office of Contract Archaeology, the Natural Heritage Program (Nature Conservancy) and users from the Sevilleta LTER were the commonest professional users. We have always had

a strong relationship with the Office of Contract Archaeology; 124 OCA scientists used the facility last year. Nearly 200 "potential students" (both graduate and undergraduate) stopped by to tour the facility. The Collection Manager hosted visitors generated by open house for homecoming, Research Day, and graduation.

Distinguished Departmental Visitors Hosted:

Dr. Hisashi Abe and four other Japanese scientists, Hokaido University. (again 1994)
Dr. Sydney Anderson, Curator, American Museum
Dr. Richard B. Forbes, Portland State University (one year).
Dr. Robert Finley, Ft. Collins, Colorado
Dr. Ira F. Greenbaum, Professor, Texas A&M, University
Dr. Rodney Honeycutt, Assoc. Professor, Harvard
Dr. K. Kamiya, Hirosaki Univ., Japan
Dr. Mike Mares, Oklahoma State Museum.
Dr. Scoot Gardner, Nebraska State Museum
Dr. CJ Peters, Centers for Disease Control
Dr. Ethylene Lloyd, CDC
Dr. T. Ksiacek, CDC
Dr. Piere Rollins, CDC
Dr. Jamie Childs, CDC
Dr. Brett Riddle, University of Nevada, Las Vegas
Dr. Michael Smith, Director, Savannah River Ecology Laboratory
Dr. Masayuki Yasuno, Dir. Environmental Division, NIE, Japan

Also, a contingent of scientists (number in parentheses) from Hungary (31), Russia (7), Israel (2), Mexico (4), and Japan (35) arrived in groups for a more formal your.

II). NUMBER OF ACCESSIONS AND SPECIMENS CATALOGED

The MSB collection of mammals now contains over 76,000 catalogued and approximately 7,000 uncatalogued specimens (much of the uncatalogued material are vouchers for a national Hantavirus study and are currently being accessioned and catalogued with additional research grant funds). According to Yates et al. (1987), the MSB Division of Mammals is the 12th largest collection of mammals in North America. Based on the figures provided in that publication we project that due to our rate of growth since 1987 and the integration with the NBS collection, the MSB mammal collection is now the seventh largest mammal collection in North America and the fourth largest university collection in the world. The collection has been growing by an average of 2,934 catalogued specimens per year over the past five years (Fig. 3). This makes MSB the second fastest growing collection in North America (Yates et al., 1987).

The degree and range of use of the collections has increased significantly since the mid 1980s. During the 1990-1995 period, the MSB processed 300 loans (average of 60 loans per year that varied from one specimen to 450 specimens per loan), 4000 visitors (not including school group tours), 5410 requests for information (average 21 requests per week),

and 27,300 phone calls (average 105 calls per week). In Appendix 1 it should be noted that loans were made to a wide scope and geographic location of institutions. Many loans (not documented completely in Appendix 1) were made to students completing graduate-level research. Also, the MSB routinely makes teaching collection specimen material available for class use, demonstrations, special exhibits, and for on-site use. It is interesting that annual loans have increased from 18 per year in 1987 to the current average of 60 per year. The fastest rate of growth has been in the Division of Biological Materials (Fig. 2).

The Mammal Division accessioned 67 groups of specimens . This MSB catalog number was MSB 68584 for the 1993-1994 report. The catalog number now is 77225 indicating that the MSB cataloged 8641 specimens in 1994-1995.

The most constant influx of material continues to be from both the Hantavirus and the Long Term Ecological Research (LTER) projects. In five years the LTER deposited approximately 4000 specimens. We have logged approximately 800 specimens from the 1993 Bolivian expedition. Two donations of mounted specimens in the form of African ungulates were also accepted. The Game and Fish Department donated ca. 70 mountain lion specimens from the Carlsbad area and about 50 Big Horned sheep from the southern part of the state as well. We still work closely with the Rio Grande Zoo and have received about 50 specimens from them this report. Wildlife Center, a rehabilitation group has donated ca. 150 specimens to us over the last 15 months.

III). NUMBER OF LOANS

The mammal collection processed 84 outgoing loans, including 51 loans of frozen tissues or collateral material. This material was used in electrophoretic, mtDNA or other DNA studies, karyotype samples, or blood samples for the CDC. Interestingly, our loaned material was sent throughout much of the Western Hemisphere and part of Europe with loans to the American Museum of Natural History, University of Michigan, University of Alaska, California State University Humboldt, University of California - Davis, Texas Tech University, Florida State University, Field Museum of Natural History, Cornell University, National Science Foundation, Centers for Disease Control and Prevention, Natural History Museum in Spain, and Department of Biology in Ben Huron University, Israel. Within the southwest, we serviced four institutions in Texas, University of Nevada Las Vegas, Northern Arizona University, Los Alamos National Lab, and our own LTER and Departmental researchers. Within the state we did business with all the major institutions of higher education including Western New Mexico State, Eastern New Mexico State, New Mexico State Las Cruces, Museum of Natural History, and Museum of New Mexico in Santa Fe. Loans were made to APS schools for use in the classroom, to the Sevilleta National Wildlife Refuge, the US Army, and with particularly heavy association with the New Mexico Museum of Natural History and the New Mexico Department of Game and Fish. Of note, we made permanent loans to two natural history museums in Bolivia, Universidad Nacional Automica de Mexico (UNAM). In-house use of the collection was also heavy. These loans included; **researchers** (Altenbach, Findley, Lowrey, Lightfoot, Parmenter, Brown, Hafner, Bogan, Duszynski, Ligon, Crawford, George Stevens), **graduate students** (particularly Davis, Frey, Miyashiro, Salazar-Bravo, Palma, Kelt, Perry, Runyon, Balistreri, Gray, Guo, Farley, Hnida, Kaufman, Merola, Zwartjes,

Mund, Patrick, Pratt, Sias, Stone, Taylor, Wilbur, Tull), and **class use** for several courses (see below), and other departments such as Anthropology, Art, Geology, Contract Archaeology, and Maxwell Museum.

We also handled 17 incoming loans. These incoming loans represented the research requests primarily of Frey, Salazar-Bravo, Palma, Kelt, Sheppard, Gannon, and Yates.

IV). UNIVERSITY COURSES USING THE COLLECTION

Clearly, the MSB is integral in the teaching and educational mission of the University. The DOM has documented loans of materials as listed below, but has also interpreted collection materials for countless others in classroom and more informal situations. We assisted five Biology Department classes and 2 other UNM classes (Anthropology, Art) with loans of specimens from our teaching collection or use of the collection in the Museum:

Biology 121:	Principles of biology	1 loans
Biology 122:	Principles of biology	5 loans
Biology 386:	General vertebrate zoology	4 loans
Biology 402/502:	Adv Vertebrate Biology	9 loans
Biology 489:	Mammalogy	6 loans
Art 412:	Museum management	1 loan
Anthro 449:	Paleontology	1 loans

The following courses used the collection extensively as part of their coursework:

Biology 489:	Mammalogy - 21 students (1994)
Biology 502:	Advanced vertebrate biology - 15 students
Biology 502:	Topics in Chromosomal Evolution - 6 students
Biology 651:	Advanced Field Biology - 3 students
Biology 512:	Population Biology - 14 students
Biology 554:	Mammalian Ecology and Behavior - 14 students

Taught by Gannon: Biology 402/502 - BATS (16), Spring 1993
Biology 402/502 (7), Fall 1993
Zoo docents: instructed 175 docents total of 25 hours in the field of mammalogy. Oct-Nov 1993.
El Malpias field lecture on bats

B) COLLECTION MANAGEMENT

I) COMPUTERIZATION

Currently we electronically capture new specimens as part of the cataloguing procedure and operate the division with 11 computers with the masterfile residing on a 1.2 gigabyte hard drive of a 90 megahertz Zeos machine. Computers are also made available to collection staff and users for rapid capture of data or conducting searches. The entire museum is now fiber optically wired for direct access to all machines and the Internet.

II). COLLECTION REVIEW

A Board of Curators was formalized by Chair-appointed Director, Dr. Terry Yates. The Board meets monthly in the presence of collection staff to handle items submitted for discussion. A Collection Manager group was formed by Bill Gannon, Jane Mygatt, Lex Snyder, and Cindy Ramotnik. Initially the group has prepared a draft MSB policy manual for approval and adoption by the Board. The Museum has supported the travel of at least one representative to the Society for the Preservation of Natural History Collections. Both Jane Mygatt and Cindy Ramotnik attended the annual meeting at the Missouri Botanic Gardens in May. The MSB also became a full, voting member of the Association of Systematic Collections. Bill Gannon is working with Mark Hafner (Louisiana State University) on a collection directory, "Recent Mammal Collections of the Western Hemisphere."

C. RESEARCH, EDUCATION, AND INFORMATION DISSEMINATION

Summary: The Mammal Division supported 22 Ph.D. dissertations and 6 M.S. theses, 18 grants, 26 published papers, 36 papers in press or submitted as manuscript, and ca. 25 papers presented at scientific meetings during this time.

Two grants were submitted to NIH and NSF, respectively. In the NIH submittal, we propose to evaluate the relationship between prevalence of Hantavirus (primarily Sin Nombre Virus, SNV) infection and population density in small mammal carriers in the southwestern United States. In addition, we hope to develop a model using Geographic Information System (GIS) technology to predict environmental correlates of high human hantaviral risk. We will use a combination of descriptive and analytic studies of environmental characteristics associated with rodent Hantavirus prevalence in conjunction with field manipulation experiments of closed small mammal populations to study these problems. The major hypotheses we intend to test are that (1) rodent population density is positively associated with incidence of rodent Hantavirus infection, and (2) environmental characteristics, such as rainfall and vegetation, (which can be modelled and identified across geographic space using GIS technology), are associated with the level of Hantavirus infection in rodent populations. Results of these studies can provide information on the degree of human risk in endemic areas which are the focus of other projects in this application. Specifically, we intend to accomplish the following goals:

1. Establish 3 closed populations of small mammals (Experimental) adjacent to 5 existing study areas (Controls) in a natural setting [Experimental component].

2. Manipulate population densities of rodents in the Experimental plots to evaluate the effect on incidence of Sin Nombre Virus (SNV) antibodies in rodent carriers in comparison to unmanipulated control populations [Experimental component].

3. Compare longevity of infected versus uninfected mice in the Experimental plots [Experimental component].

4. Develop a multivariate model which predicts Hantavirus prevalence in small mammals based on environmental features in a GIS [Modelling component].

5. Test the predictive model by sampling areas *a priori* identified by the model as high or low prevalence areas [Modelling component].

For the NSF submittal, the Divisions of Mammals and Biological Materials of the Museum of Southwestern Biology (MSB) at the University of New Mexico request support to complete three major projects associated with the research collections. These are to: 1) move to new facilities in a building adjacent to our current location; 2) verify and consolidate computer files and specimens contained in the frozen tissue collections; and 3) verify computer files and integrate the National Biological Service's (NBS) western collections into the MSB.

The MSB collections of mammals are among the largest in North America. With the incorporation of the NBS collections these holdings will contain over 100,000 specimens and be international in scope. The collections are a major research resource and additionally serve as an important training center for students in organismal biology. These collections are among the five largest university research collections of their kind in the world.

The Division of Biological Materials may be the largest such collection in existence for mammals. It contains approximately 70,000 catalogued specimens and over 200,000 samples of frozen tissue, purified DNA, frozen cell suspensions, etc. These collections are growing rapidly and have experienced continual and rapid usage.

The current space housing the collections of mammals and frozen tissues are at or beyond capacity. We have an opportunity to move the collections into new space in an excellent facility immediately adjacent to our current location. The University of New Mexico will pay for the actual move and for necessary renovations. Funds are requested herein for the purchase of spacesaver units and additional personnel to accomplish tasks itemized herein.

The western collections of the NBS are currently housed together with those of the MSB but in separate storage cabinets. Although the NBS collection has been computerized, the electronic records have not been verified. We propose to verify computer records against actual specimens in the NBS collections and then integrate the two collections.

Finally, we propose to verify existing databases for the cryogenic collections maintained in the division of Biological Materials and create a single database from the current several that exist. This will involve comparing computer printouts of specimen data to actual specimens in the division's freezers and liquid nitrogen tanks and also verifying the existence and location of voucher specimens.

I). AWARDS, GRANTS, AND CONTRACTS:

Terry Yates:
Long Term Ecological Research: The Sevilleta. National Science Foundation. $2,400,000.00. BSR-8811906. 72 months (Co-principal Investigator).
Start date 11/15/88. End date 9/31/95. The continuation proposal of this grant was submitted and approved for $3.8 million, beginning 10/1/95.

Mammalian diversity in Bolivia: The Yungas and Valles. The National Science Foundation. $280,000 (including supplements) 48 Months (with Syd Anderson and Joseph Cook). BSR - 8920617, 6/1/90 - 5/31/95. This grant ended 5/31/1995.

The Sevilleta field station: Development of a regional research center in New Mexico. The NSF, $150,000 24 months (with C. Crawford, J. Brown, D. Duszynski, J. Gosz, D. Marshall, and R.Parmenter). Start date 8/01/90.

Endangered fishes of New Mexico. New Mexico Department of Game and Fish, $193,645. 24 months, (with Steve Platania) start date 5/1/90.

Host genetic factors affecting specificity of parasites of small mammals. The NIH, $ 62,000. 48 months (with D. Duszynski), start date 1/1/87.

Biological diversity on Canon Airforce Base. US Department of Defense, $260,000. 36 months, (with Robert Parmenter), start date 6/1/93.

Response of Southwestern montane mammal communities to global change. US Fish and Wildlife Service, $250,000. 60 months, start date 10/1/93.

Evolutionary relationships among taxa of the genus Thylames (Marsupialia, Didelphidae) in southern South America. The NSF, $18,900. 24 months, start date 10/15/92, Dissertation improvement grant for Eduardo Palma.

Hantavirus prevention, control, treatment, and research. New Mexico Department of Health. $167,853. 12 months. Start date 10/1/93.

Long Term Ecological Research: The Sevilleta II. National Science Foundation. $3,800,000.00. 72 months (Co-principal Investigator).
Start date 10/15/94.

NOTE* Six additional conservation genetic studies were funded.

Awards and appointments to TL Yates

Appointed Research Associate, National Museum of Natural History, 1991 - present.

Recipient - Leopold Conservation Award, 1991, The Nature Conservancy

Elected Trustee, Southwestern Association of Naturalists.
Recognized for outstanding administrative performance , National Science Foundation
Editor for Reviews, Journal of Mammalogy, 1993 - present.
Chair, Main Campus Animal Care and Use Committee, UNM
Chair, Department of Biology, University of New Mexico - 1 Aug 1995- 31 July 1999.

OTHER STAFF AND STUDENTS:

Jennifer Frey
Arizona Game and Fish Department, $7,700.00 for Mogollon vole (Microtus mogollonensis) genetic analysis. 1992-1993

Recipient-- Albert R., and Alma E. Shadle Fellowship from the American Society of Mammalogists and the Theodore Roosevelt fund, $3,145.00.

Appointments:
American Society of Mammalogist - Committee on Graduate Education, member

William Gannon
New Mexico Department of Game and Fish, Share With Wildlife Program, Acoustic sampling of bats of New Mexico, $18,400 ($7,700.00 for first year, 1993-1994).
Supplemental Funding to Share with Wildlife Grant, $18,000.00 (1994), and $25,000 (1995).

Appointments (Gannon):
Editorial Committee - Publications of the Museum of Southwestern Biology
American Society of Mammalogists, Information Retrieval Committee - member since 1988
American Society of Mammalogists, Systematic Collections Committee - member since 1992
Society for the Preservation of Natural History Collections - Supplies Committee, member
Member, Main Campus Animal Care and Use Committee, UNM

R. Eduardo Palma: Graduated, Ph. D., June 1995. Left for appointment in Santiago, Chile
Funding and contracts obtained:

1992. National Science Foundation, Research Improvement Grant ($ 18,900).

Jorge Salazar-Bravo
1. The systematics of **Bolomys:** $2200
2. Rodents of the Puna (with P. Marquet): $14,000
3. Historical biogeography and systematic relationships among South American mice, Dissertation Improvement Grant, $22,500

Jennifer Miyashiro: No funding at this time. Expected to graduate, Spring 1996
Travis Perry: No funding at this time. Expected to graduate, Spring 1997.

II). PUBLICATIONS

The Mammal Division supported many types of publications in 1993-94. Among these are included book chapters, refereed journal articles, oral presentations, and published abstracts.

Papers Published in 1993

Chiszar, D., H. M. Smith, and C. Ramotnik. 1993. Geographic distribution. Cnemidophorus sexlineatus. Herpetological Review 24:154.

Davis, F. W., and J. L. Choate. 1993. Morphologic variation and age structure in a population of the eastern vole. J. Mamm. 74:1014-1025.

Dickerman, R. W. 1993. On the validity of Ceyx (Myioceyx) lecontei ruficeps. Bulletin of the British Ornithology Club 113:255-257.

Dickerman, R. W. 1993. The subspecies of the Great Horned Owls of the central Great Plains, with notes on adjacent areas. Kansas Ornithological Society Bulletin 44:17-21.

Farley, G. H. 1993. Observation of a ruby-crowned kinglet (Regulus calendula) roosting in a verdin (Auriparus flaviceps) nest in winter. Southern Naturalist 38:72-73.

Fitzgerald, L. A., F. B. Cruz, and G. Perotti. 1993. The reproductive cycle and the size at maturity of Tupinambis rufescens (Sauria: Teiidae) in the dry chaco of Argentina. Journal of Herpetology 27:70-78.

Frey, J. K. 1993. Modes of peripheral isolate formation and speciation. Systematic Biology 42:373-381.

Frey, J. K. 1993. Nocturnal foraging by the Scissor-tailed Flycatcher under artificial illumination. Western Birds 24:200.

Frey, J. K., and C. T. LaRue. 1993. Notes on the distribution of the Mogollon vole (Microtus mogollonensis) in Arizona and New Mexico. The Southwestern Naturalist 38:176-178.

Gannon, W. L. 1993. Book Review of, "Papousek, H., U. Jurgens, and M. Papousek (eds.), Nonverbal vocal communication: comparative and developmental approaches." Cambridge University Press and Editions de la Maison des Sciences de l'Homme, Cambridge, 303 pp. J. Mamm. 74:1085-1086.

Gannon, W. L., R. B. Forbes, and D. E. Kain. 1993. Tamias ochrogenys. Mammalian Species 445:1-4.

Kelt, D. A. 1993. Irenomys tarsalis. Mammalian Species 447:1-3.

McAllister, C. T., S. J. Upton, C. M. Garrett, J. N. Stuart, and C. W. Painter. 1993. Hemogregarines and Sarcocystis sp. (Apicomplexa) in a western green rat snake, Senticolis triaspis intermedia (Serpentes: Colubridae), from New Mexico. Journal of the Helminthological Society of Washington 60:284-286.

Ruedas, L., J. Cook, T. L. Yates, and J. Bickham. 1993. Conservative genome size and rapid chromosomal evolution in the South American tuco-tucos (Rodentia: Ctenomyidae). Genome 36:449-458.

Smith, H. M., G. A. Hammerson, D. Chiszar, and C. Ramotnik. 1993. Geographic distribution: Bufo cognatus. Herpetological Review 24:152-153.

Smith, H. M., G. A. Hammerson, D. Chiszar, and C. Ramotnik. 1993. Geographic distribution: Pseudacris triseriata. Herpetological Review 24:153.

Smith, H. M., G. A. Hammerson, D. Chiszar, and C. Ramotnik. 1993. Geographic distribution: Rana pipiens. Herpetological Review 24:153.

Smith, H. M., G. A. Hammerson, D. Chiszar, and C. Ramotnik. 1993. Geographic distribution: Tantilla nigriceps. Herpetological Review 24:157.

Smith, H. M., G. A. Hammerson, D. Chiszar, and C. Ramotnik. 1993. Geographic distribution: Eumeces multivirgatus multivirgatus. Herpetological Review 24:154.

Smith, H. M., G. A. Hammerson, D. Chiszar, and C. Ramotnik, 1993. Geographic distribution: Crotalus viridis viridis. Herpetological Review 24:156.

Smith, H. M., G. A. Hammerson, D. Chiszar, and C. Ramotnik. 1993. Geographic distribution: Nerodia sipedon sipedon. Herpetological Review 24:156.

Stuart, J. N. 1993. Geographic distribution: Cnemidophorus exsanguis (Chihuahuan spotted whiptail). Herpetological Review 24:66.

Stuart, J. N. and R. E. Anderson. 1993. The gray fox, Urocyon cinereoargenteus, on the Llano Estacado of New Mexico. Texas Journal of Science 45:354-355.

Stuart, J. N. and C. W. Painter. 1993. Life history note: Rana catesbeiana (Bullfrog); Cannibalism. Herpetological Review 24:103.

Stuart, J. N. and C. W. Painter. 1993. Notes on hibernation of the smooth green snake (Opheodrys vernalis) in New Mexico. Bulletin of the Maryland Herpetological Society 29:140-142.

Stuart, J. N., C. W. Painter, and B. C. Stearns. 1993. Life history note: Trachemys gaigeae (Big Bend Slider); Maximum size. Herpetological Review 24:32-33.

Papers published in 1994

Bogan, M. A. 1994. Research determines status and distribution of bats on the Colorado Plateau. Colorado Plateau Newsletter 4:1-7.

Childs, J. E., T. G. Ksiazek, C. F. Spiropoulou, J. W. Krebs, S. Morzunov, G. O. Maupi, K. L. Gage, P. E. Rollin, J. Sarisky, R. E. Enscore, J. K. Frey, C. J. Peters, and S. T. Nichol. 1994. Serologic and genetic identification of Peromyscus maniculatus as the primary reservoir for a new hantavirus in the southwestern United States. Journal of Infectious Disease 169:2171-2180.

Cook, J.A., and T.L. Yates. 1994. Systematic relationships of the Bolivian tuco-tucos, genus *Ctenomys* (Rodentia: Ctenomyidae). Journal of Mammalogy, 75:583-599.

Farley, G. H., L. M. Ellis, J. N. Stuart, and N. J. Scott, Jr. 1994. Avian species richness in different-aged stands of riparian forest along the middle Rio Grande, New Mexico. Conservation Biology 8:1098-1108.

Farley, G. H., L. M. Ellis, J. N. Stuart, and N. J. Scott, Jr. 1994. Birds of restored and mature riparian woodlands in the Middle Rio Grande Valley. New Mexico Ornithological Society Bulletin 22:25-33.

Farley, G. H. and J. N. Stuart. 1994. Atypical nesting sites of the cactus wren. Texas Journal of Science 46:193-195.

Farley, G. H. and J. N. Stuart. 1994. Natural history note: Sceloporus spinosus spinosus; Behavior. Herpetological Review 25:27.

Fitzgerald, L. A. 1994. The interplay between life history and environmental stochasticity: Implications for exploited lizard populations. American Zoologist (In Press).

Fitzgerald, L. A. 1994. Tupinambis lizards and people: A sustainable use approach to conservation and development. Conservation Biology (In Press).

Fitzgerald, L. A., G. Porini, and V. Lichtschein. 1994. El manejo de Tupinambis en Argentina: Historia, estado actual y perspectivas futuras. Interciencia (In Press).

Frey, J. K., and F. C. Bermudez. 1994. Cordilleran flycatchers nesting within a cave. NMOS Bulletin 22:23-24.

Germano, D. J. 1994. Growth and age at maturity of North American tortoises in relation to regional climates. Can. J. Zool. 72:918-931.

Glass, P. J., and W. L. Gannon. 1994. Description of M. uropataginalis (a new muscle), with additional comments from a microscopy study of theuropatagium of the fringed myotis (Myotis thysanodes). Can. J. Zool. 72:1752-1754.

Hjelle, B., F. Chavez-Giles, N. Torrez-Martinez, T. L. Yates, J. Sarisky, J. Webb, and M. Ascher. 1994. Genetic identification of a novel hantavirus of the harvest mouse Reithrodontomy megalotis. Journal of Virology 68:6751-6754.

Hoyt, R. A., J. S. Altenbach, and D. J. Hafner. 1994. Observations on long-nosed bats (Leptonycteris) in New Mexico. The Southwestern Naturalist 39:175-179.

Honeycutt, R.L., and T.L. Yates. 1994. Molecular Systematics, Pp. 288-309, In (J.R. Choate and E.C. Birney, eds.). Seventy-five years of North American Mammalogy. Special Publication of the American Society of Mammalogists, 433 Pp.

Ibanez, C., J. Cabot, and S. Anderson. 1994. New records of Bolivian mammals in the collection of the Estacion Biologica de Donana. Acta Vertebrata 21:79-83.

Kamiya, M., Y. Oku, H. K. Ooi, N. Nonaka, and T. L. Yates. 1994. Diversity of Taeniid parasites transmitted through predator-prey interaction. Pp 51-59, in Biodiversity: its complexity and role (M. Yasuno, and M.M. Watanabe, eds.). Global Environmental Forum.

Kelt, D. A. 1994. Biogeography of small mammals across a strong environmental gradient in southern South America. J. Mamm. (In press).

Kelt, D. A. Eligmodontia. The Mammals of South America, edited by A. Gardner, J. L. Patton, and S. Anderson (In press).

Kelt, D. A. Irenomys. The Mammals of South America, edited by A. Gardner, J. L. Patton, and S. Anderson (In press).

Kelt, D. A., and T. J. Valone. Effects of grazing on the abundance and diversity of annual plants in Chihuahuan Desert scrub habitat. Oecologia (In press).

Kelt, D. A. 1994. The natural history of small mammals from Aisen Province, southern Chile. Revista Chilena de Historia Natural 67:183-207.

Kelt, D.A. and M.H. Gallardo. 1994. A new tuco-tuco (Rodentia: Ctenomyidae) in Chile, with comments on its biology and systematic implications. (In Press).

Kelt, D. A., P. L. Meserve, and B. K. Lang. 1994. Quantitative habitat associations of small mammals in a temperate rainforest in southern Chile: empirical patterns and the importance of ecological scale. J. Mamm. 75:890-904.

Kelt, D. A. 1994. [Review of] Species diversity: historical and geographic perspectives. R. E. Ricklefs and D. Schluter. J. Mamm. 75:1085-1090.

Matsuzaki, T., K. Matsuzaki, Y. Yokohata, R. Ohtsubo, M. Kamiya, and T. L. Yates. 1994. Breeding of the northern grasshopper mouse (Onychomys leucogaster) as a laboratory animal. Exp. Anim. 43:395-401.

Matsuzaki, T., Y. Yokohata, M. Kamiya, and T. L. Yates. 1994. Laboratory rearing of a hibernating animal, pocket mouse (Perognathus flavus). Exp. Anim. 43:421-425.

Morton, S. R., J. H. Brown, D. A. Kelt, and J. R. W. Reid. 1994. Comparisons of community structure among small mammals of North American and Australian deserts. Australian Journal of Zoology 42:501-525.

Salazar, J., M. L. Campbell, S. Anderson, S. L. Gardner, and J. L. Dunnum. 1994. New records of Bolivian mammals. Mammalia 58: 125-130.

Sullivan, R. M. 1994. Micro-evolutionary differentiation and biogeographic structure among coniferous forest populations of the Mexican woodrat (Neotoma mexicana) in the American Southwest: a test of the vicariance hypothesis. Journal of Biogeography. 21:369-389.

Yates, T. L. 1994. Assessing and monitoring biological diversity at the genetic level. Pp. 41-50, in Biodiversity: Its complexity and role (M. Yasuno and W. W. Watanabe, eds.). Special Publication, Global Environmental Forum, Tokyo, Japan, 273 pp.

Papers Published in first Six-months of 1995

Dickerman, A.W., and T.L. Yates. 1995. Systematics of Oligoryzomys: Protien-electrophoretic analyses. Journal of Mammalogy, 76:172-188.

Gannon, W. L., and R. B. Forbes. 1995. Tamias senex. Mammalian Species, No. 502:1-6.

Hjelle, B., B. Anderson, N. Torrez-Martinez, W. Song, W. L. Gannon, and T. L. Yates. 1995. Prevalence and geographic genetic variation of Hantaviruses of New World harvest mice (*Reithrodontomys*): Identification of a divergent genotype from a Costa Rican *Reithrodontomys mexicanus*. Virology, 207:452-459.

Occasional Papers of the Museum of Southwestern Biology
(All Occasional Papers = $2.00 each)

OP83-1 Bogan, M. A., and P. Mehlhop. 1983. Systematic relationships of gray wolves (Canis lupus) in southwestern North America. Occasional Papers of the Museum of Southwestern Biology, University of New Mexico 1:1-21.

OP83-2 Smith, M. F., J. L. Patton, J. C. Hafner, and D. J. Hafner. 1983. Thomomys bottae pocket gophers of the central Rio Grande Valley, New Mexico: local differentiation, gene flow and historical biogeography. Occasional Papers of the Museum of Southwestern Biology, University of New Mexico 2:1-16.

OP85-3 Scott, N. J. Jr., and R. D. Jennings. 1985. The tadpoles of five species of New Mexican leopard frogs. Occasional Papers of the Museum of Southwestern Biology, University of New Mexico 3:1-21.

OP86-4 Cook, J. A. 1986. The mammals of the Animas Mountains and adjacent areas, Hidalgo County, New Mexico. Occasional Papers of the Museum of Southwestern Biology, University of New Mexico 4:1-45.

OP88-5 Sullivan, R. M., and K. E. Petersen. 1988. Systematics of southwestern populations of least chipmunks (Tamias minimus) reexamined: A synthetic approach. Occasional Papers of the Museum of Southwestern Biology, University of New Mexico 5:1-27.

OP90-6 Bestgen, K. R., and S. P. Platania. 1990. Extirpation of Notropis simus simus (Cope) and Notropis orca Woolman (Pisces: Cyprinidae) from the Rio Grande in New Mexico, with notes on their life history. Occasional Papers of the Museum of Southwestern Biology, University of New Mexico 6:1-8.

OP95-7 Frey, J. K. IN PRESS. Mammalian type localities in New Mexico. Occasional Papers of the Museum of Southwestern Biology, University of New Mexico 7:1-19.

Special Publications of the Museum of Southwestern Biology
(SP91-1 = $6.00; SP93-2 = $8.00)

SP91-1 Findley, J. S., and T. L. Yates (eds.). 1991. The biology of the Soricidae. Special Publication, The Museum of Southwestern Biology 1:1-91.

SP93-2 Anderson, S., B. R. Riddle, T. L. Yates, y J. A. Cook. 1993. Los mamiferos del Parque Nacional Amboro y la region de Santa Cruz de la Sierra, Bolivia. Special Publication, The Museum of Southwestern Biology 2:1-58.

SP95-3 Yates, T. L., W. L. Gannon, and D. E. Wilson (eds.). 1995. Life among the Muses: Papers in honor of James S. Findley. Special Publication, The Museum of Southwestern Biology, 3:X-XXX. (late Fall)

III). ABSTRACTS AND CONTRIBUTED TALKS AT PROFESSIONAL MEETINGS

Approximately 25 presentations were made during 1993-1994 by the Division's denizens. Papers were presented at all the major annual meetings including the American Society of Mammalogists, Southwestern Association of Naturalists, Parasitology Society, Southwestern Association of Biologists, Bat Society, International Theriological Congress, and several other world-recognized professional organizations.

IV). GRADUATE EDUCATION.

Mammal Group, or Advances in Vertebrate Biology (Biology 402/502) was offered all semesters and was attended by 6 registered students and 12 regular drop ins. The group expanded to include students of all vertebrate groups but is still mostly attended by mammalogists. The class met every week at night for three hours. A seminar in Systematics met weekly at Dr. Yates' home and was attended by ca. 20 students regularly.

Masters degrees awarded:
Marcel Zalles, Spring 1994 (T. Yates, advisor)

Doctors degrees awarded:
Jennifer K. Frey, Spring 1994 (T. Yates, advisor)
Eduardo Palma, Summer 1994 (T. Yates, advisor)

Names of 551, 599 and 699 students
Biol 699 (spring and fall)
Forrest Davis
Jennifer Frey
Eduardo Palma
Jorge Salazar

Biol 699 (Summer)
Forrest Davis

Biol 551 (Fall, Spring, Summer)
Jennifer Frey
Jennifer Miyashiro
Jorge Salazar
Eduardo Palma
Ellen Roots

Biol 499 (Fall, Spring)
J.L. Dunnum
S. Peurach
S. Davenport
Ellen Roots
Amy Ditto
Franke Bermudez

As a note on education, the Division has consistently provided education at a multitude of levels including: the kindergartners looking up at a stuffed chipmunk and asking, "Why are its eyes white?"; or the fifth grader who goes on and on about the time he and his dog were sprayed by skunks when he was asked if he knew what k-rats ate in the desert; or the community member that calls in about the "raven problem"; the Boy Scout with a special natural history project on ultrasound; the Future Farmers of America who are trying to win the championship; the news media interested about bats or Hantavirus; the volunteer who wants to "just scrape a few bones and get some experience"; the undergraduate who thought they wanted medical school, but never thought there was this; the graduate student needing help making ends meet and cannot afford some equipment, xeroxes, and needs help on a trapping grid; the professional inquiring about the number of Neotoma cinerea from Socorro

County; the retired orthopedic surgeon just wanting to x-ray a few sloth bones, but ending up x-raying the entire Eutheria; the rest-home elderly who recall the sea of gemsbok and impala on their trip to Kenya with Roosevelt. These are the everyday users and learners of the collection. No price can be put on what they learn, glean, or regurgitate from the holdings of this Division. No numbers can be put on insight, intrinsic values, or a good story about how vampires really feed. This is a good, worthwhile place. (WLG)

PERSONNEL

Curatorial Staff, Division of Mammals -- Jan 1986 - present

Terry L. Yates	Director - MSB; Curator of Mammals, Birds
Jim S. Findley	Curator Emertis, Director
William L. Gannon	Collections Manager, Acting Curator
Michael A. Bogan	Curator, National Biological Survey
Cindy A. Ramotnik	Collections Manager, National Biological Survey
Michelle Intihar	Secretary, National Biological Survey
Robert W. Dickerman	Curatorial Associate, Ornithology
William Lopez-Forment	Acting Curator, Chiroptera (90)
Richard B. Forbes	Acting Curator, Sciuridae (91)
Eduardo Palma	Assistant Curator (90, 92, 94)
Jennifer K. Frey	Assistant Curator (90, 91, 93, 94)
Joseph A. Cook	Assistant Curator (90)
Forrest W. Davis	Assistant Curator (89)
Brett R. Riddle	Assistant Curator (87, 88, 89)
Laura Janecek	Assistant Curator (86)
Robert M. Sullivan	Curatorial Assistant (87)
Marian Skupski	Curatorial Assistant (88)
Alejandra Alvarado	Curatorial Assistant (89)
Marianne Martin	Curatorial Assistant (89)
Jorge Salazar Bravo	Curatorial Assistant (90, 91, 93, 94)
Marikay Ramsey	Curatorial Assistant (89,90)
Jennifer Miyashiro	Curatorial Assistant (92, 93, 94, 95)
Phillip J. Glass	Programmer, work-study,staff (90-2)
Mariel L. Campbell	Head Preparator, work-study (88,90; Hanta Project 1994)
Rosanne L. Humphrey	Head Preparator, work-study (89)
Suzy C. Peurach	Head Preparator, work-study (88,90)
Roberto U. Gutierrez	Head Preparator, work-study (89,90)
Jon O. Dunnum	Head Preparator, work-study (89,91, Hanta Project 1994)
Amy Ditto	Head Preparator, work-study (1993)
Stephen Davenport	Head Preparator, work-study (1994-95)
Damien L. Scott	Head Preparator, work-study (1994-95)
Melissa Saenz T.	Preparator, RAMHSS, (1993-95)
Jane Mac Taylor	Preparator, work-study (1994)
Andy Hawk	Preparator, work-study (1994)

Christen Coucheron-Aamont	Preparator, work-study (1994)
Lisa Hollis	Preparator, LTER, WS, (1993, 94, 95)
Molly McCormick	Preparator, work-study (1993-95)
Guy O. Herbert	Preparator, work-study (91,92)
Roberto U. Gutierrez	Preparator, work-study (88-89)
Lisa A. Valle	Preparator, work-study (89; Hanta Project 94))
Kristin Vaitkus	Preparator, work-study (90)
Colin Campbell	Preparator, work-study (91)
Steve Davenport	Preparator, work-study (91-94; Bat Project 1994)
Melissa Chavez	Preparator, MBRS (91-93)
Matt Brady	Preparator, work-study (90,91)
Natalie Derwelis	Preparator, SRAP, Academy HS (87,88)
Shelly McCaulley	Preparator, work-study (87,88)
Brian Frank	Preparator, MBRS, (87,88,89)
Cheryl Parmenter	Museum Technician, Hanta Project (1994-5)
Heather Smith	Museum Technician, Canon, Hanta Projects (1993-5)
Sarah Rowe	Museum Technician, Hanta Project (1994)
Jackie Mirrales	Museum Technician, Hanta Project (1994)
Francesca Bermudez	Museum-Aid, work-study (1993)
Carol Malcolm	Museum-aid, work-study (86)
Jim Seely	Museum-aid, work-study (86)
Yvette M. Paroz	Museum-aid, SRAP, (87)
Allison Brody	Museum aid (88)
Catherine Isbell	Museum-aid (88)
Stacey Hoffman	Museum-aid (88,89)
Dave Keller	Museum-aid (89)
Julie Kubler	Museum-aid (89)
Damon Matlock	Museum-aid (89)
Gabrielle Tripp	Museum-aid (89)
Jeff Harmon	Museum-aid, work-study (90)
Rachel Montenegro	Museum-aid (90)
Paulette Ford	Museum-aid (88)
Melissa Suarez	SRAP (91)
Justin McHorse	SRAP (91)
Ta-Ta Bill	SRAP (91)
Gerald Cunningham	School on Wheels (91)
Naomi Vallejos	School on Wheels (91)
John Alberto	School on Wheels (91)
Vicki Sanchez	YDI program (91)
Wade Wilson	RA parasites
Anne Brown	RGZ, volunteer, (1994)
Nancy Heimbigner	volunteer (90)
Mike Friggins	volunteer (89-90)
Stan Moolenijzer	volunteer (89)
Monica K. Rusk	USFWS, Preparator (89)

Tom G. Roe	karyology, MBRS (89-90)
Millan Baca	museum-wide, SRAP (90)
Miguel Romero	museum-wide, SRAP (90)
Tom Collins	WS, Sept 91
Bryant Furlow	WS, May 92
Kurt Shipley	WS, Summer 92, Hanta Project 1994
Marcos Sandoval	museum-wide, YDI (92)
Levi Lucero	museum-wide, YDI (92)
Halea Johnson	museum-wide, YDI (92)
Nadine Kemrer	volunteer, Academy HS, 92

Other Mammalogists and Professionals Associated With the Division of Mammals

Dr. Sydney Anderson MSB Research Associate, Curator, Mammals, American Museum of Natural History

J. Scott Altenbach, Associate Biology Professor Chiropteran Anatomy and Physiology

Troy L. Best Auburn University Assistant Professor, Biology, Mammalian Morphology and Systematics; Dipodomys

James H. Brown, Professor of Biology, Mammalian Biogeography Community Ecology

Astrid Kodric-Brown Associate Professor, Community Ecology

Joseph A. Cook. Curator, UAF Museum, Frozen Tissue Collection studies in Ctenomys, Bolivia

Donald W. Duszynski MSB Research Associate, Mammalian hosts of coccidian parasites

James S. Findley, retired, 1993. Former-Director of MSB, Ecomorphology, Community Ecology,Curator Emertis, Mammal Division

Richard B. Forbes,Professor, Portland State University mammalian photography, ecology

Ken Geluso, Professor, University Nebraska, bats, mammals of Carlsbad area

Brett R. Riddle, Assistant Professor, Department of Biology, University of Nevada, Las Vegas

Curatorial Associates:

James H. Brown	UNM Department of Biology
Robert W. Dickerman	Museum of Southwestern Biology
Richard B. Forbes	Department of Biology, Portland State University,
William Lopez-Forment	UNAM, Mexico (1990)

Research Associates:

J. Scott Altenbach	UNM Department of Biology
Sydney Anderson	American Museum of Natural History,New York
Robert J. Baker	The Museum, Texas Tech University,Lubbock, TX
Troy L. Best	Department of Biology, Auburn University

Joseph A. Cook	Natural History Museum, University of Alaska, Fairbanks
Scott L. Gardner	Dept. Nematology, Curator, University Nebraska.
Sarah B. George	Director, Utah State Museum.
Gary L. Graham	Bat Conservation International
David J. Hafner	New Mexico Museum Nat. History
Bruce J. Hayward	Department of Biology, Western New Mexico University
Edward J. Heske	Illinois Biological Survey
Dwit Ivey	Retired. Active in Botany, mammals
Clyde Jones	The Museum Texas Tech University
Dwight W. Moore	Emporia State University
Robert Parmenter	Department Biology, LTER coordinator
James L. Patton	Museum of Vertebrate Zoology,University of California
Richard A. Smartt	New Mexico Museum of Natural History.

GRADUATE STUDENTS ASSOCIATED WITH THE DIVISION OF MAMMALS

Ph. D.
Forrest Davis
William Gannon
Douglas Kelt
Shahroukh Mistry
Eduardo Palma
Michael Patrick
Jorge Salazar Bravo
Ursula Sheppard
Mike Balistreri
Travis Perry

Masters
Marcelo Zalles
Jennifer Miyashiro

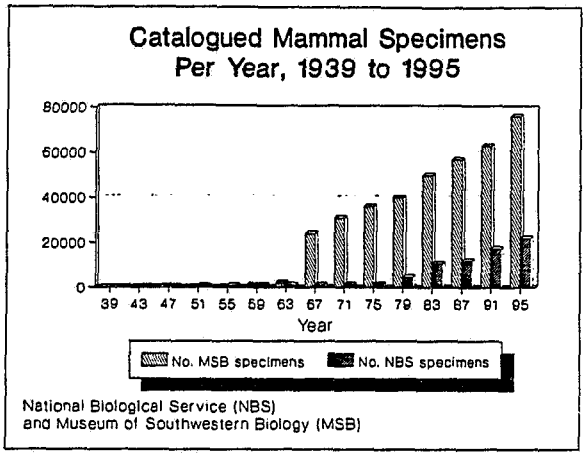


Fig. 1. Catalogued mammal specimens in MSB and NBS from 1939 to 1995.

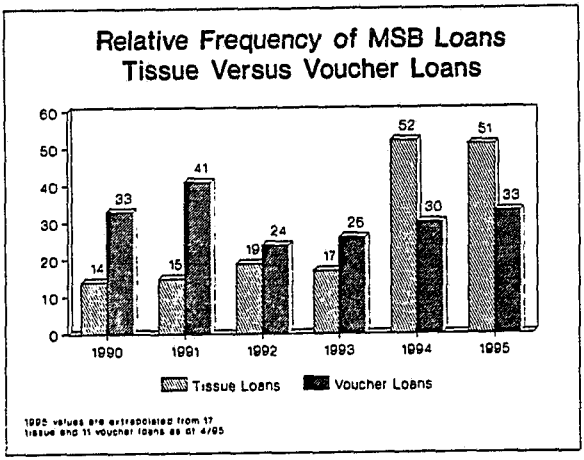


Fig. 2. Relative frequency of tissue versus voucher loans in the MSB.

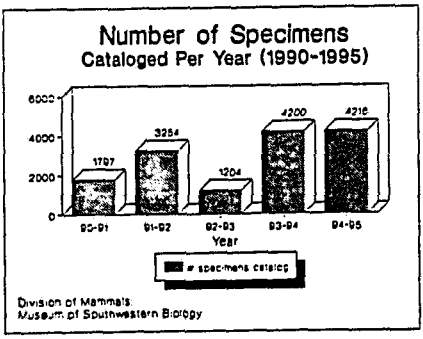


Fig. 3. Number of MSB specimens catalogued, 1990-1995.

Loan Nu	Person	Institution	Nature of Loan	Date Loan	Date Retu	Voucher
19525	Tom Hakonson	Los Alamos National Lab	Peromyscus, 4	15-Oct-89		
19541	David Huckaby	Cal State Long Beach	Neotoma, 7	12-Jan-90	22-Jan-90	bacula
19542	Marsha Connely	NMSU	Peromyscus, 2	12-Jan-90	perm loan	voucher
19544	Robert Sullivan	NMMNH	Tamrascinus, 71	30-Jan-90	perm loan	voucher
19547	Dave Bleably	UNM	Mammal specimens	9-Feb-90	16-Feb-90	voucher
19549	Dave Hofner	NM Museum of Nat. History	Aquila, 2	14-Feb-90	perm loan	voucher
19550	Marion Skupski	UNM	Skulls, 2	19-Feb-90	28-Feb-90	skulls
19554	Troy Best	Auburn U	Mexico trip	6-Mar-90	perm loan	tissue
19555	Robert Leonard	UNM - Anthro.	MTC mammals, 8	14-Mar-90	1-Jul-91	voucher
19556	John Hubbard	NMGF	Mammal skins, 4	23-Mar-90		skins
19559	Mankay	UNM/Sevilleta	misc. mammals	4-Apr-90	6-Aug-90	skins
19560	Luis Ruedes	Texas A&M	Octodon, 100	6-Apr-90		tissue
19561	Sullivan/Yates	NMMNH	Red squirrel	4-Apr-90		tissue
19562	Eduardo Palma	UNM	Marmosa, 6	6-Apr-90	6-Apr-90	voucher
19563	Eduardo Palma	UNM	Marmosa, 1	9-Apr-90	17-May-90	voucher
19565	Jennifer Frey	UNM	Misc. mammals	24-Apr-90		voucher
19569	Lynn Mitchell	Chapparell Elem.	Misc. mammals	16-May-90		voucher
19570	Linda Mick-Ohara	NM Museum, Santa Fe	Syn mat., cat skeleton	16-May-90		voucher
19571	Syd Anderson	AMNH	Bolivian rats	16-May-90		voucher
19572	Troy Best	Auburn U	Lepus, 4	21-May-90	10-Jul-91	voucher
19573	Troy Best	Auburn U	"Mexico 86" tissues	21-May-90	perm loan	tissue
19574	Troy Best	Auburn U	Dipodomys	21-May-90	perm loan	voucher
19576	Duke Rogers	Utah	Red squirrel	7-Jun-90	perm loan	tissue
19578	Joe Cook	U of Alaska, Fairbanks	Bolivian mammals, 80	18-Jun-90	perm loan	voucher
19579	Tamar Dagen	Florida State U	Hetereomyid skulls, 170	20-Jun-90	2-Dec-90	skulls
19580	Travis Glenn	U of Michigan	Cervus elaphus	20-Jun-90		tissue
19584	Jerome Zuni		Mammal skeletons, 14	11-Jul-90	10-Jun-91	skeletons
19587	Linda Mick-OHara	Museum of Santa Fe	Sigmodon hispidus	10-Sep-90		skin
19588	Lyle Berger	UNM	Misc. mammals	13-Sep-90		voucher
19589	Atilla Bality	Rio Grande Nature Center	mouse	14-Sep-90	perm loan	voucher
19591	Eduardo Palma	UNM	gray fox skull, 1	16-Sep-90		skull
19592	Eduardo Palma	UNM	Neotoma funcipes	18-Sep-90		skin
19593	Rodney Honeycut	Texas Tech	SA tissues, 20	18-Sep-90	perm loan	tissue
19594	Dwight Moore	Emporia State	Microtus longicaudus, karyot	1-Oct-90		tissue
19595	Juan Morales	Texas A&M	Lasiurus, tissues	2-Oct-90		tissue
19596	Gerry Roehm	USFWS	misc. mammals	1-Oct-90	4-Oct-90	voucher
19597	Stefan Sommer	UNM	misc. mammals	3-Oct-90		voucher
19598	Ursula Sheppard	UNM	MTC specimens, 3	26-Sep-90	3-Oct-90	skin
19599	Sandy Ligon	UNM	misc. mammals	27-Sep-90	8-Oct-90	voucher
19600	Dave Hafner	NMMNH	Ammospermophilus, 3	31-Oct-90		tissue
19601	Dave Hafner	NMMNH	Canis lupus material	11-Nov-90		voucher
19602	Rani Alexander	UNM - Anthro.	misc. mammals	9-Nov-90	13-Nov-90	voucher
19603	Kate Fuller	UNM - Anthro.	not specified	13-Nov-90	13-Nov-91	
19604	Bruce Hayward	WNMSU	Degu tissue	13-Nov-90	perm loan	tissue
19605	Brett Riddle	U of Nevada, Las Vegas	mammal tissue	27-Aug-90		tissue
19606	Ted Fleming	U of Miami	Leptomycteris, 16	7-Dec-90	perm loan	toe sampl
19607	Troy Best	Auburn U	mammal skin	20-Dec-90	26-Mar-91	skin
19608	Knox Jones	Texas Tech U	Peromyscis maniculatus, 50	15-Jan-91		voucher

19609	John Plants	North Texas U	tissues, 8	4-Feb-91		tissue
19614	Leslie Carraway	Oregon State U	Shrew skin, skeleton	6-Mar-91		skin, skele
19615		Museum of NM, OAS	mammal skeletons, 39	5-Mar-91	indef loan	skeleton
19616		NMMNH	skeletons, 47	5-Mar-91	exchange	skeleton
19617	Eduardo Palma	UNM	Thylamys elegans, skulls, sk	14-Mar-90		skull, skel
19619	Clint Fisher	UNM - Education	skins, 8	18-Mar-91		skin
19623		NMMNH	skins, 28	4-Feb-91	exchange	skin
19624	James Fulwyler	Los Alamos Nat. Labs	Ovis, skull, 1	25-Mar-91	perm loan	skull
19625	Brett Riddle	UNLV	Tamrascinus, Perognathus	1-Apr-91		tissue
19626	Paul Nicoletto	UNM	misc. mammals, to GUZ	2-Apr-91	4-Apr-91	voucher
19628	Kate Fuller	UNM - Anthro	Lepus, Canis, Syvilagus	20-Mar-91	2-Apr-91	voucher
19631	Elizabeth Elliston	Wildlife Rescue	skin, 1	25-Apr-91	gift	skin
19632		Museum of NM, OAS	skeleton, 1	29-Apr-91	indef loan	skeleton
19633		NMMNH	skin, 4; skeleton, 1	29-Apr-91	exchange	skeleton,
19634	Anne Culley	USFWS - Albuquerque	elephant tooth	7-May-91	13-May-91	tooth
19635	Robert J. Baker	TTV	mammal tissue	14-May-91		tissue
19636	Fred Stangl	Midwestern State	Sigmodon, 20	29-May-91	17-Jul-91	voucher
19637	Dave Hafner	NMMNH	horse, human, badger	11-Jun-91		pectoral a
19638	Marsha Lewis	LTER	not specified	21-Jun-91	Sep-91	not specifi
19639	Miriam Marmontel	NERC, Gainesville	manatee, 18	2-Jul-91	Dec-91	periotic co
19640	BJVerts/Lois Alex	Oregon State U	shrews, 100 (part 1of 3)	10-Jul-91	Mar-92	voucher
19641	Theresa de Walt	U of North Texas	tissues	10-Jul-91		tissue
19642	Mike Wooten	Auburn U	tissues	10-Jul-91		tissue
19643	Cosette Wheeler	UNM	Odocoileus, 2	10-Jul-91		tissue
19644	Susan Olcott/Ron	Frostburg State	Sylvilagus floridanus	18-Jul-91	15-Oct-91	voucher
19645	Rani Alexander	UNM - Anthro.	misc. mammals, 8	18-Jul-91		voucher
19646	LTER	UNM	unspecified	no date	no date	unspecifie
19647	Bollmann's	Eureka, CA	8 skins to be tanned	21-Jul-91	Apr-92	skins
19648	Dr. Minear	UNM - Anthro.	Erethizon dorsatum	8-Aug-91	Dec-91	femur
19649	Theresa DeWalt	U of North Texas	Peromysus gratus, 3	8-Aug-91		tissue
19650	Altenbach	UNM	pronghorn skull	23-Aug-91	28-Aug-91	skull
19651	Joe Cook	U of Alaska, Fairbanks	Myotis volans, Auriculus sku	26-Aug-91		skull
19652	Luis Ruedes	Texas A&M	Sylvilagus tissues, 4	3-Sep-91		tissue
19653	Mike Stanhope/M	Wayne State	insectivore tissues, 4	3-Sep-91		tissue
19654	Susan Stratton	UNM - Anthro.	skulls, 4	6-Sep-91		skull
19655	Joe Cook	U of Alaska, Fairbanks	Proechinys	6-Sep-91		tissue
19656	Miriam Marmontel	USFWS, Florida	manatee periotics, 2	6Sep91d		periotics
19657	Scott Gardner	UCD	misc. slides, 35	12-Sep-91	perm loan	tissue
19658	Terry Yates	NSF/UNM	Oryzonys, 5	24-Sep-91	9-Dec-91	voucher
19659	Syd Anderson	AMNH	7 specimens for ID	24-Sep-91	15-Jan-93	voucher
19660	Eduardo Palma	UNM	Thylanys, 25	4-Oct-91		voucher
19661	Jim Burbank	UNM	wolf parts	9-Oct-91	18-Nov-91	voucher
19662	Joe Cook	U of Alaska, Fairbanks	tuco tissue, 320 tubes	24-Oct-91	perm loan	tissue
19663		Rio Grande Zoo	prairie dogs, 8; kangaroo	26-Oct-91	29-Oct-91	voucher
19664	Sandy Ligon	UNM	mammal skins, 18	29-Oct-91	30-Oct-91	skin
19665	Juan Carlos Moral	Texas A&M	Lasiurus tissues	4-Nov-91		tissue
19666	Knox Jones	Texas Tech	Myotis evotis, skin & skull	4-Nov-91	gift	skin, skull
19667	David Jacobs	U of Hawaii	Lasiurus skins & skeletons	6-Nov-91		skin, skele
19668	Juan Carlos Moral	Texas A&M	Lasiurus tissues	6-Nov-91		tissues

0327

19669	Joe Cook	U of Alaska, Fairbanks	Sorex tundrensis, 4	18-Nov-91	perm loan	voucher
19670	Carla Kishinami	Bishop Museum	hoary bats, 21	19-Nov-91	30-Mar-92	voucher
19671	Jon Dunnam/Terr	UNM	Carromorph karyotype slide	25-Mar-91		tissue
19672	Jen Miyashiro	UNM	mountain lion skulls	26-Mar-91	3-Dec-91	skull
19673	Debbie Tull	UNM	sciurids, 2; pika, 1	2-Dec-91	3-Dec-91	voucher
19674	Joe Cook	U of Alaska, Fairbanks	Proechinys, karyotype slides	5-Dec-91		tissue
19675	John Walsh	U of Montana	Phylotis hastatus, 1	6-Dec-91	specimen l	voucher
19676	Suzy Peunach	UNM	misc. mammals	6-Dec-91	13-Dec-91	voucher
19677	Jorge Salazar	UNM	mammal tissues, 50	6-Jan-92		tissue
19678	Brett Riddle	U of Nevada, Las Vegas	Heteromyid, 50	8-Jan-92		tissue
19679	Bryan Evans		Epidonera truillii	21-Feb-92		skin
19680	Brett Riddle	U of Nevada, Las Vegas	Tamiasciurus donglasii tissu	21-Feb-92		tissue
19681	Marian Skupski	UNM	Reithrodontomys tissue	21-Feb-92	28-Jan-93	tissue
19682	Steve Fain/Dave	USFWS, Ashland, OR	Canis lupus tissue	2-Mar-92		tissue
19683	Terry Yates	NSF/UNM	Andinomys slide	25-Feb-92	15-Aug-93	tissue
19684	Catherine Hubbar	Rio Grande Zoo	misc mammals skins and v	10-Oct-91	extended l	skin & vert
19685	Forrest Davis	UNM	Ctenomys bolivensis	4-Mar-92		voucher
19686	Alex Van Nievelt	Duke U	Marmota, 5	11-Mar-92	1-Feb-93	voucher
19687	Flavio Colman	Museo Nacional, Paraguay	Parguayan specimens, 16	20-Mar-92	perm loan	tissue
19688	Jennifer Miyashiro	UNM	Phyllotine tissues, 130	23-Mar-92		tissue
19689	Lisa Ellis	UNM	small mammals, 12	25-Mar-92		voucher
19690	Paul Samollon	SW Foundation for Biomedical Re	Monodelphis domestica, 7	25-Mar-92		tissue
19691	Ron Adkin/Rod H	Texas A&M	pika tissue	31-Mar-92		tissue
19692	Jerry Drago/Rod	Texas A&M	Spilogule tissue	31-Mar-92		tissue
19693	Syd Anderson	AMNH	Bolivian skeletal elements, 3	31-Mar-92	20-Jan-93	skeletons
19694	Guy Herbert	UNM/MSB	mammal bones & skins	4-Apr-92	6-May-92	bones & s
19695	Eduardo Palma	UNM/MSB	Didelphis, Urocyon skins	15-Apr-92	25-Jun-92	skin
19696	Bollmanns	Eureka, CA	bison, beaver	22-Apr-92		voucher
19697	Marian Skupski	UNM	taxidera taxus	30-Apr-92	14-May-92	skin
19698	Bob Parmenter	LTER	Sevilleta reference collection	14-May-92	10-Sep-92	
19699	Guy Herbert	UNM/MSB	Canis lupus skulls, Equus ca	15-May-92	20-May-92	skulls, leg
19700	BJVerts/Lois Alex	Oregon State U	shrews (part 2 of 3)	11-Jun-92		voucher
19701	Rani Alexander	UNM - Anthro.	mammal skeletons, 12	16-Jul-92		skeletons
19702	Ed Heske	Illinois Nat Hist. Survey	mammal skins	17-Sep-92		skins
19704	Joe Cook	U of Alaska, Fairbanks	misc. mammals, karyotype s	24-Sep-92		tissue
19705	Sandy Ligon	UNM	chaelodipus, 2	29-Sep-92	29-Sep-92	voucher
19706	Mike Balistreri	UNM	small mammals, 15	5-Oct-92	7-Oct-92	voucher
19707	Sandy Ligon	UNM	mammal antlers	6-Oct-92	6-Oct-92	antlers
19708	Joe Cook	U of Alaska, Fairbanks	Vampyrum tissues	9-Oct-92		tissue
19709	Terry Yates	UNM	misc. bats	10-Oct-92	10-Oct-92	voucher
19710	Lisa Ellis	Nature Center	misc. mammals, 17	13-Oct-92	15-Oct-92	voucher
19711	Jon Dunnam	UNM	dactylomys, karyotype slides	19-Oct-92		tissue
19712	Terry Yates	UNM	misc. mammals	30-Oct-92	30-Oct-92	voucher
19713	Mike Passman	UNM - Psych.	Macaca, 3	19-Nov-92	20-Nov-92	skins
19714	Joe Cook/Tim Ho	Framingham, MA	mammal slides	24-Nov-92		tissue
19715	Fernando Cervant	UNAM	Lepus callotis	24-Nov-92	25-Nov-92	voucher
19716	Joe Cook	U of Alaska, Fairbanks	Noctilio	2-Dec-92		tissue
19717	Brett Riddle	UNLV	Chaetodips, 3	3-Dec-92		voucher
19718	Don Linzey	Wytheville Community Coll	misc. mammals	9-Dec-92		voucher

19719	Fernando Cervant	UNAM	Mexican mammal skins, 58		9-Dec-92	voucher
19720	Terry Yates	UNM/MSB	misc. mammals, 50	11-Dec-92	12-Dec-92	voucher
19721	Fernando Cervant	UNAM	lagomorphs, 5	9-Dec-92		voucher
19722	David Johnson	College of Santa Fe	misc. mammals, 50	18-Dec-92		voucher
19723	Marian Skupski	UNM	D. merriami, 30 tissues	22-Jan-93		tissue
19724	Bill Gannon	UNM	misc. mammals, 25	2-Feb-93	6-Feb-93	voucher
19725	Michael Gannon/	Penn State	Felis concola, 30	3-Feb-93	not sent	voucher
19726	Terry Yates/Bob	UNM/MSB	Peromyscus, gophers, & mis	9-Feb-93	10-Feb-93	voucher
19727	Lisa Ellis	Nature Center	misc. mammals, 15	10-Feb-93	12-Feb-93	voucher
19728	Jennifer Miyashiro	UNM/MSB	mammal tissues	22-Feb-93		tissue
19729	Ursula Sheppard	UNM/MSB	misc. mammals	23-Feb-93		voucher
19730	Lyle Berger	UNM	misc. mammals, 18	24-Feb-93		voucher
19731	Ted Fleming	Florida - Coral Gables	bats, 3	3-Mar-93		voucher
19732	Sacha Wheeler	UNM - Art	Macaca mulatta, 3	22-Mar-93	23-Mar-93	skins
19733	Bill Gannon	UNM/MSB	Macrotis californicus, Lasiur	25-Mar-93		voucher
19734	Derek Werner	Santa Fe	Larus californicus	1-Apr-93		voucher
19735	Suzy Peurach	UNM/MSB	karyotype sfides, 75	5-Apr-93		tissue
19736	Mike Balistreri	UNM	Thomomys, Sciurus	26-Apr-93	3-May-93	voucher
19737	William Minear	UNM	mammal femur	30-Apr-93	20-Jan-95	femur
19738	Mike Balistreri	UNM	misc. bats	4-May-93		voucher
19739	Joe Cook	U of Alaska, Fairbanks	mammal tissue, 23	17-May-93		tissue
19740	Robert Owen	Texas Tech U	Euderma, 10; Idionycteris, 1	21-May-93		voucher
19742	Tom Estenson	UNM	Siratt cervicals	27-May-93	30-May-93	cervicals
19743	Rob Baker	Texas Tech U	Bat tissue	12-Jul-93		tissue
19744	Robert Bradley	Texas A&M	insectivore tissue	1-Jun-93		tissue
19745	Jennifer Miyashiro	UNM/MSB	misc. Phyllotines	12-Jul-93		tissue
19746	Paul Sherman	Cornell U	insectivore tissue, 20	28-Aug-93		tissue
19747	Jim Gosz	Washington, DC	Peromysus maniculatis	28-Aug-93		skin
19748	Syd Anderson	Amer. Museum of Nat. History	Andinomys edax, karyotype	2-Sep-93		tissue
19749	Eduardo Palma	U of Wisconsin	mammal tissue, 15	8-Sep-93		tissue
19750	Bogdanowicz/R.	Texas Tech U	Euderma, 5; Idiomycteris, 5	17-Sep-93	1-Sep-94	voucher
19751	Kerry Kilburn	W. Virginia State College	Dipodomys, 6	11-Oct-93		voucher
19752	Robert Dello-Rus	Socorro	Ovis canadensis	10-Oct-93		post-crani
19753	Kirsch	Madison, Wisconsin	mammal tissues	11-Oct-93		tissue
19754	Suzy Peurach	UNM	Bolivian mammal tissue	18-Oct-93		tissue
19755	Terry Yates	UNM	Abracoma, Desmid tissue	21-Oct-93		tissue
19756	Terry Yates	UNM	Peromysus, 10	25-Oct-93		voucher
19757	Terry Yates	UNM	mole tissue	27-Oct-93		tissue
19758	Joe Cook	U of Alaska, Fairbanks	mammal tissue	27-Oct-93		tissue
19760	Damian Scott	UNM	cell suspensions	3-Nov-93		tissue
19761	Karen Held/Elena	Del Norte High School	Dipodomys ordii	16-Nov-93	17-Nov-93	voucher
19762	Mike Balistreri	UNM	Zapus, Myocaster	17-Nov-93		voucher
19763	Georgy Shenbrot	Ben Gurian Raman Ctr, Israel	mammal skins/skulls	22-Nov-93	permanent	skins/skull
19764	Scott Altenbach	UNM	misc. bats	30-Nov-93		skins
19765	Karl Koopman	AMNH	Vespertilionid India bats, 6	8-Dec-93		voucher
19766	Tom Estefson	UNM - Anthro.	Giraff cervical	9-Dec-93	13-Dec-93	cervical
19767	Terry Yates	UNM	red squirrels, 2	24-Jan-94		voucher
19768	Terry Yates	UNM	Peromyscus tissues, 400	28-Jan-94		tissue
19769	T. Lawler	Humboldt State U	Cethrionymys tissues	31-Jan-94		tissue

19970	Lisa Ellis	UNM	MTZ mammals	4-Feb-94		voucher
19971	Scott Steppan	FMNH, Chicago, IL	Phyllotine tissues, 7	15-Feb-94		tissue
19972	Scott Steppan	FMNH, Chicago, IL	not specified	16-Feb-94		not specifi
19973	Joe Cook	U of Alaska, Fairbanks	Bolivian carnivore slide	17-Feb-94		tissue
19974	Garden Kirkland	Shippenburg State U	mammal carcasses, 25	15-Feb-94	perm loan	carcasses
19975	Lyle Berger	UNM	bobcat skulls, vampire skulls	17-Feb-94	15-Feb-94	skulls/skin
19976	Norm Scott/Luz A	Washington U	tropiderus tissues	22-Feb-94	perm loan	tissue
19977	Joe Zunt	Zunt Pueblo	mammal skins/skeletons	26-Feb-94	26-Feb-94	skins/skel
19978	Terry Yates	UNM	Sigmodon liver tissue	2-Mar-94		tissue
19979	Isabel Fraile	Spain	Degu tissue, 5	8-Mar-94		tissue
19980	Don Duszynski	UNM	mammal slides	9-Mar-94	10-Mar-94	tissue
19981	Bruce Anderson	UNM - Medical School	Hanta tissues	11-Mar-94		tissue
19982	Jennifer Miyashiro	UNM	misc. mammal tissues	16-Mar-94		tissue
19983	Rodney Honeycut	Texas A&M	Abracoma, Desmid	21-Mar-94		voucher
19984	Lisa Valle	UNM	misc. mammals	27-Mar-94	28-Mar-94	voucher
19986	Terry Yates	UNM	Peromyscus	5-Apr-94		voucher
19987	Damian Scott	UNM	bat skins, 10	11-Apr-94	16-Apr-94	skins
19988	John Hubbard	UMDGK	year end report	25-Apr-94		
19989	Debbie Knapp	Colorado State U	Mormoops, Pteronotus skull	11-May-94	28-Jul-94	skulls
19990	John Patton	LGL, Byrne, TX	Marmosine tissues	11-May-94		tissue
19991	Linda Mick-OHara	Museum of NM, Santa Fe	gray fox	13-May-94		voucher
19992	Brian Hjelle	UNM - Pathology	Neotoma tissue	16-May-94		tissue
19993	Joe Cook	U of Alaska, Fairbanks	Microtis tissue	23-May-94		tissue
19994	Scott Steppan	Field Museum	Phyllotis tissue	23-May-94		tissue
19995	Jim Brown/Amy D	UNM	mammal skins	30-May-94	in museum	skins
19996	Dave Parsons	USFWS	wolves: skins, skulls	1-Jun-94		skins/skull
19997	Richard Monk	Texas Tech U	Apodemus	7-Jun-94		voucher
19998	Tom Estenson	UNM	giraff, P. truei vertebra	7-Jun-94		vertebra
19999	Tim Michenssun	Socorro, NMDGF	Ovis canadensis, 3	9-Jun-94	perm loan	voucher
19800	Brett Riddle	UNLV	pocketmice tissues	18-Apr-94		tissue
19801	Tom Ksiakek	CDC	rodent wicks, 200	15-Jun-94		tissue
19802	Brian Hjelle	UNM - Pathology	Onychomys tissues	17-Jun-93		tissue
19803	Brian Hjelle	UNM - Pathology	mammal lung tissue	22-Jun-94		tissue
19804	Ira Greenbaum	Texas A&M	P. ermicus tissues	29-Jun-94		tissue
19805	Rob Voss	American Museum	mammal skin and skull	1-Aug-94	17-Aug-94	skin/skull
19806	John Patton	Ecological Genetics, Bryan, TX	Marmonine tissues	5-Jul-94		tissue
19807	Jim Patton	U of California, Berkeley	Marmosops tissues	6-Jul-94		tissue
19808	Brian Hjelle	UNM - Pathology	Hanta tissues	6-Jul-94		tissue
19809	Lisa Ellis	Nature Center	local mammals	6-Jul-94		voucher
19810	Brian Hjelle	UNM - Pathology	Reithrodontomys, Baiomys	8-Jul-94		tissue
19811	Brian Hjelle	UNM - Pathology	Peromyscus, Onychomys	11-Jul-94		tissue
19812	Tom Ksiazek	CDC	mammal bloods & diskette	12-Jul-94		blood
19813	Tom Ksiazek	CDC	mammal bloods & diskette	13-Jul-94		blood
19814	Brian Hjelle	UNM - Pathology	mammal liver	14-Jul-94		tissue
19815	Brian Hjelle	UNM - Pahtology	mammal tissue	19-Jul-94		tissue
19816	Scott Steppan	FMNH, Chicago, IL	Phyllotis, skin and skeleton	20-Jul-94		skin/skelet
19817	Scott Steppan	FMNH, Chicago, IL	Phyllotis, skin and skeleton	24-Jul-94		skin/skelet
19818	Phil Sudman	South Dakota	mammal tissue	27-Jul-94		tissue
19819	Margareth Smith	U of California, Berkeley	Akodon tissues	4-Aug-94		tissue

19820	Tom Ksiazek	CDC	Hanta bloods	9-Aug-94		blood
19821	Phil Sudman	South Dakota	Eutamias tissues	8-Aug-94		tissue
19822	Brian Hjelle	UNM - Pathology		16-Aug-94		
19823	Leslie Carraway	Oregon State U	Shrews, 22	23-Aug-94	23-Nov-94	voucher
19824	Mark McKnight	U California, Davis	Chaetodipus, P. californius ti	23-Aug-94		tissue
19825	John Patton	LGL ecological Genetics, Bryan,	mouse, possum tissues	23-Aug-94		tissue
19826	Brian Hjelle	UNM - Pathology		29-Aug-94		
19827	Tom Ksiazek	CDC	bloods, 576	30-Aug-94		blood
19828	Syd Anderson	AMNH	Chroeomys, Calomys	1-Sep-94	14-Jan-95	tissue
19829	Brian Hjelle	UNM - Pathology	Peromysine tissue	6-Sep-94		tissue
19830	Ed Heske	Illinois Nat. History		7-Sep-94		
19831	Mariel Campbell	UNM/MSB	mammal skins, skulls	20-Sep-94		skins, skul
19832	Pierre Rollins	CDC	mammal bloods, 500	26-Sep-94		blood
19833	Pierre Rollins	CDC		29-Sep-94		
19834	Pierre Rollins	CDC	mammal bloods, 200	5-Oct-94		blood
19835	Luis Albuja	Esc. Polit. Nacional		18-Oct-94		
19837	Luis Albuja	Esc. Polit. Nacional		18-Oct-94		
19838	Pierre Rollins	CDC	mammal bloods, 699	25-Oct-94		blood
19839	Pierre Rollins	CDC	mammal bloods, 769	31-Oct-94		blood
19840	Robert Harrison/	Louisiana State U	small rodents, 6	13-Nov-94	3-Dec-94	voucher
19841	Pierre Rollins	CDC	mammal bloods	7-Nov-94		blood
19842	Jorge Salazar	UNM	misc. mammals	18-Nov-94	19-Nov-94	voucher
19843	Greg Farley	UNM/GVZ	misc. mammals	18-Nov-94	19-Nov-94	voucher
19844	Scott Steppan	FMNH	Phyllotis skins and skulls	21-Nov-94		skins/skull
19845	Bruce Anderson/	UNM - Pathology	mammal tissues, 102	23-Nov-94		tissue
19846	Pierre Rollins	CDC	mammal bloods, 698	28-Nov-94		blood
19847	Brett Riddle	U of Nevada, Las Vegas	lizard tissues	5-Nov-94		tissue
19848	Pierre Rollins	CDC	mammal bloods, 249	5-Dec-94		blood
19849	Pierre Rollins	CDC	mammal lung tissue	7-Dec-94		tissue
19850		CBF, La Paz, Bolivia	Bolivian mammal specimens	10-Dec-94	transfer	
19851	Brian Hjelle	UNM - Pathology	Reithrodontomys megalotis	16-Dec-94		tissue
19852	Brian Hjelle	UNM - Pathology	Peromyscus, 50	4-Jan-95		voucher
19853	Pierre Rollins	CDC	mammal lung, kidney	4-Jan-95		tissue
19854	Pierre Rollins	CDC	mammal bloods, 211	9-Jan-95		blood
19855	Pierre Rollins	CDC	mammal bloods, 40	11-Jan-95		blood
19856	Robert Baker	Texas Tech U	Apodemus speciosus	11-Jan-95		tissue
19857	Eduardo Palma	Texas Tech U	marsupial livers	18-Jan-95		tissue
19858	Eduardo Palma	Texas Tech U	marsupial livers	24-Jan-95		tissue
19859	Pierre Rollins	CDC	mammal bloods, 224	25-Jan-95		blood
19860	Heather Smith/Da	UNM/MSB	Peromyscus gratus, 20 tube	27-Jan-95		tissue
19861	Mike Balistreri	UNM	bat skins, 20	27-Jan-95		skins
19862	M. Schmidt	Smithville, TX	fish tissue, 250	2-Feb-95		tissue
19863	Lyle Berger	UNM	bobcat	2-Feb-95		voucher
19864	Lisa Ellis	Nature Center	misc. mammals	8-Feb-95		voucher
19865	Sandy Ligon	UNM	misc. mammals	9-Feb-95		voucher
19866	Brian Hjelle	UNM - Pathology	golden mice,	13-Feb-95		voucher
19867	Mike Carleton	USNM-SI	Oecomys	15-Feb-95		voucher
19868	Guy Musser	AMNH	Oryzomys	15-Feb-95		voucher
19869	Tom Estenson	UNM - Anthro.	mammal skulls, 7	20-Feb-95		skulls

0329

19870	Richard Monk	Texas Tech U	mammal tissues, 8	23-Feb-95	returned	tissue
19871	Eduardo Palma	Texas Tech U				
19872	Scott Gardner	Nebraska		6-Mar-95		
19873	Maureen Schmitt	Texas	*fish eyes and muscle*			tissue
19874	M. Mustrangi/ J L.	U of California, Berkeley	mammal tissues	22-Feb-95		tissue
19875	Garnet McMillan	UNM - Anthro.	mammal bones, 3	24-Feb-95		bones
19876	Pierre Rollins	CDC	mammal bloods, 280	28-Feb-95		blood
19878	Pierre Rollins	CDC	mammal bloods, 86	6-Mar-95		blood
19879	Phil Myers	UMMZ	*Akodon*, 3	7-Mar-95		voucher
19880	Catherine Hubbar	Rio Grande Zoo	Cheetah skull	9-Mar-95	long-term l	skull

BSH 0330

Name	Date	Institution	Purpose
Ed Heske	3/1/90	UNM	Reithrodontomys montanus
Gillian Harris	3/1/90	UNM	Calomys spp.
Kate Fuller	4/1/90	MNM/UNM	archaeology tour
Jack B Burtram	4/1/90	Albuquerque	Burtram consulting
Dick Forbes	5/1/90	Portland State Univ.	visiting
Kate Fuller	8/1/90	MNM/UNM	archaeology fauna
Rob Haught	22/1/90	UNM	visit
Rob Harrison	22/1/90	UNM	Ph D work
Kurt Menke	23/1/90	Ex-UNM	skull I D.
Kate Fuller	24/1/90	MNM/UNM	archaeology fauna
Linda Mick-O'Hara	24/1/90	MNM/UNM	archaeology fauna
Susan Converse	29/1/90	UNM	tour Anthro 121L class
Anil J Hubbard	29/1/90	UNM	Arch class
Carolyn Daniel	31/1/90	OCA at UNM	faunal analysis
J Burtram	1/2/90	Albuquerque	Burtram consulting
Claire Intress	Feb-90	UNM	NS 263 class science-El. Ed. teacher
Julia Shaw	2/2/90	UNM	
Anthony	2/2/90	S.V School	
Jennifer Adams	6/2/90	Bandelier El. School	1-5 Gifted class tour
Kate Fuller	7/2/90	UNM/MNM	archaeology fauna
Kendra West	15/2/90		
Cody Hall	15/2/90	MHS	Ag teacher at Moriarity
Chris Ragland	15/2/90		
Tammy L Fetchik	15/2/90	Moriarity	
Cody J.W. Svid	15/2/90	Moriarity	
Kim Baumgardener	15/2/90		Art student
Alex Loweng	19/2/90	Anthro.	archaeology
Bob Leonad	19/2/90	Zuni Pueblo	Archaeology
Kate Fuller	20/2/90	lab of Anthro at UNM	archaeology fauna
Kate Fuller	28/2/90	lab of Anthro at UNM	archaeology fauna
Heather O'Clerlcu	1/3/90	Moriarity	
Chris Ragland	1/3/90		
Linda Josie Chavez	1/3/90		
Kate Fuller	2/3/90		archaeology fauna
Anita N Jaime	5/3/90	Matheson Pk. El.	to research endangered animals
Kristen Shurtz	5/3/90	Matheson Pk. El.	to research endangered animals
R Lang	5/3/90	SW Arch. Consultants	Identification of Arch specimen
Tammy Rillam	5/3/90	Cibola FFA	state wildlife judging
Kate Fuller	7/3/90	MNM/UNM	archaeology fauna
Kate Fuller	13/3/90	MNM/UNM	archaeology fauna
Linda Mark-O'Hara	15/3/90	MNM/UNM	archaeology fauna
Aleta Lawrence	15/3/90	UNM	archaeology fauna
Sarah Huges	16/3/90	University of Iowa	visit
Julie Huges	16/3/90	University of Iowa	visit
Kate Fuller	21/3/90	MNM/UNM	archaeology fauna
Jeff Rathland	22/3/90	U of Northern Iowa	visit
Kimnyn Meyer	22/3/90	U of Northern Iowa	visit
J. Brown	22/3/90	Game & Fish	pick up specimens
Phil Sudman	22/3/90	Oak Ridge Nat. Lab	examine Eutamias
H. Morris	26/3/90		Draw heads
R.W. Larvy	28/3/90	R.W.L. and Co.	Bone identification
Linda Mark-O'Hara	29/3/90	MNM Research	ID fauna
Sam Dimnix	29/3/90	MLK Elem. School	Animal unit of study

Aleta Lawrence	29/3/90	UNM	faunal analysis
Kate Fuller	30/3/90	MNM/UNM	faunal analysis
Rolf Ims	3/4/90	U of Oslo, Norway	visit
Kate Fuller	4/4/90	MNM/UNM	faunal analysis
Mrs. Limmerly's 2nd Grd.	6/4/90	SY Jackson Elem.	Field Trip
Bob Leonad	9/4/90	UNM	archaeology
Aleta Lawrence	9/4/90	UNM	archaeology fauna
Morgan Ford	9/4/90	IB Elementary	spring break
Trisia Brooks	9/4/90	MarVista High Sch.	spring break
Kate Fuller	11/4/90	MNM/UNM	fauna analysis
Aleta Lawrence	12/4/90	UNM	fauna analysis
J. Langan	12/4/90	UNM	visit (incredible trophies)
Angela Abeyta	12/4/90	PHS	visiting
Michael Jackson	12/4/90	PHS	visiting
Elema Diram	12/4/90	PHS	visiting
Sandra Sanchez	12/4/90	PHS	visiting
Yvonne Fernandez	12/4/90	PHS	visiting
Kate Fuller	17/4/90	MNM/UNM	fauna analysis
Martha Binford	19/4/90	OCA/UNM	archaeology faunal analysis
Dana Davis	24/4/90	Lowell Elem.	classroom study
Kate Fuller	25/4/90	UNM/Lab Anth.	faunal analysis
Sydney Oudeum	25/4/90	Amer. Mus. Nat. His.	New York-Bolivian mammal
Justine Anderson	25/4/90	Amer. Mus. Nat. His.	New York-Bolivian mammal
Willis Thayor	25/4/90	U Mass.	visit
Tom Shine	1/5/90	self	book
Ed Heche	1/5/90	UNM	verify Chaetochpins species ID
Sandra Brantley	4/5/90	UNM	use Sevilleta teaching collection
Kate Fuller	9/5/90	MNM/UNM	archaeology fauna analysis
Jean Crawford	9/5/90	UNM	to visit Kate Fuller
Kate Fuller	11/5/90	MNM/UNM	archaeology fauna ID
Denisut Gonteman	12/5/90	University of Jordan	visit
Lew Hilliam	12/5/90		vistor- very impressive!
Denise Jodden	13/5/90	UNM/Bio Dept.	look at Sevilleta collection
Stacy Carr	15/5/90	Berkley Univ.	to study animal bones
Martha R. Binford	15/5/90	UNM	visit
LeeAnna Schmiebs	15/5/90	UNM-OCA	tour of facilities
Linda Mick-O'Hara	15/5/90	UNM-OCA	tour
Lou Redmond	18/5/90	US Forest Service	ID Pleistocene horse teeth
Jim Travis	18/5/90	LANL	sonography
Aleta Lawrence	21/5/90	OCA	faunal analysis
LeeAnna Schmiebs	21/5/90	OCA	faunal analysis
Jack Shield	21/5/90	DPI QLD Australia	research
LeeAnna Schmiebs	22/5/90	UNM/OCA	faunal analysis
U Shepherd	22/5/90	UNM	PhD work
Kate Fuller	24/5/90	MNM-Research Sect.	Fauna ID
Kate Fuller	25/5/90	MNM-Research Sect.	Fauna ID
Scott Gardener	29/5/90	UNM/Parasit.	re-placing loan
Lark B. Butram	4/6/90	CGI/NFS Obola	ID on LA1178 Neotomes
Lewis Kimmelman	15/6/90	MNM/Research Sect.	ID Arch. Fauna
Andrew Sowbrew	15/6/90		artists
Jerry Wassel-Grimm	26/6/90	San Bernidino, CA	loot at specimens
Jerome Vime	11/7/90	Zuni Arch. Program	faunal ID- arch
Elfiy Nuestal, David	12/7/90	Edgewood, NM	bone analysis
Michael Patrick	16/7/90	UNM/Parisitology	specimen idenification

0331

Michael Patrick	20/7/90	UNM/Parasitology	tour of museum
Laura Kewitt	20/7/90	Washington D C	tour of musem
Haruo Kamiya	23/7/90	Hirosaki Univ of Med.	to visit Bio. Dept.
Aleta Lawrence	24/7/90	Human Systems	fauna ID-Arch.
LeeAnna Schniebs	24/7/90	HSR	fauna ID -Arch.
Aleta Lawrence	25/7/90	HSR	fauna ID -Arch.
Joel Lusk	25/7/90	US Fish & Wildlife	Falcon to bugs
Jan Roberts	26/7/90		
Aleta Lawrence	26/7/90	UNM student	art project
Aleta Lawrence	31/7/90	HSR	faunal analysis
Aleta Lawrence	1/8/90	HSR	faunal analysis
Aleta Lawrence	6/8/90	HSR	faunal analysis
Jim Boone	8/8/90	Univ. of Georgia	visit people and look around
Aleta Lawrence	8/8/90	HSR	faunal analysis
LeeAnna Schniebs and	10/8/90	HSR	faunal anslysis
Laura Snyder	13/8/90	Marie Hughes Elem.	looking around
Mike Petriol	13/8/90	UNM	giving (above) tour
A.L. Averd	14/8/90	HSR	faunal analysis
W. Lopez- Forment	14/8/90	UNAM-Biology	collection and mammalology
Chris Sandburg	19/8/90	Guatifuco Charles Da.	visit
Lemu Prado R.	21/8/90	Ecuador	visit
Gustavo Hinojosa	21/8/90	Ecuador	visit
Galo Rosales R.	21/8/90	Ecuador	visit
Roberto Korkin	21/8/90	Ecuador	visit
Jorge Sovia	21/8/90	Ecuador	visit
Carlos Nombrous	21/8/90	Ecuador	visit
Oslo Sarango Valverde	21/8/90	Ecuador	visit
Jorge Olselo S.	21/8/90	Ecuador	visit
Sautor Calderon S.	21/8/90	Ecuador	visit
German E. Morillo	21/8/90	Ecuador	visit
Efecer Cruz B.	21/8/90	Ecuador	visit
Miguel P. Mejiag	21/8/90	Ecuador	visit
Kate Fuller	22/8/90	MNM-OAS	archaeology fauna
John Wigginton	27/8/90	Auburn Univ.	measuring bobcat skulls
John Wigginton	28/8/90	Auburn Univ.	measuring bobcat skulls
John Wigginton	29/8/90	Auburn Univ.	measuring bobcat skulls
Kate Fuller	29/8/90	MNM-OAS	archaeology fauna
John Wigginton	30/8/90	Auburn Univ.	measuring bobcat skulls
John Wigginton	31/8/90	Auburn Univ.	measuring bobcat skulls
Mike Petriol	4/9/90	UNM	NR # check specimen
Linda Mick-O'Hara	11/9/90	MNM-OAS	faunal analysis
Joyce M. Szabo	11/9/90	UNM	museum studies class -25 people
Kate Fuller	12/9/90	MNM-OAS	arch. fauna
Pat Oldham	19/9/90	Bemidji, MN	draw animals for coloring book
Kate Fuller	19/9/90	MNM-OAS	arch. fauna
Claire Intress	20/9/90	UNM-NS 263 class	teaching purposes
Jennifer Richards	23/9/90	FIU	see museum
Kate Fuller	26/9/90	MNM-OAS	fauna arch.
Larry Choati	19/10/90	Texas Tech Univ.	mammals from E. New Mexico
Jennifer Loey	19/10/90	Brunn School	tour
Madigar Chander	19/10/90	UNM	
Anne Muchmore	19/10/90	Brunn School	tour
Wendi Ray	19/10/90	Brunn School	tour
Brad Swenson	24/10/90	The Brunn School	tour

Zach Richards	24/10/90	UNM	art student
Linda Mick-O'Hara	24/10/90	MNM-OAS	ID arch. fauna
Richard Cifelli	26/10/90	OK Mus. Nat. His.	ID
Rani Alexander	8/11/90	Anthro. UNM	arch. fauna
Sydney Anderson	9/11/90	Amer. Mus. Nat. His.	Bolivia
Yove Lee	12/11/90	NC State Museum	SE bats and Dizonay
Mary K. Clayh	12/11/90	NC State Museum	Eudesmn and Plecotos
Rani Alexander	13/11/90	MNM-OAS	arch. fauna
J.P. Hubbard	16/11/90	NMSGF	Peromyscus
Rani Alexander	20/11/90	OCA	archae faunal remains
Eric Caine	20/11/90	Jefferson Mid. School	tour
Hart R. Schwartz	21/11/90		sheep skull
Pidro Rodriguez	21/11/90	UNM/Pathology	NK # checking species names
Michael Patrick	21/11/90	UNM student	loof at gophers
Michael Patrick	11/31/90	UNM Parasitology	specimen checks
Dr. John Dryzel	27/11/90		tooth
Tasha & Joan Findley	13/12/90	Mesa Pals	tour
Phillip Chappeli	18/12/90	Mesa Pals	tour
Troy L. Bert	20/12/90	Auburn Univ.	heteromyids
Jerry W. Dragoo	26/12/90	Texas A&M Univ.	skunks
Monan Skupsli	26/12/90	UNM	122 lab development
Yvonne Chaquin	2/1/91	UNM	draw skull
Mike Petriol	8/1/91	UNM	traps
Galen Burgeti	8/1/91	UNM-Anthro.	bones
Rani Alexander	14/1/91	UNM-Anthro.	id
Ravenwolf	22/1/91	UNM Pathos society	tour
Rani Alexander	22/1/91	UNM-Anthro.	id
Greta Johnke	23/1/91	UNM	draw skull
Christine Wudman	28/1/91	Bosque del Apache	tour
Randi Alexander	4/2/91	UNM Anthro.	faunal analysis
L. Schmiebs	5/2/91	OCA	id
Marie Brown	7/2/91	OCA	id
Rani Alexander	10/2/91	UNM Anthro.	id
Joan Morrison	12/2/91	UNM	Zapus
Claire Intress	14/2/91	Education- UNM	class
Linda Mick-O'Hara	18/2/91	MNM/OAS	faunal analysis
Brad Swanson	20/2/91	UNM	Dipodomys
Amber Fpagger	21/2/91	San Diego State	tour
D.M. Auther	22/2/91	LACM	maps
Marie Brown	22/2/91	UNM/OCA	id
Ryan Wells	26/2/91		id
David G. Clifton	26/2/91		id
Linda Mick-O'Hara	27/2/91	MNM/OAS	id
Laura Anyder	1/3/91	Marie Hughes	visitor
Aubrey DeMerrit	1/3/91	Marie Hughes	visitor
Gregory DeMerrit	1/3/91	Marie Hughes	visitor
Linda Mick-O'Hara	8/3/91	MNM/OAS	faunal ID's
Cody H. Hall	8/3/91	Moriarity	judging collection
Chris Baylor	9/3/91	SIUC	id
Rani Alexander	11/3/91	MNM/OAS	fauna
Cody Hall	11/3/91	Moriarity	to study collection
Ken Delum	18/3/91	Univ. of Nebraska	id
Carolyn Daniel	20/3/91	OCA/UNM	faunal analysis
Rani Alexander	22/3/91	MNM/OAS	arch. fauna

0332

Gorges Family (4)	23/3/91	Cheyenne, Wyoming	info for kids
T L Bert	28/3/91	Auburn Univ	return loan
Carolyn Daniel	3/4/91	OCA/UNM	faunal analysis
Abigail Sullwar	4/4/91	BUHS	tour
Brian Lang	8/4/91		independant study
Rani Alexander	7/5/91	UNM Anthro.	arch. bones
Jim Effinger	10/5/91	ABQ	visit
Rani Alexander	10/5/91	UNM Antro.	arch. bones
Ariel Kalishman	12/5/91	ABQ	tour
Chala Kendrich	14/5/91	ABQ	tour
Meddy Goodkind	16/5/91	ABQ	tour
Steven L. Hartman	17/5/91	ABQ	tour
Mrs. Scotts HPP class	17/5/91	ABQ	tour
Daphine Lucero	17/5/91		tour
Steven O'Loway	17/5/91		tour
Hershul O'Loway	17/5/91		tour
Valerie Sanchez	17/5/91		tour
Jennifer Terry	17/5/91		tour
Andrea Pole	17/5/91		tour
Casina Sanchez	17/5/91		tour
Denise Mace	17/5/91		tour
Alma Gonzalez	17/5/91		tour
Sue Stratton	22/5/91	UNM-Anthro.	Arch. bones
Sue Stratton	23/5/91	UNM-Anthro.	Arch. bones
Bill Stanley	24/5/91	Mus. of Nat. His.	tour- wonderful collection!
Sue Stratton	26/5/91	UNM-Anthro.	arch. bones
Linda Mick-O'Hara	30/5/91	MNM/OAS Santa Fe	ID fauna
Pat Jablonsky	3/6/91	DMNH Denver	bat studies- great collections!
Ruben Ravago	13/6/91		draw skulls
Elizabeth Cervades	13/6/91	ABQ, NM-UNM	
Mona Abousleman	13/6/91		
Phobe Sunia	13/6/91		
Angela Bachicha	13/6/91		
Daniel Tang	13/6/91		
Susan Stratton	20/6/91	UNM Anthro.	arch. bones
Marie Brown	26/6/91	OCA	arch. bone
Emily Wallace	26/6/91		
Sherry L. Phelps	26/6/91		
Joan Morrison	28/6/91	LANL	id Zapus
Brian Morris	2/7/91	USDA- Vet. Services	facility inspection
R L. Perberson	2/7/91	USDA- Vet. Services	facility inspection
Miles Harwell	13/7/91	McKinnley Elem.	to visit
Nancy Akins	15/7/91	Mus. of New Mexico	to use comparitive materials
Josh Baker	19/7/91	Westgate Elem.	to visit
Freddy Martinez	19/7/91	Westgate Elem.	to visit
Pat Drake	30/7/91	Sunsmith, SC	to visit
Lisa Ellis	5/8/91	UNM	study Peromyscus skins
Marie Brown	6/8/91	UNM-OCA	ID arch. bones
Kathie Rick	12/8/91	UNM	photo shoot
Kate Fuller	20/8/91	UNM-Anthro.	ID bones
Kate Fuller	22/8/91	UNM-Anthro.	ID bones
Tim Stuart	26/8/91	art - UNM	photograph skull
Brad Boyle	27/8/91	Missouri Botanical	talk with Bill Gannon
Kate Fuller	28/8/91	UNM Anthro.	bones of birds

Boris Weikamann	30/8/91	Univ. Borullera, Spain	excellent
Kate Fuller	30/8/91	UNM Anthro.	birds and mammals id
Susan Stratton	4/9/91	UNM Anthro.	bone ID's
Susan Stratton	6/9/91	UNM Anthro.	bone ID's
Paul Cryan	6/9/91	my mind	bats, bats and more bats
Susan Stratton	8/9/91	UNM Anthro.	bone ID's
Ken & Marie Brown	10/9/91	UNM,OCA	arch. bone ID's
Linda Mick-O'Hara	11/9/91	MNM/OAS	faunal analysis
Susan Moga	11/9/91	MNM/OAS	faunzl analysis
Marie Brown	11/9/91	UNM/OCA	arch. bone ID's
Susan Stratton	13/9/91	UNM Anthro.	arch. bone ID's
Marie Brown	16/9/91	UNM/OCA	arch. bone ID's
Susan Stratton	20/9/91	UNM Anthro.	bone ID's
Lew & Pat Brewen	24/9/91	Albuquerque	tour
Lorin Healton	24/9/91	Riverside, CA	from Friends of the Library
Sarah Healton	24/9/91	Riverside, CA	from Friends of the Library
Eilleen Kramer	24/9/91	Riverside, CA	from Friends of the Library
Eleanor Sanchez	24/9/91	Visitors Center	tour
Joyce M. Szabo	24/9/91	UNM Art & Art His.	museum studies
Susan Stratton	2/10/91	UNM Anthro.	bone ID's
Phil Letownean	2/10/91	Anthro.	bone ID's
Jonathan Niles	2/10/91	Anthro.	bone ID's
Steve Churchill	3/10/91	Anthro.	visit
Marie Brown	4/10/91	OCA/UNM	bone ID's
Susan Stratton	5/10/91	Anthro.	bone ID's
Susan Stratton	6/10/91	Anthro.	bone ID's
Steve Churchill	7/10/91	Anthro.	bone ID's
Susan Stratton	7/10/91	Anthro.	bone ID's
Suasan Stratton	9/10/91	Anthro.	bone ID's
Phil Etavene	9/10/91	Anthro.	bone ID's
Robert Dello Russo	9/10/91	Anthro	bone ID's
Rick Reyvelt	9/10/91	Anthro.	bone ID's
Samantha Rogers	9/10/91	Anthro.	bone ID's
Steve Churchill	10/10/91	Anthro.	bone ID's
Steve Churchill	11/10/91	Anthro.	bone ID's
Michael Irie	11/10/91	Montana State Univ	schmooze
Steve Churchill	14/10/91	Anthro.	bone ID's
Mark S. Putman	15/10/91	Anthro.	bone ID's
Steve Churchill	15/10/91	Anthro.	bone ID's
Zane Dohner	16/10/91	self	research
Steve Churchill	21/10/91	Anthro.	bone ID's
Zane Dohner	21/10/91	self	research
Joanne Rondean	21/10/91	homeschooling	field trip
Trini Angelio	21/10/91	homeschooling	field trip
Steve Churchill	22/10/91	Anthro.	bone ID's
Steve Churchill	23/10/91	Anthro.	bone ID's
Mike Hatch	23/10/91	Anthro.	bone ID's
Steve Churchill	24/10/91	Anthro.	bone ID's
Zane Dohner	24/10/91	self	ID's
Zane Dohner	28/10/91	self	ID's
Patty Ashley	28/10/91	Biology	compare coloration
Anthony Velardez	29/10/91	self	tour
Steve Churchill	29/10/91	Anthro.	bone ID's
Steve Churchill	30/10/91	Anthro.	bone ID's

Susan Stratton	30/10/91	Anthro	bone ID's
Rick Rayvelt	30/10/91	Anthro	bone ID's
Jonathan Niles	30/10/91	Anthro.	bone ID's
Phill Towned	30/10/91	Anthro.	bone ID's
Robert Dello Russo	30/10/91	ARA	photo
Zane Dohner	31/10/91	self	ID's
Zane Dohner	4/11/91	self	mammal ID's
U Burton Lewis	6/11/91	NMOS	discuss BASE IV
Patrica Hager	6/11/91	UNM	praine dogs proposal
Zane Dohner	7/11/91	self	mammal ID
Zane Dohner	12/11/91	self	bird ID
Steve Churchill	15/11/91	Anthro.	id
Angel M. McGara	17/11/91	Anthro.	pick up bones
Veronica Apodoca	17/11/91	self	to visit my dad
Susan Stratton	20/11/91	self	to visit
Phil LeTowen	20/11/91	UNM	bone ID's
Robert Dello Russo	20/11/91	UNM	bone ID's
R Reyvelt	20/11/91	UNM	bone ID's
Jane Greenberg	20/11/91	Cornell	visit
Iris Greenberg	20/11/91	Cornell	visit
Marie & Ken Brown	20/11/91	OCA (UNM)	arch. bone ID's
Marie & Jenny Brown	21/11/91	OCA (UNM)	arch. bone ID's
Jon Niles	22/11/91	UNM	bone ID's
Conney Standing	25/11/91	Sipi	field trip
Brisulla Wade	25/11/91	Sipi (Sioux/Isleta)	field trip
D. Johns	25/11/91	Sipi (Navajo)	field trip
Mejiron	25/11/91	Sipi (Isleta)	field trip
Kyle Williams	25/11/91	Sisseton, SD	field trip
Donnie Benear	25/11/91	Kiowa OKC, OK	field trip
V.L. Christianson	25/11/91	Sipi-BIA	field trip
Mike Toya	25/11/91	Sipi (Jemez)	field trip
Sydney&Justine Anderson	2/12/91	Amer. Mus. Nat. His.	Bolivian study
Marie & Ken Brown	3/12/91	OCA (UNM)	arch. bone ID's
Susan Stratton	11/12/91	Anthro.	UNM bone ID's
Susan Stratton	17/12/91	UNM Anthro.	bone ID's
Marie & Ken Brown	18/12/91	OCA-UNM	arch. bone ID's
Susan Stratton	18/12/91	UNM Anthro.	arch. bone ID's
Susan Stratton	19/12/91	UNM Anthro.	arch. bone ID
Susan Stratton	20/12/91	UNM Anthro.	arch. bone ID
Aleta Lawrence	21-Dec-91	AMNH	id
Joe Cook	4/1/92	Univ. Alaska Muse.	measure Ctenomys
Phlip Jones	7/1/92	self	tour
Tom Estenson	14/1/92	UNM Anthro.	tour
Susan Stratton	14/1/92	UNM Anthro.	bone ID's
Marie & Ken Brown	15/1/92	OCA-UNM	arch. bone ID's
Star York	17/1/92		research Toncan
Marie & Ken Brown	22/1/92	OCA-UNM	arch. bone ID
Michael Passman	24/1/92	UNM	Anthro./Psych.
T. Lowery	30/1/92	UNM	see how the other half lives
K. Geluso	3/2/92	UNM	look at a Noetona supp.
T Estenson	4/2/92	UNM Anthro.	Felis rufus
T Estenson	5/2/92	UNM Anthro.	Felis rufus
T Estenson	6/2/92	UNM Anthro.	Felis rufus
Marie & Ken Brown	6/2/92	UNM/OCA	arch. bone ID

Anne Mulkey	6/2/92	Rio Grande Zoo	research on a talk on diets
Tom Estenson	7/2/92	UNM Anthro.	Felis rufus
Richard Cifelli	8/2/92	OK Mus. Nat. His.	Felis rufus
Patrica Warner	10/2/92	NSF-Washington D.C.	look around, visit staff
Thomas L.	10/2/92	Anthro.	bone ID's
Steve Churchill	10/2/92	Anthro.	bone ID's
Tina Carlson	11/2/92	NM Heritage Program	computer demo with Bill Gannon
Pat Mehlop	11/2/92	NM Heritage Program	computer demo with Bill Gannon
Hope Christian Ctass	11/2/92	Hope Christian 3rd G.	studying mammals, etc.
T.L. Estenson	11/2/92	UNM Anthro.	Felis rufus
Pat Mehlop	12/2/92	NMNHP-UNM	id - discuss manuscript
Joy E. Nicholopoulos	18/2/92	USFWS	tour
Dave Parsons	18/2/92	US Fish & Wildlife	Mexican Wolf
Marie & Ken Brown	19/2/92	OCA-UNM	arch. bone ID
Sue Gibson	20/2/92	MHS	practice for state fauna ID
Tony Callepos	20/2/92	FFA	practice for state fauna ID
Clay Hardai	20/2/92	FFA	practice for state fauna ID
LeAnne Larranaga	20/2/92	Moriarity FFA	practice for state fauna ID
Cassie Pullman	20/2/92	Moriarity FFA	practice for state fauna ID
Sheryl Butler	20/2/92	Moriarity FFA	practice for state fauna ID
Susan Stratton	21/2/92	UNM	arch. fauna ID
Susan Stratton	23/2/92	UNM	arch. fauna ID
T. Estenson	28/2/92	UNM Anthro.	Canis latranus
T. Estenson	28/2/92	UNM Anthro.	Lepus californias
T Estenson	28/2/92	UNM Anthro.	Lepus californias
Susan Stratton	3/3/92	Unm Anthro.	arch. faunal
Ollie Patterson	4/3/92	UNM Econ.	visit
Ken & Marie Brown	4/3/92	UNM-OCA	arch, bone ID
T. Estenson	5/3/92	UNM-Anthro.	C. boloviensis
J.L. Schafer	5/3/92	DOI	tour
Y. Crossi	5/3/92	DOI	tour
Jennie Low	5/3/92	DOI	tour
T. Estenson	8/3/92	UNM Anthro.	C. boliviensis
T. Estenson	8/3/92	UNM Anthro.	C. boliviensis
Patrica Gunn	11/3/92	UNM	volunteer week
Steve Churchill	11/3/92	UNM Anthro.	bone ID's
T. Estenson	12/3/92	UNM Anthro.	Vuples macrotis
T. Estenson	15/3/92	UNM Anthro.	Vuples macrotis
Marie & Ken Brown	16/3/92	UNM-OCA	arch. bone ID
Marie & Ken Brown	17/3/92	UNM-OCA	arch. bone ID
T. Estenson	17/3/92	UNM Anthro.	Vulpes macrotis
Marie & Ken Brown	18/3/92	UNM-OCA	arch. bone ID
T. Estenson	20/3/92	UNM Anthro.	Felis rufus
T. Estenson	23/3/92	UNM Anthro.	Felis rufus
T. Estenson	24/3/92	UNM Anthro.	Felis rufus
S. Stratton	24/3/92	UNM Anthro.	bone ID's
Marie & Ken Brown	25/3/92	UNM-OCA	arch. bone ID
P. Robertson	26/3/92	Merich & Assc.	arch. bone
Ken Deldrew	26/3/92	UNO	rodent to CCNP
Anne Ruck	27/3/92	Can. Mus. of Nature	see collection
Rochelle Pino	3/4/92	SFIS	tour
Myrna Garrison	3/4/92	SFIS	tour
Jennifer Irving	3/4/92	SFIS	tour
Eldon Niet	3/4/92	SFIS	tour

0334

James Ahaverz	3/4/92	SFIS	tour
Barbara Sweny	6/4/92	SFIS	tour
Geary Goffard	6/4/92	Coronado HS, TX	tour
Jim Kunola	6/4/92	Belen HS	Junior Sci. & Humanities Symposium
Laura Farnsworth	6/4/92	Belen HS	Junior Sci. & Humanities Symposium
Molly McPherson	6/4/92	Biskell, AZ	Sci. Symposium
Mancella Marquez	7/4/92	Bisbie HS, AZ	Sci. Symposium
Geomara Marquez	7/4/92	Bisbie HS, AZ	Sci. Symposium
Jessy Preston	7/4/92	Sandia Prep, Alb, NM	Sci. Symposium
Sarah E. Marshall	7/4/92	Sierra Vista, AZ	Sci. Symposium
Ming-Ye Kiw	7/4/92	Las Cruces, NM	Sci. Symposium
Diane Lumbly	7/4/92	Sierra Vista, AZ	Sci. Symposium
Marie & Ken Brown	8/4/92	UNM-OCA	arch. bone ID
Mary Allison	8/4/92	Senior Center	tour
Anastasia Drasutes	8/4/92	Senior Center	tour
Eleanora & Charles Davis	8/4/92	Senior Center	tour
Vira Park	8/4/92	Senior Center	tour
Katharine Counts	8/4/92	Senior Center	tour
Elizabeth Bradys	9/4/92	Senior Center	tour
Susan Stratton	14/4/92	UNM Anthro.	faunal ID's
Susan Stratton	14/4/92	UNM Anthro.	fauna ID
Nadine & Sandy Kraner	17/4/92	Albuquerque	tour
523 Troop	22/4/92	Girl Scouts	tour
Troop 544	22/4/92	Girl Scouts	tour
Delia Raymer	23/4/92	Los Alamos Labs	identifying different Peromyscus supp.
James Boggs	23/4/92	Los Alamos Labs	identifying different Peromyscus supp.
Mary Hagy	23/4/92	UNM	tour
Susan Stratton	23/4/92	UNM Anthro.	faunal ID's
Mark Bible	29/4/92	Bellview	bats
Scott Gordon	29/4/92	Ucbavis	mammals-Tucos etc.
Susan Stratton	30/4/92	UNM Anthro.	faunal ID's
Susan Stratton	3/5/92	UNM Anthro.	faunal ID's
Marie & Ken Brown	6/5/92	OCA-UNM	arch. bone ID
Mike Nahu	8/5/92	Navajo Nation	show mammals
Adilene Koyaysva	8/5/92	Navajo Nation	show mammals
Gail Robertscn	8/5/92	Navajo Nation	show mammals
Corinna Conattie	8/5/92	Navajo Nation	show mammals
Rebecca Clitso	8/5/92	Navajo Nation	show mammals
Christina Billy	8/5/92	Navajo Nation	show mammals
Delores Dodeon	8/5/92	Navajo Nation	show mammals
Jeff Lowin	12/5/92	Rutgers Univ.	curious
Matt Choen	13/5/92	self	tour
Cydia Gvetze	13/5/92	Phillips Academy	tour
Kathy Sups	16/5/92	Rho. Med. Inc.	tour
Ruth & Charles Needham	16/5/92	Maxwell Lab.	id
Dan Ligon	16/5/92	UNM	small mammals
Marylin Attenbaugh	19/5/92	USFS	spotted bat
Rosanne Humphrey	19/5/92	OU	look at Paraguay mammals
Monte Vista Kindergarten	19/5/92	albuquerque	to see musuem
Ken Geluso	28/5/92	OSNE	mammals of CCNP
Rani Alexander	29/5/92	Anthro.	skeletal ID
Ann Browning	5/6/92		photo
Mane & Ken Brown	9/6/92	UNM-OCA	arch. bone ID
Kathie Rick	12/6/92	UNM	photograph specimens

Susan Stratton	12/6/92	UNM Anthro.	to give Bill G. a gift & ask a question
Marie & Ken Brown	19/6/92	UNM Anthro.	faunal ID's
Jesus Martinez	22/6/92	Inst. Bio. UNAM Mex.	examine Mexican mammals
Marie & Ken Brown	26/6/92	UNM-OCA	arch. bone ID's
Marie & Ken Brown	2/7/92	UNM-OCA	arch. bone ID's
Anne J. Biseno	10/7/92	UNM	visit
Laura K. Frizi	15/7/92	The ABQ Journal	article for newspaper
Tim Rapson	15/7/92	The ABQ Journal	article for newspaper
Marie & Ken Brown	16/7/92	UNM-OCA	arch. bone ID's
Rani Alexander	16/7/92	Anthro.	faunal ID
Lisa Cewantes	16/7/92	UNM Anthro.	arch. fauna
Aiko Akiyanna	16/7/92	UNM-Art	photography
Maki Aikawa	16/7/92	UNM-Art	photography
Na-Ryoung Kim	16/7/92	UNM-Art	photography
Jennifer Hatala	16/7/92	UNM-Art	photography
Marie & Ken Brown	30/7/92	UNM-OCA	arch. bone ID
Natalie Runyan	31/7/92	Utah State, Logan UT	visitor
Travis Perry	31/7/92	Utah State, Logan UT	visitor
Keith Geluso	3/8/92	UNM	look at some specimens
Harvo Kamiya	5/8/92	Hirosaki Univ.	colaboration research
Sky Jhubby	5/8/92	Holderness School	tour-perspective student
Niki Kimball	6/8/92	OCA-UNM	ID of organic artifact-animal fur
M. Yasuno	10/8/92	N.I.E.S., Japan	to observe program
Elaine Fewrson	11/8/92	Roswell Zoo, DIR	brought black bear specimen
Sue Nichols	11/8/92	Roswell Zoo	brought black bear specimen
Nova Guy	13/8/92	UNM student	to research skull found
Bill Caine	14/8/92	Univ. Cent. Okla.	re-visit alma mater
Debbie Allen	14/8/92	Univ. Cent. Okla.	visiting with Dr. Caine
Mane & Ken Brown	17/8/92	OCA-UNM	arch. bone ID
Ken Gelvro	17/8/92	UNO	mammals of CCNP
Matt Playford	18/8/92	Hokkaido Univ, Japan	education
Marie & Ken Brown	18/8/92	OCA-UNM	arch. bone ID
Brian A. Evans	18/8/92	Albuquerque	to research cuckoo and owl
Paul Shows	26/8/92	Talking Talons	turn in a weasel
Wendy Aescheman	26/8/92	Talking Talons	turn in a weasel
Ron Armstrong	2/9/92	NM Game & Fish	ID bones taken as evidence
Sacha Wheeler	9/9/92	UNM	photography
Philip LoPiccio	11/9/92	Chaco Collection	took a hair sample
Valene Hollingsworth	11/9/92	UNM Photo Dept.	photograph a bat
Sacha Wheeler	15/9/92	UNM Photo Dept.	photography
Alicia Livesley	28/10/92	Eldorado HS	tour
John & Jan Davis	29/10/92	Omaha, NE	tour
Lavonn Davis	29/10/92	Hutchinson, KS	tour
Kim Stans	30/10/92	Sevilleta N.W.R.	discuss LTER
Lana Palmer	30/10/92	Sevilleta N.W.R.	discuss LTER
T. Stans	30/10/92	Sevilleta N.W.R.	discuss LTER
Virgil N. Lengion	18/11/92	SIPI	visit
Arthur Wall	18/11/92	SIPI or Crow	visit
Ivan Gutierrez	18/11/92	SIPI or Tewa	visit
Cary Boogurt	18/11/92	SIPI Zuni	visit
Andrea Fernando	18/11/92	SIPI	visit
Bereta Chavez	18/11/92	SIPI	visit
Richard Beechav	18/11/92	SIPI	visit
Elmer Dawford	18/11/92	SIPI	visit

0335

Ryan Paul Workall	18/11/92	SIPI Jemez	visit
John Galvon	18/11/92	SIPI	visit
Brooke Salt Bull	18/11/92	SIPI	visit
Val Christinson	18/11/92	SIPI	visit
Brooke Deluth	2/12/92	UNLV	pocket mice ID
Duttchner	2/12/92	NMMNH	pocket mice ID
Joel Alake	2/12/92	UAM	research tucos noctilio
Fernando A. Cervantes	4/12/92	Univ of Mexico	research electro lab/ lagomorphs
Consuelo L. Menterrukio	9/12/92	Univ of Mexico	research electro lab/ lagomorphs
Steve West	14/12/92	Washington University	visit
Carolyn Daniel	18/12/92	OCA-UNM	arch. fauna ID
Paul Martin	20/12/92	NA	sting ray
Christopher Humphreys	21/12/92	Den 4 Cubscouts	naturalist badge
Sarah Humphreys	21/12/92	Den 4 Cubscouts	naturalist badge
Sean McCarthy	21/12/92	Den 4 Cubscouts	naturalist badge
Milli McCarthy	21/12/92	Den 4 Cubscouts	naturalist badge
Ursula Shepherd	21/12/92	UNM	research
Laura Synder	22/12/92	Pa.	heard about the collection
Carolyn Daniel	23/12/92	OCA-UNM	arch. fauna ID
C Krishtalka	4/1/93	NSF	mammal/ botany collection
Franke Bermudez	5/1/93	URI	volunteer
Deborah Grant	7/1/93	Albuquerque	visit
Justine Anderson	11/1/93	AMNH	bolivian specimen
Tom Masters	12/1/93	freelance writer	study beavers
Martin Ramirez	13/1/93	Pomona College	visit
Erasmo Rodriquez	13/1/93	ALF	inspection
Susan Stratton	23/1/93	UNM Anthro.	faunal ID's
Susan Stratton	1/2/93	UNM Anthro.	faunal ID's
Lesa Lovato	2/2/93	UNM	artsy stuff
Melody Malone	2/2/93	UNM	artsy stuff
Mr Romero 3rd Grade	5/2/93	Carroll Elem., Bern.	field trip
Bob Boston & class	10/2/93	Valley HS	class visit, info.
Sydney Anderson	11/2/93	AMNH	bolivian specimen
Jack B. Bartram	11/2/93	Bartram consulting	wolf exam for USF & WS
Mabel Mouno	11/2/93	Brazil	look at the Proechimys
Manny Herrera	11/2/93	Sandia View Acad.	Biology field trip
Justin Johnson	11/2/93	Sandia View Acad.	Biology field trip
Corey Walch	24/2/93	UNM	intevestin onychomys sp.
Ken Voorhes	25/2/93	S.V.A. Corrales, NM	tour & taxidermy study
Dan Albrecht	25/2/93	Indiana Univ.	rodents
Gina Dello Russo	26/2/93	UNM	inevestin onychomys
Mark Watson	4/3/93	UNM	use canary
Linda Mick-O'Hara	4/3/93	MNM-OAS	ID arch. faunas
John Ballenot	5/3/93	Illinios Nat. His.	learn about publications
Mark Watson	11/3/93	UNM	wolves
Marian Spupski	12/3/93	UNM	canary
Bronalian Woloszyn	22/3/93	Polish Acd., Krakow	bats of Baja, CA
Shanta Savara	24/3/93	UNM	see Bill Gannon
Johnathan Dreznee	24/3/93	Phila.	ID dogs
Nina Carlson	24/3/93	Phila.	ID dogs
Timothy W. Houseal	25/3/93	IS Labs, Franhyham	chromosome studies of Bolivian rodents
Steve Churchill	30/3/93	Anthro.	bome ID
Robert Franciscus	30/3/93	Anthro.	bone ID
Carne Jacobi	30/3/93	Anthro.	bone ID

Manel Campbell	1/4/93	UC Davis	Bolivia ID's
Los Lunas Elem.	5/4/93	Los Lunes	school field trip
Sacha Wheeler	5/4/93	UNM	photography
Christine Tardieu	5/4/93	CNRS France	mimote collections
Bernalilo HS	7/4/93	Bernalillo, NM	field trip
Sacha Wheeler	12/4/93	UNM	photography
Hughes students	16/4/93	Valley HS	field trip
Jesse Kennedy	19/4/93	Monte Vista Elem.	school field trip
Amy Parkman & Kinder.	19/4/93	Monte Vista Elem.	school field trip
Robert B. Finley Jr.	22/4/93	USFWS	visit & look at Neotona
Sacha Wheeler	27/4/93	UNM	photography
Jack Belcher	27/4/93	UNM	ID coyote bones
J A. Cook	2/5/93	Univ. of Alaska	consort
Steve Smith	3/5/93	Longfellow	field trip
Jon Sapette	9/5/93	Colo. State Univ.	research
Steve Churchill	9/5/93	UNM Anthro.	research
N Runyan	10/5/93	Nat. Heritage Program	check specimen tag
G. Shenbozy	13/5/93	Ben-Gurin Univ., Israel	desert rodents
T Estenson	17/5/93	UNM Anthro.	F. rufus
Natalie Runyan	18/5/93	Nat. Heritage Program	specimen tags
Pablo Arroyo	22/5/93	Mexico	visit musuem
Joaquin Arroyo-Cabrales	22/5/93	INAH Mexico	visit musuem
Wieslaw Bojauowic	22/5/93	Poland	loan of specimen
David Nickle	27/5/93	UNLV	look at pevoghaths
N. Runyan	2/6/93	Nat. Heritage Program	transcribe specimen tag info.
Beth Allard	8/6/93	USFWS	see collection
Dave Worthington	8/6/93	USFWS	examine collection
Erine Valdez	8/6/93	USFWS	examine collection
N. Runyan	10/6/93	Nat. Heritage Program	transcribe specimen tag info
Elizabeth Milford	10/6/93	NMNHP	transcribe specimen tag info
Marie & Ken Brown	11/6/93	UNM-OCA	arch. bone ID
N Runyan	21/6/93	NMHP	specimen tag info
Elizabeth Milford	24/6/93	NMNHP	specimen tag info
Carolyn Daniels	25/6/93	OCA-UNM	faunal ID for arch.
Marie & Ken Brown	25/6/93	UNM-OCA	arch. bone ID
Marie & Ken Brown	2/7/93	UNM-OCA	arch. bone ID
Marie & Ken Brown	8/7/93	UNM-OCA	arch. bone ID
Caryolyn Daniel	10/7/93	OCA-UNM	faunal ID
Linda Mick-O'Hara	13/7/93	UNM-OCA	faunal ID
Susan Moya	13/7/93	MNM/OAS	faunal ID
Marie & Ken Brown	13/7/93	UNM-OCA	faunal ID
Garett McMillion	3/8/93	UNM-OCA	faunal ID
Will Post	11/8/93	Charleston Museum	blackbird
Tom Meluso, Lori Kanaly	16/8/93	New York	visitor
Nicky Kanaly	16/8/93	New York	visitor, heard about collection from colleague
Braden Kanaly	16/8/93	New York	visitor
Sarah Ernest	17/8/93	UNM-LTER.	NK books
Rosanne Humphrey	17/8/93	OMNH	measure skulls
Garett McMillion	19/8/93	OCA	faunal ID's
Marie & Ken Brown	19/8/93	UNM-OCA	arch. bone ID
Mr. & Mrs. Balistreri	20/8/93	Wisconsin & Flordia	visiting our son Mike Balistreri
Marie & Ken Brown	20/8/93	UNM-OCA	arch.bone ID
Octavio R. Rojos Soto	20/8/93	UNAM	visit the colection of birds
Karl M. Johnson	25/8/93	Boreman, MT	marmots

0336

Tonia V Voorhees	25/8/93	Sandia View Acad.	visit the museum
Jay Butler	27/8/93	albuquerque	visit
Jaque B	30/8/93	Discover Magazine	photographing Bob Parmenter
Marie & Ken Brown	31/8/93	UNM-OCA	arch bone ID
Rob Roy Ramey II	31/8/93	Cornell Univ	measuring bighorn sheep skulls
John D Wehausen	31/8/93	U C White Mtn.	measuring bighorn sheep skulls
Ron Voorhees	2/9/93	NM Dept. of Health	mtg. with T Yates
Sacha Wheeler	8/9/93	UNM- ART	Photograph fluid preserved specimens
J A. Cook	9/9/93	Univ Alaska - Fairbanks	tucos
Kenneth Brown	14/9/93	OCA	faunal ID
Jeff Barklef	12/10/93	Art	drawing specimens
Daniel Schairer	12/10/93	Art	drawing specimens
Micah Marcqu	12/10/93	Art	drawing specimens
Jennifer Killion	12/10/93	Fine Arts	drawing
Bryan White	12/10/93	Art	drawing
Joel Waldrop	12/10/93	Art	drawing
Jeremy Foote	12/10/93	Art	drawing
Juan Martinez	12/10/93	Art I	drawing
David Kowalski	13/10/93	Art I	drawing
Timothy H. Heaton	13/10/93	Univ. of South Dakota	measuring
Virgina P. Naples	13/10/93	Northern Ill. Univ.	sloths, anteaters
Aleta Lawrence	15/10/93	AMNH	specimens
Kim Berget	15/10/93	Albq. Arch. Soc.	faunal analysis
Marie Brown	19/10/93	OCA-UNM	arch. bone ID
Larry Gorbert	26/10/93	UNM Anthro.	use canary
Russ & Susan Biggs	2/11/93	BSA	see Terry
Glenna & Richard Bergon	2/11/93	BSA	see Terry
Stephanie Rippel	4/11/93	WCRM	faunal ID for EPNG project
Tari Draper	8/11/93	Valley HS	tour
Bill Hudspeth	8/11/93	Anthro.	faunal analysis
Bill Hudspeth	9/11/93	Anthro.	faunal analysis
Susan Stratton	10/11/93	Anthro.	faunal analysis
Susan Stratton	11/11/93	Anthro.	faunal analysis
Kristin Karipides	11/11/93	Anthro.	tour/ arch.
Maria S. Sprehn	11/11/93	Anthro.	tour/arch.
Erica Hill	12/11/93	Anthro.	tour/arch.
L Gorbet	17/11/93	Anthro.	use Canary software
Dan Lalonde	19/11/93	Hist.	tour
Ethelene Lolyd	19/11/93	CDC	site visit
Nichol M. Termi	22/11/93	Blackpaw	photo
Peter Walch	6/12/93	UNM	tour
Florami Curtis	6/12/93	UNM	tour
Nancy Montoya	6/12/93	Art Museum	tour
Dave Lightfoot	6/12/93	UNM	mammal records
Leslie W. Welaz	8/12/93	El Malpais, NM	help! with Ovis canadensis
Lisa Ford	8/12/93	El Malpais, NM	help! with Ovis canadensis
Marie & Ken Brown	15/12/93	OCA-UNM	arch. bone ID
Marie & Ken Brown	17/12/93	OCA-UNM	arch. bone ID
Mildred Damatnik	26/12/93	L. I., New York	id
Pam & Ed Dumatone	26/12/93	Stratford, CT	id
S. & Justine Anderson	3/1/94	Amer. Mus. Nat. Hist.	Bolivian mammals
Marie & Ken Brown	5/1/94	OCA-UNM	arch. bone ID
"The New Explorers"	9/1/94	PBS TV	hantavirus
"Pablo D. Ordaz"	14/1/94	PBS TV	documentary

"Highland Television"	14/1/94	PBS TV	documentary
Felisa Smith	18/1/94	UNM	Neotoma
Fred Evans	18/1/94	CUNY	friendship!
Ernie Valdez	19/1/94	Fort Collins	move
David Hillis	20/1/94	Univ. Texas @ Austin	seminar, hunting lesson for Yates
Sacha Wheeler	21/1/94	UNM	photo
Andrew Konnerth	25/1/94	self	to visit
Angie Barba	26/1/94	SIPI	lab
Mitchel Croon	26/1/94	SIPI	lab
Jessie Truax	26/1/94	SIPI	lab
Valentino Ray	26/1/94	SIPI	lab
Michael Toya	26/1/94	SIPI	lab
Lyle Cerntes	26/1/94	SIPI	lab
Felisa Smith	26/1/94	UNM	research Neotoma
N. Runyan	2/2/94	Nat. Heritage Program	literature review for AAFB
Bill Andspeth	4/2/94	Anthro.	faunal analysis
Leslie Delang	9/2/94	NPS	cataloging assistance/ ID
Lisa Ford	9/2/94	NPS-ELMA	cataloging assistance/ID
Felisa Smith	9/2/94	OCA	faunal ID
Rusty Hunt	17/2/94	UNM	intrest
Yuvonne Lenn	18/2/94	Zuni HS	study game mammals
Levi Leone	18/2/94	Zuni HS	study game mammals
Stacy Baruni	18/2/94	Zuni HS	study game mammals
Bryan Hugte	18/2/94	Zuni HS	study game mammals
Dan Hogerty	18/2/94	Zuni HS	study game mammals
Marie & Ken Brown	23/2/94	UNM-OCA	arch. bone ID
Jim Check	23/2/94	IHS-HQW	visit Terri Yates about Hauntavirus
Eddie E. Bennet	25/2/94	NM Game & Fish	visit Terri Yates
Bill Hudspeth	25/2/94	Anthro.	faunal analysis
Erenst Matamorez	28/2/94	JAMS	to get owl pelts
Felisa Smith	2/3/94	UNM	Neotoma study
Kurt Shipley	3/3/94	UNM	Perocitysocus
N. Runyan	3/3/94	NMNHP	use library
Marie & Ken Brown	4/3/94	OCA-UNM	arch. bone ID
Kurt Shipley	4/3/94	UNM	use library
Jon Poling	10/3/94	UNM	see what's new!
Andrew Konneth	10/3/94	self	see Terri Yates
Mike Berg	12/3/94	Rio Grande Zoo	Bill Gannon
Rita Faruki	12/3/94	Rio Grande Zoo	Bill Gannon
Anna Mulkey	12/3/94	self	visit
Kate Fuller	14/3/94	Zuni arch.	arch. fauna
Kate Fuller	15/3/94	Zuni arch.	arch. fauna
Brenda Witsell	16/3/94	USFS Flaggstaff, AZ	collecting prey mass for spotted owl
Kate Fuller	16/3/94	Zuni arch.	arch. fauna
Nicole Harman	18/3/94	St. Mary's	science fair
Brian Smith	19/3/94	Grant Mid. School	science fair
Amy Wells	19/3/94	St. Mary's	science fair
Timmy Wells	19/3/94	Parjaito	science fair
Thao Iran	19/3/94	Grant Mid. School	science fair
Jamie Lucero	19/3/94	LBJ	science fair
Daniel Garcia	19/3/94	Moriarity	science fair
Robert Garcia	19/3/94	Moriarity	science fair
Summer Little	19/3/94	LBJ	scince fair
Brenda Dhoret	23/3/94	UNM	research

0337

Kate Fuller	24/3/94	*Zuni* arch.	arch. fauna
Charleen DeBerry	28/3/94	UNM - ART	photograph specimens
Rubi Alarcon	28/3/94	El Paso HS	tour
Melissa Wethington	29/3/94	Kirtland HS	tour
Adrin Flores	29/3/94	El Paso HS	tour
Kate Fuller	23/5/95	MNM-Research Sect.	Fauna ID

0338

APPENDIX C

BIOLOGY FACULTY SCHOLARLY & PROFESSIONAL ACHIEVEMENTS, CY 1994

UNM DEPARTMENT OF BIOLOGY

FACULTY SCHOLARLY ACTIVITIES & PUBLICATIONS

CY 1994

I. SCHOLARLY ACTIVITIES

A. BOOKS AUTHORED.

BACA

Baca, O.G. and M.A. Baca. 1994. Analysis of deaths in New Mexico's Rio Abajo, Part II, A compilation of burial records from the villages of Tome, Valencia, Peralta, El Cerro, San Fernando, Los Enlames (Adelino), La Constancia and Casa Colorada, 1847-1920. The University of New Mexico Southwest Hispanic Research Institute Working Paper Series, 199 pp. (copyright, UNM Center for Regional Studies).

B. BOOKS EDITED.

STRICKER

Wilson, W.H., Jr., Stricker, S.A. and G.L. Shinn, eds. 1994. Reproduction and Development of Marine Invertebrates. Baltimore, MD: Johns Hopkins Press, 325 pp.

C. CHAPTERS IN BOOKS OR MAJOR SYNTHETIC REVIEWS.

BACA

Baca, O.G., Y.-P. Li and H. Kumar. 1994. Survival of the Q fever agent *Coxiella burnetii* in the phagolysosome. Trends in Microbiology 2(12):476-480.

BARTON

Barton, L.L., C.R. Vester, P. Gill and J.B. Neilands. 1994. The role of siderophores in symbiotic nitrogen-fixation by *Rhizobium* spp. Pp. 55-66 in Biochemistry of Metal Micronutrients in the Rhizosphere, J.A. Manthey, D.E. Crowley and D.G. Luster, eds. Boca Raton, FL: Lewis Publishers.

Barton, L.L., H.E. Nuttall, Jr. and R.C. Blake, III. 1994. Biocolloid formation: An approach to bioremediation of toxic metal wastes. Pp. 481-496 in Remediation of Hazardous Waste Contaminated Soils, D.L. Wise and D.J. Trantolo, eds. New York: Marcel Dekker, Inc.

Barton, L.L. 1994. The pyruvic acid phosphoroclastic reaction. Pp.94-103 in Methods in Enzymology, Vol. 243, H.D. Peck, Jr. and J. LeGall, eds. San Diego: Academic Press, Inc.

BROWN

Brown, J.H. 1994. Complex ecological systems. Pp. 419-449 in Complexity: Metaphors, Models and Reality, G.A. Cowan, D. Pines and D. Melzer, eds. Santa Fe Institute Studies in the Science of Complexity, Proceedings Vol. XVIII, Reading MA: Addison-Wesley.

Brown, J.H. 1994. Organisms and species as complex adaptive systems: Linking the biology of populations with the physics of ecosystems. Pp. 16-24 in Linking Species and Ecosystems, C.G. Jones and J.H. Lawton, eds. London: Chapman and Hall.

Brown, J.H. and D.E. Wilson. 1994. From natural history to evolutionary ecology. Pp. 377-397 in 75 Years in Mammalogy, E.C. Birney and J.R. Choate, eds. Special Publication No. 11, American Society of Mammalogists, Provo UT.

Brown, J.H. In press. Grand challenges in scaling up ecological research. Pp. 21-26 in Environmental Information Management and Analysis: Ecosystem to Global Scales, W.K. Michener, J.W. Brunt and S.G. Stafford, eds. London: Taylor and Francis.

GOSZ

Gosz, J.R. Sustainable biosphere initiative: Data management challenges. Pp. 27-40 in Environmental Information and Analysis: Ecosystem to Global Scales, William K. Michener, J.W. Brunt and S.G. Stafford, eds. London: Taylor and Francis, Ltd. 555 pp.

Pickett, S.T.A., I.C. Burke, V.H. Dale, J.R. Gosz, R.G. Lee, S.W. Pacala and M. Shachak. 1994. Integrated models of forested regions. Pp. 120-141 in Integrated Regional Models: Interactions Between Humans and Their Environment. P.M. Groffman and G.E. Likens, eds. New York, NY: Chapman and Hall. 157 pp.

LOKER

Loker, E.S. 1994. On being a parasite in an invertebrate host: A short survival course. Journal of Parasitology 80:728-747.

NATVIG

Natvig, D.O., W.H. Dvorachek, Jr. and K. Sylvester. 1994. Evolution and biological roles of fungal superoxide dismutases. Pp. 391-412 in Metal Ions in Fungi, G. Winkelmann and D.R. Winge, eds. New York: Marcel Dekker, Inc.

Natvig, D.O., K. Sylvester, W.D. Dvorachek, Jr. and J.L. Baldwin. In press. Fungal superoxide dismutases and catalases. In The Mycota, Vol. III, "Biochemistry and Molecular Biology," R. Brambl and G. Marzluf, eds. Springer-Verlag.

NELSON

Glass, N.L. and M.A. Nelson. 1994. Sexual development genes in the filamentous ascomycetes. Pp. 295-306 in The Mycota, Vol. I, "Growth, Differentiation and Sexuality," J.G.H. Wessels and F. Meinhardt, eds. Springer-Verlag.

SNELL

Cayot, L.J., H.L. Snell, W. Llerena and H.M. Snell. 1994. Conservation biology of Galápagos reptiles: Twenty-five years of of successful research and management. Pp. 297-305 in Captive Management and Conservation of Amphibians and Reptiles, J.B. Murphy, K.A. Adler and J.T. Collins, eds. New York: SSAR.

STRICKER

Stricker, S.A. 1994. Confocal microscopy of living eggs and embryos. Pp. 281-300 in Three Dimensional Confocal Microscopy: Volume Investigation of Biological Specimens, J.K. Stevens, L.R. Mills and J.E. Trogadis, eds. San Diego, CA: Academic Press.

Stricker, S.A., K.L. Conwell II, D.J. Rashid and A.M. Welford. 1994. Nucleolar disassembly during starfish oocyte maturation. Pp. 29-43 in Reproduction and Development of Marine Invertebrates, W.H. Wilson, Jr., S.A. Stricker and G.L. Shinn, eds. Baltimore, MD: Johns Hopkins Press.

VOGEL

Vogel, K.G. 1994. Glycosaminoglycans and Proteoglycans. Pp. 243-279 in Extracellulat Matrix Assembly and Structure, P. Yurchenco, D. Birk and R. Mecham, eds. Academic Press.

YATES

Honeycutt, R.L. and T.L. Yates. 1994. Molecular Systematics, Pp. 288-309 in Seventy-Five Years of Mammalogy (1919-1994), E.C. Birney and J.R. Choate, eds. Special Publication #11, American Society of Mammalogists, 433 pp.

Yates, T.L. 1994. Assessing and monitoring biological diversity at the genetic level, Pp. 41-50 in Biodiversity: Its Complexity and Role, M. Yasuno and W.W. Watanabe, eds. Special Publication, Global Environmental Forum, Tokyo, Japan, 273 pp.

Kamiya, M., Y. Oku, H.K. Ooi, N. Nonaka and T. Yates. 1994. Diversity of Taeniid parasites transmitted through predator-prey interactions. Pp. 51-59 in Biodiversity: Its Complexity and Role, M. Yasuno and W.W. Watanabe, eds. Special publications, Global Environmental Forum, Tokyo, Japan, 273 pp.

D. ARTICLES IN REFEREED JOURNALS.

ALTENBACH

Hoyt, R.A., J.S. Altenbach and D.J. Hafner. 1994. Observations on long-nosed bats (*Leptonycteris*) in New Mexico. Southwestern Naturalist 39(2):175-179.

BARTON

Barton, L.L. 1994. Application of biotechnology in management of industrial wastes containing toxic metals. Radioactive Waste Management and Environmental Restoration 8:13-25.

BROWN

Heske, E.J., J.H. Brown and S. Mistry. 1994. Long-term experimental study of a desert rodent community: 13 years of competition. Ecology 75:438-445.

Valone, T.J., J.H. Brown and E.J. Heske. 1994. Interactions between rodents and ants in the Chihuahuan Desert: An update. Ecology 75:252-255.

DUSZYNSKI

Wilber, P.G., B. Hanelt, B. VanHorne & D.W. Duszynski. 1994. Two new species and temporal changes in the prevalence of eimerians in a free-living population of Townsend's ground squirrels (*Spermophilus townsendii*) in Idaho. Journal of Parasitology 80:251-259.

Wilber, P.G., K. McBee, D.J. Hafner and D.W. Duszynski. 1994. A new coccidian (Apicomplexa: Eimeriidae) in the northern pocket gopher (*Thomomys talopides*) and a comparison of oocyst survival rates in hosts from radon-rich vs. radon poor soils. Journal of Wildlife Diseases 30:359-364.

Miller, G.D., L. Couch and D.W. Duszynski. 1994. Preliminary survey for coccidian parasites in the birds at Cape Bird, Ross Island. Antarctic Journal of the U.S. 28:148.

LOKER

Loker, E.S., Couch, L. and Hertel, L.A. 1994. Elevated agglutination titers in plasma of *Biomphalaria glabrata* exposed to *Echinostoma paraensei*: Characterization and functional relevance of a trematode-induced response. Parasitology 108:17-26.

Hertel, L.A., S.A. Stricker, F.P. Monroy, W.D. Wilson and E.S. Loker. 1994. *Biomphalaria glabrata* hemolymph lectins: Binding to bacteria, mammalian erythrocytes, and to sporocysts and rediae of *Echinostoma paraensei*. Journal of Invertebrate Pathology 64:52-61.

Adema, C.M., D.F. Arguello, S.A. Stricker and E.S. Loker. 1994. A time-lapse study of interactions between *Echinostoma paraensei* intramolluscan larval stages and adherent hemocytes from *Biomphalaria glabrata* and *Helix aspersa*. Journal of Parasitology 80:719-727.

LOWREY

Lowrey, T.K. and P.J. Knight. 1994. *Townsendia gypsophila* (Compositae; Astereae): A new species from northern New Mexico. Brittonia 46:194-199.

Sivinski, R., T. Lowrey and R. Peterson. 1994. Additions to the native and adventive flora of New Mexico. Phytologia 76:473-479.

MARSHALL

Marshall, D.L. and O.S. Fuller. 1994. Does non-random mating among wild radish plants occur in the field as well as in the greenhouse? American Journal of Botany 81:439-445.

MILNE

Blanco-Montero, C.A., T.B. Bennet, P. Neville, C.S. Crawford, B.T. Milne and C.R. Ward. In press. Potential environmental and economic impacts of turfgrass in Albuquerque, New Mexico. Landscape Ecology.

Johnson, A.R., C.A. Hatfield and B.T. Milne. In press. Simulated diffusion dynamics in river networks. Ecological Modelling.

Wiens, J.A., T.O. Crist, K.A. With and B.T. Milne. In press. Fractal patterns of insect movement in microlandscape mosaics. Ecology.

MOLLES

Lieurance, F.S., H.M. Valett, C.S. Crawford and M.C. Molles, Jr. 1994. Experimental flooding of a riparian forest: Restoration of ecosystem functioning. In Proceedings of the Second International Conference on Ground Water Ecology, J.A. Stanford and H.M. Valett, eds. Herndon, VA: American Water Resources Association.

NATVIG

Chary, P., D. Dillon, A.L. Schroeder and D.O. Natvig. 1994. Superoxide dismutase (sod-1) null mutants of *Neurospora crassa*: Oxidative stress sensitivity, spontaneous mutation rate and response to mutagens. Genetics 137:723-730.

RIEDESEL

Bondar, R.L., M.S. Kassam, F. Stein, P.T. Dunphy and M.L. Riedesel. 1994. Simultaneous transcranial Doppler and arterial blood pressure response to lower body negative pressure. Journal of Clinical Pharmacology 34:584-589.

SNELL

Snell, H.L., H.M. Snell and P.A. Stone. 1994. Accelerated mortality of *Opuntia* on Isla Plaza Sur: Another threat from an introduced vertebrate? Noticias de Galapagos 54:19-20.

Stone, P.A., H.L. Snell and H.M. Snell. 1994. Behavioral diversity as biological diversity: Introduced cats and lava lizard wariness. Conservation Biology 8:569-573.

STRICKER

Stricker, S.A., V.E. Centonze and R.F. Melendez. 1994. Calcium dynamics during starfish oocyte maturation and fertilization. Developmental Biology 165:33-58.

Hertel, L.A., S.A. Stricker, F.P. Monroy, W.D. Wilson and E.S. Loker. 1994. *Biomphalaria glabrata* hemolymph lectins: Binding to bacteria, mammalian erythrocytes, and to sporocysts and redia of *Echinostoma paraensei*. Journal of Invertebrate Pathology 64:52-61.

Adema, C.M., D.F. Arguello II, S.A. Stricker and E.S. Loker. 1994. A time-lapse study of interactions between *Echinostoma paraensei* intra-molluscan larval stages and adherent hemocytes from *Biomphalaria glabrata* and *Helix aspersa*. Journal of Parasitology 80:719-727.

THORNHILL

Thornhill, R. 1994. Is there psychological adaptation to rape? Anylyse und Kritik 16:68-85.

Thornhill, R. and S.W. Gangestad. 1994. Fluctuating asymmetry correlates with lifetime sex partner numbers and age of first sex in *Homo sapiens*. Psychological Science 5:297-302.

Gangestad, S., R. Thornhill and R. Yeo. Facial physical attractiveness, developmental stability and fluctuating asymmetry. Ethology and Sociobiology 15:73-85.

Watson, P. and R. Thornhill. 1994. Fluctuating asymmetry and sexual selection. Trends in Ecology and Evolution 9:21-24.

Grammer, K. and R. Thornhill. 1994. Human (*Homo sapiens*) facial attractiveness and sexual selection: The role of symmetry and averageness. Journal of Comparative Psychology 108:233-242.

TOOLSON

Toolson, E.C., P.D. Ashby, R.W. Howard and D.W. Stanley-Samuelson. 1994. Eicosanoids mediate control of thermoregulatory sweating in the cicada, *Tibicen dealbatus* (Homoptera:Cicadidae). J. Comp. Physiol. B 164:278-285. •

* This paper resulted from work that required five years to complete.

VOGEL

Vogel, K.G., J.D. Sandy, G. Pogany and J.R. Robbins. 1994. Aggrecan in bovine tendon. Matrix Biology 14:171-179.

Robbins, J.R. and K.G. Vogel. 1994. Regional expression of mRNA for proteoglycans and collagen in tendon. European J. Cell Biol. 64:264-270.

Pogany, G., D.J. Hernandez and K.G. Vogel. 1994. The *in vitro* interaction of proteoglycans with type I collagen in modulated by phosphate. Archiv. Biochem. Biophys. 313:102-111.

WERNER-WASHBURNE

Fuge, E.K., E.L. Braun and M. Werner-Washburne. 1994. Protein synthesis in long-term stationary phase cultures of *Saccharomyces cerevisiae*. Journal of Bacteriology 176:5802-5813.

YATES

Hjelle, B., F. Chavez-Giles, N. Torrez-Martinez, T.L. Yates, J. Sarisky, J. Webb and M. Ascher. 1994. Genetic identification of a novel hantavirus of the Harvest Mouse, *Reithrodontomys megalotis*. Journal of Virology 68(10):6751-6754.

Matsuzaki, T., Y. Yokohata, M. Kamiya and T.L. Yates. 1994. Laboratory rearing of a hybernating animal, *Perognathus flavus*. Exp. Animal 43(3):421-425.

Cook, J.A. and T.L. Yates. 1994. Systematic relationships of the Bolivian Tuco-tucós, genus *Ctenomys* (Rodentia: Ctenomyidae). Journal of Mammalogy 75(3):583-599.

Matsuzaki, T., K. Matsuzaki, Y. Yokohata, R. Ohtsubo, M. Kamiya and T.L. Yates. 1994. Breeding of the Northern Grasshopper Mouse (*Onychomys leucogaster*) as a laboratory animal. Exp. Anim. 43(3):395-401.

E. BOOK REVIEWS.

BROWN

Brown, J.H. 1994. Review of Ricklefs and Schluter's Species Diversity in Ecological Communities. Science 263:995-996.

Brown, J.H. 1994. Review of Damuth and MacFadden's Body Size in Mammalian Paleobiology. Quarterly of Review of Biology 68:257.

LOWREY

Bremer, Kare. 1994. Asteraceae: Cladistics and Classification. Timber Press. ASPT Newsletter 8:19-21.

F. ARTICLES IN NON-SCHOLARLY JOURNALS.

WERNER-WASHBURNE

ASCB Profile: Margaret Werner-Washburne, ASCB News, September 1994, p. 16-19.

Cultural Diversity at the University: Beckman Life, 3rd quarter, p.16.

G. QUASI-PUBLIC REPORTS FOR INTERNAL/EXTERNAL CIRCULATION.

ALTENBACH

Altenbach, J.S. 1994. Reports on Bat Use and Occupancy of Abandoned Mines (35). Submitted to New Mexico Abandoned Minelands Bureau, Homer E. Milford, Environmental Coordinator.

BARTON

Geiger, S., L.L. Barton, T. Ross and J. LaPointe. 1994. Biocorrosion of ferrous metals using ESEM. Pp. 248-258 in Proceedings of Third Annual WERC Technology Development Conference. New Mexico State University, Las Cruces NM.

Cifuentes, R., L.L. Barton and W. Lindermann. 1994. Bioremediation of soils containing toxic metals. Pp. 237-248 in Proceedings of the Third Annual WERC Technology Development Conference. New Mexico State University, Las Cruces NM.

Jordan, F.L. and L.L. Barton. 1994. Mechanisms of lead precipitation by bacteria resulting in the detoxification of lead contaminated sites. Proceedings of the Fourth International IGT Symposium on Gas, Oil and Environmental Biotechnology. Colorado Springs CO, Dec. 9-11, 1994.

DUSZYNSKI

Edited Vol. 10, Department of Biology Annual Newsletter (1994) mailed to more than 2,500 alumni, friends and supporters of Biology, December 1994.

Wrote and prepared camera ready copy of the Call For Papers booklet announcing the 1995 Joint Meeting of the American Society of Parasitologists (ASP) and the American Society of Veterinary Parasitologists (AAVP). Mailed by Allen Press to 2,200 members of ASP & AAVP. 30 p.

Prepared and edited the Program And Abstracts booklet for the 1994 Annual Meeting of the American Society of Parasitologists, August 9-13, 1994, Colorado State University, Ft. Collins CO. Mailed by Allen Press to 1,500 members of the ASP. 109 p.

Wilber, P.G., D.W. Duszynski and B. Van Horne. 1994. The parasite community of Townsend's ground squirrels. Snake River Birds of Prey Annual Report for the Bureau of Land Management. Pp. 226-232.

LOKER

Annual Report for U.S. Agency for International Development grant entitled "The Impact of Crayfish on Schistosomiasis Transmission and Non-target Organisms in Man-made Habitats in Central Kenya."

SNELL

Snell, H.L. and H.M. Snell. "Informe Final del Primer Año: El Velero de Investigación Prima en las Islas Galápagos, Ecuador," June 1994.

YATES

Authored one to the Arizona Department of Game and Fish and another to the NBS; both were reports for funded projects.

H. ABSTRACTS (REFEREED OR INVITED).

BACA

Aragon, A.S., H.A. Pereira and O.G. Baca. 1994. A synthetic bactericidal peptide based on the human neutrophil's antimicrobial CAP37 protein enhances *Coxiella burnetii* infection of host cells. Abstracts of the 11th Sesqui-Annual Meeting of the American Society for Rickettsiology and Rickettsial Diseases, St. Simon's Island GA, September 17-20, 1994.

Baca, O.G., Y.-P. Li and H. Kumar. 1994. Purification and characterization of *Coxiella burnetii*'s acid phosphatase. Abstracts of the 11th Sesqui-Annual Meeting of the American Society for Rickettsiology and Rickettsial Diseases, St. Simon's Island GA, September 17-20, 1994.

BARTON

Barton, L.L., B.M. Thomson, K. Steenhoudt, K. Choudhury, M.Thombre and M.D. Tucker. 1994. Control of uranium migration by microbial action. The Fourth Annual WERC Technology Development Conference, Las Cruces NM, April 13-15, 1994.

Ross, T. and L.L. Barton. 1994. Surface interactions between bacteria and metals. The Fourth Annual WERC Technology Development Conference, Las Cruces NM, April 13-15, 1994.

Barton, L.L., A. Groffman, A. Meijer, J. Blount, K. Choudhury and B. Thomson. 1994. Microbially mediated processes in contaminated groundwater downgradient from uranium mill tailings sites. Second International Conference on Ground Water Ecology, Atlanta GA, March 12-15, 1994.

LOKER

Loker, E.S., C.M. Adema, D.F. Arguello II and S.A. Stricker. 1994. Trematode larvae affect snail hemocyte behavior *in vitro*. American Society of Parasitologists Annual Meeting, Ft. Collins CO, August 9-13, 1994.

Adema, C.M., E.S. Loker, D.F. Arguello II and S.A. Stricker. 1994. Trematode larvae affect snail hemocyte behavior *in vitro*. Presented at the Sixth ISDCI Congress on Developmental and Comparative Immunology, Wageningen, The Netherlands, July 31–August 5, 1994.

Mkoji, G.M., B.V. Hofkin, J.H. Ouma, A.M. Kuris, D.K. Koech and E.S. Loker. 1994. Schistosomiasis transmission in small man-made impoundments in Kenya and potential strategies for its control. Presented at the Eighth International Congress of Parasitology, Izmir, Turkey, October 10-14, 1994.

Loker, E.S. and C.M. Adema. 1994. The immunoecology of trematode-snail relationships. Presented at the Eighth International Congress of Parasitology, Izmir, Turkey, October 10-14, 1994.

LOWREY

Lowrey, T.K. Systematics and biology of sex expression in the Compositae. 1994. Second International Compositae Symposium Proceedings, Royal Botanic Gardens, Kew, England.

MARSHALL

Marshall, D.L. 1994. Non-random mating in wild radish: On beyond inbreeding. Agronomy Abstracts.

MILNE

Invited symposium, Ecological Society of America, "The Necessity for Sampling at Multiple Scales," Knoxville TN, August 1994.

Invited INTECOL symposium, The Silver Jubilee of Statistical Ecology, Manchester, England.

MOLLES

Molles, M.C, Jr., C.S. Crawford and L.M. Ellis. 1994. Experimental flooding of a riparian forest along the Rio Grande: Influences on populations and ecosystem processes. Bulletin of the Ecological Society of America 75:158.

Valett, H.M., C.S. Crawford, M.C. Molles, Jr. and F.S. Lieurance. 1994. Experimental flooding of a riparian forest: Restoration of ecosystem functioning. Second International Groundwater Ecology Program, Atlanta GA, March 1994.

VOGEL

Vogel, K.G., D.J. Hernandez and G. Pogany. 1994. The interaction of decorin and biglycan with collagen *in vitro* is differentially affected by phosphate concentration. Trans. Orthop. Research Society 19:6.

WERNER-WASHBURNE

Padilla, P.A. and M. Werner-Washburne. Identification of a novel gene family in *Saccharomyces cerevisiae*. Society for the Advancement of Chicanos and Native Americans in the Sciences (SACNAS), El Paso TX, January 5-7, 1995.

Gomez, M.A., V.M. Peck and M. Werner-Washburne. The role fo cAMP-dependent protein kinase in stationary phase yeast, *Saccharomyces cerevisiae*. SACNAS, El Paso TX, January 5-7, 1995.

Crawford, M.E. and M. Werner-Washburne. Analysis of promoter elements responsible for the regulation of BCY1. Yeast Genetics and Molecular Biology meeting, Seattle WA, August 16-21, 1994.

Fuge, E.K., E.L. Braun and M. Werner-Washburne. Protein synthesis in stationary phase yeast. Yeast Genetics and Molecular Biology meeting, Seattle WA, August 16-21, 1994.

Peck, V., E.L. Braun and M. Werner-Washburne. Analysis of C-terminal mutants of Bcy1p, the regulatory subunit of cAMP-dependent protein kinase. Yeast Genetics and Molecular Biology meeting, Seattle WA, August 16-21, 1994.

YATES

Yates, T.L. 1994. Hantavirus in North America: Historical diversity or recent emergence? President's Symposium, 69th Annual Meeting American Society of Parasitologists, Fort Collins CO, August 1994.

I. ABSTRACTS (CONTRIBUTED).

ALTENBACH

Altenbach, J.S. 1994. Evaluation of bat habitat and occupancy of the Mariscal Mercury Mine Complex and Rio Grande Village Adit, Big Bend National Park, Texas. Big Bend National Park 1993 Research Newsletter, p. 80.

BARTON

Barton, L.L. and M.J. Gillespie. 1994. Energetics of molecular hydrogen oxidation by *Campylobacter rectus*. Second Annual Meeting of the Anaerobe Society of the Americas, Marina del Rey CA, July 29-31, 1994.

Barton, L.L., B.M. Thomson, T.K. Steenhoudt and M.D. Tucker. 1994. Anaerobic bacterial systems result in the removal of soluble uranium. Ninth Conference on Hazardous Waste Remediation, Montana State University, Bozeman MT, July 15-18, 1994.

Barton, L.L., S. Rao and T.J. Ross. 1994. Analysis of microbial activity and the biocorrosion of metals. Ninth Annual Conference on Hazardous Waste Remediation, Montana State University, Bozeman MT, July 15-18, 1994.

Barton, L.L., B.M. Thomson, A. Groffman, K. Choudhury and H.A. Noskin. 1994. Bacterial activity in ground water at uranium mill tailings sites. 94th General Meeting of the American Society for Microbiology, Las Vegas NV, May 23-27, 1994.

Barton, L.L., K. Schitoskey, R. Grubbs and J.T. Lahusen. 1994. Influence of chromium on Cr(VI) reductase, Fe(III) reductase and cytochrome produced by *Pseudomonas* LCII. 94th General Meeting of the American Society for Microbiology, Las Vegas NV, May 23-27, 1994.

Barton, L.L., K. Steenhoudt, M.D. Tucker, and B.M. Thomson. 1994. Removal of soluble U(VI) from metal-enriched media by nitrate-reducing and sulfate-reducing bacteria. 94th General Meeting of the American Society for Microbiology, Las Vegas NV, May 23-27, 1994.

Jordan, F.L. and L.L. Barton. 1994. Mechanisms of lead precipitation by bacteria resulting in the detoxification of lead contaminated sites. Fourth International IGT Symposium on Gas, Oil and Environmental Biotechnology, Colorado Spring CO, December 9-11, 1994.

DUSZYNSKI

Wilson, W.D., J.A. Hnida and D.W. Duszynski. Parasites of mammals on the Sevilleta National Wildlife Refuge, Socorro, New Mexico: *Cuterebra* spp. (Diptera: Cuterebridae) from *Neotoma and Peromyscus*. Presented at the 70th Annual Meeting, American Society of Parasitologists, Ft. Collins CO, August 11, 1994.

Wilber, P.G. and D.W. Duszynski. Patterns of parasite infection in Townsend's ground squirrels (*Spermophilus townsendii*) during and following drought. Presented at the 70th Annual Meeting, American Society of Parasitologists, Ft. Collins CO, August 11, 1994.

Wilber, P.G. and D.W. Duszynski. The effect of parasites on Townsend's ground squirrels at the Snake River Birds of Prey Area, Idaho. Presented at the Annual Meeting of the Wildlife Society of America, Albuquerque NM, September 21-25, 1994.

JOHNSON, G.

Johnson, G.V. and N. Shah. 1994. Iron and soybean nodulation and nitrogen fixation: Comparison of *Bradyrhizobium* strains differing in growth in iron deficient medium. Fifth International Symposium on Genetics and Molecular Biology of Plant Nutrition, Davis CA, July 17-24, 1994.

Johnson, G.V. and A.H. Heilman. 1994. Tissue culture and regeneration of African violet: A plant physiology laboratory exercise. Plant Physiol. 105S:176.

KODRIC-BROWN

Kodric-Brown, A. 1994. Fluctuating asymmetry in pupfish (*Cyprinodon pecosensis*), an indicator of male quality. Proceedings of International Behavioral Ecology Congress, University of Nottingham, England.

LOWREY

Lowrey, T.K., D. Daniels, R. Chan and R. Whitkus. 1994. Duplication of cytosolic NADP-IDH in Hawaiian and Cook Island *Tetramolopium*. American Journal of Botany 82:104.

Read, D. and T. Lowrey. 1994. Duplication of cytosolic NADP-IDH in Hawaiian and Cook Island *Tetramolopium*. Proceedings of the SW and RM Division of AAAS 70th Meeting 34:11.

Cross, K. and T. Lowrey. 1994. Experimental interspecific hybridization between Cook Island and Hawaiian species of *Tetramolopium*. Proceedings of the SW and RM Division of AAAS 70th Meeting 34:11.

MARSHALL

Marshall, D.L., M.W. Folsom, C.A. Hatfield and T. Bennett. 1994. Exploitation vs. interference competition among pollen grains: Which has a greater effect on seed paternity? Bulletin of the Ecological Society of America 75(2):143.

MILNE

Milne, B.T., A.R. Johnson, T.H. Keitt, C.A. Hatfield, J. David and P. Hraber. 1994. Indicators of spatial phase transitions and critical densities in woodland landscapes. Annual Meeting of the International Association for Landscape Ecology, Tucson AZ.

Also, three abstracts with A. Johnson as first author: one for IALE meeting in Tucson, one for ESA meeting in Knoxville, and one for INTECOL meeting in Manchester, England.

NELSON

Broussard, M. and M.A. Nelson. Isolation of mating-specific genes in *Neurospora crassa*. Annual Conference of the Society for Advancement of Chicanos and Native Americans in Science, Chicago IL, March 24-28, 1994.

Garnand, K. and M.A. Nelson. The effect of DNA conformation on co-transformation efficiencies in the filamentous fungus *Neurospora crassa*. Annual Conference of the Society for Advancement of Chicanos and Native Americans in Science, Chicago IL, March 24-28, 1994.

STRICKER

Stricker, S.A. 1994. Calcium dynamics during starfish early development. Molecular Biology of the Cell 5:358a.

THORNHILL

Thornhill R. and S.W. Gangestad. 1994. Fluctuating asymmetry and models of sexual selection. Human Behavior and Evolution Society Annual Meeting, Ann Arbor MI, June 1994.

Gangestad, S.W. and R. Thornhill. 1994. Fluctuating asymmetry and relationship dynamics. Human Behavior and Evolution Society, Ann Arbor MI, June 1994.

TRUJILLO

Charlie, J., L. Hays and J.L. Trujillo. Cloning and expression in *E. coli* of phosphoenol-pyruvate carboxykinase from rat liver. Third Annual Research Day, Department of Biology, UNM, April 7, 1994.

Vezmar, M., E. Weeber, P. Padilla and J.L. Trujillo. Expression in *E. coli* of human liver phosphofructokinase-1 by genetic engineering techniques. ??, August 7, 1994.

Apodaca, A., L. Hays and J.L. Trujillo. Cloning by polymerase chain reaction techniques into an *E. coli* expression vector of the rat liver PEPCK enzyme. ??, August 7, 1994.

VOGEL

Moran, J. and K. Vogel. Proteins and proteoglycans of human intervertebral disc. Third Annual Research Day, UNM Dept. of Biology, April 1994.

Quigley, S. and K. Vogel. Modulation of proteoglycan binding to collagen by phosphate concentration is not altered by pepsin digestion. Third Annual Research Day, UNM Dept. of Biology, April 1994.

Vogel, K. and R. Wert. The effect of *in vitro* cyclic compressive loading on turnover of newly-synthesized proteoglycans in fetal tendon. Western Connective Tissue Society, May 1994.

Robbins, J.R. and K. Vogel. TGF-b1 increases aggrecan and biglycan mRNA levels in cultured fetal tendon. Western Connective Tissue Society, May 1994.

Quigley, S. and K. Vogel. Proteoglycan binding to collagen in a low concentration of phosphate is not mediated by non-collagenous components. Western Connective Tissue Society, May 1994

Berenson, M.C., J. Moran, F. Orcutt and K. Vogel. Proteoglycans and proteins of adult human intervertebral disc. Western Connective Tissue Society, May 1994.

Robbins, J.R., S.P. Evanko and K.G. Vogel. 1994. TGF-b1 possibly mediates changes in proteoglycan synthesis following *in vitro* compression of tendon. Molec. Biol. Cell 5:385a.

YATES

Miyashiro, J.B.M. and T.L. Yates. 1994. The phylogenetics of members of the tribe Phyllotini as determined by allozyme data. 75th Annual Meeting American Society of Mammalogists, Washington DC, June 1994.

Miyashiro, J.B.M. and T.L. Yates. 1994. Systematic relationships of the tribe Phyllotini based on protein electrophoretic data. 41st Annual Meeting Southwestern Association of Naturalists, Emporia KS, April 1994.

Frey, J.K., D.J. Hafner, T.L. Yates and C.G. Schmitt. 1994. Allozyme and mtDNA variation in migratory sandhill crane (*Grus canadensis*). 41st Annual Meeting Southwestern Association of Naturalists, Emporia KS, April 1994.

J. OTHER.

ALTENBACH

Photographs of Greater Bulldog Bat in National Wildlife Magazine, October 1994. Photograph of Townsend's Big Eared Bat in New York Times Magazine, March 20, 1994.

DUSZYNSKI

Traveled to Pittsburg, PA to site visit convention facilities for the 1995 Annual Meeting of the American Society of Parasitologists to be held there jointly with the American Society of Veterinary Parasitology, July 6-10, 1995.

Research Affiliate, The Harold W. Manter Laboratory of Parasitology, University of Nebraska State Museum, Lincoln NE.

Anthocephalum duszynskii, a tapeworm from the spiral valve of stingrays, was the third nominal species named for me (Rhunke, T.R.). 1994. Systematic Parasitology 29:159-176.

MOLLES

Ellis, L.M., M.C. Molles, Jr. and C.S. Crawford. 1994. The effects of annual flooding on Rio Grande riparian forests: Bosque Del Apache National Wildlife Refuge, San Antonio. Progress Report to U.S. Fish and Wildlife Service Ecological Services, New Mexico. 91 pp.

NELSON

Coordinator for the Sandia National Laboratories Workshop on Computational Molecular Biology, Albuquerque NM, June 20, 21 and 24, 1994.

II. PROFESSIONAL PUBLIC ACTIVITIES

A. COLLOQUIUM PRESENTATIONS, UNM AND ELSEWHERE.

BARTON

Fourth Annual WERC Technology Development Conference, L.L. Barton, B.M. Thomson, K. Steenhoudt, K. Choudhury M. Thombre and M.D. Tucker, "Control of uranium migration by microbial action," Las Cruces NM, April 13-15, 1994.

Fourth Annual WERC Technology Development Conference, T. Ross and L.L. Barton, "Surface interactions between bacteria and metals," Las Cruces NM, April 13-15, 1994.

Second International Sonference on Ground Water Ecology, L.L. Barton, A. Groffman, A. Meijer J. Blount, K. Choudhury, and B.M. Thomson, "Microbially mediated processes in contaminated groundwater down gradient form uranium mill tailings sites," Atlanta GA, March 12-15, 1994.

Second Annual Meeting of the Anaerobe Society of the Americas, L.L. Barton and M.J. Gillespie, "Energetics of molecular hydrogen oxidation by *Campylobacter rectus*," Marina del Rey CA, July 29-31, 1994.

Ninth Annual Conference on Hazardous Waste Remediation, L.L. Barton, B.M. Thomson, T.K. Steenhoudt and M.D. Tucker, "Anaerobic bacterial systems result in the removal of soluble uranium," Montana State University, Bozeman MT, July 15-18, 1994.

Ninth Annual Conference on Hazardous Waste Remediation, L.L. Barton, S. Rao and T.J. Ross, "Analysis of microbial activity and the biocorrosion of metals," Montana State University, Bozeman MT, July 15-18, 1994.

94th General Meeting of the American Society for Microbiology, L.L. Barton, B.M. Thomson, A. Grofman, K. Choudhury and H.A. Noskin, "Bacterial activity in ground water at uranium mill tailings sites," Las Vegas NV, May 23-27, 1994.

94th General Meeting of the American Society for Microbiology, L.L. Barton, K. Schitoskey, R. Grubbs and J.T. Lahusen, "Influence of chromium on Cr(VI) reductase, Fe(III) reductase, and cytochrome produced by *Pseudomonas* LC11," Las Vegas NV, May 23-27, 1994.

94th General Meeting of the American Society for Microbiology, L.L. Barton, K. Steenhoudt, M.D. Tucker and B.M. Thomson, "Removal of soluble U(VI) from metal-enriched media by nitrate-reducing and sulfate-reducing bacteria," Las Vegas NV, May 23-27, 1994.

Fourth International IGT Symposium on Gas, Oil and Environmental Biotechnology, F.L. Jordan and L.L. Barton, "Mechanisms of lead precipitation by bacteria resulting in the detoxification of lead contaminated sites," Colorado Springs CO, Dec. 9-11, 1994.

LOWREY

New Mexico State University, Department of Biology Colloquium, "Systematics and evolution of *Tetramolopium* (Compositae)," Las Cruces NM, November 1994.

SNELL

Invited Colloquium Presentation, Max-Planck Institute Colloquium Series in Evolutionary Ecology, "The roles of sexual and natural selection in the evolution of sexual dimorphism in size: Measures of selection in Galápagos Lava Lizards," Max-Planck Institute, Anders, Germany, April 1994.

THORNHILL

H.O. Lund Distinguished Scientist Lecture, University of Georgia, "Fluctuating asymmetry," Athens GA, May 1994.

Graduate Student Selected Speaker for 1994, Department of Neurobiology and Behavior, Cornell University, "Fluctuating asymmetry," Ithaca NY, November 1994.

VOGEL

Session Chairman and Organizer, NIH/AAOS Workshop on Repetitive Motion Disorders of the Upper Extremity, "Pathophysiology of connective tissues," Bethesda MD, June 1994.

Session Co-Chairman, Symposium, "Biophysical regulation of metabolism, growth and remodelling in musculoskeletal tissues," (Sponsored by: Biomedical Engineering Society), Experimental Biology 1994, Anaheim CA, April 1994.

WERNER-WASHBURNE

"Characterization of stationary phase in yeast," Yeast Genetics Meeting, Seattle WA, August 1994.

B. SEMINAR PRESENTATIONS, UNM AND ELSEWHERE.

BACA

Ecology and Evolution Seminar, UNM Department of Biology, "Analysis of deaths in central New Mexico during the late Spanish Colonial and Mexican Periods (1793-1846)," April 20, 1994.

"Q fever—A model for host-parasite interactions," California State–Northridge, October 1994.

BROWN

Archibald Biological Station, Florida, February 3, 1994
Miami University, Ohio; February 7, 1994
University of Oklahoma, Oklahoma, February 10, 1994
University of Arizona, Arizona, April 12, 1994
University of Minnesota, Minnesota, April 20, 1994
University of Chicago, Illinois, April 25, 1994
Centre for Population Biology, United Kingdom, August 22, 1994
National Biological Survey, Washington DC, November 21, 1994
The University of New Mexico, New Mexico, November 29, 1994

JOHNSON, C.

Radiological Safety Lecture to Hughes Progrm Summer students, UNM Department of Biology, June 13, 1994.

KERKOF

Lovelace Foundation, "TSH-Induced Gene Expression in Ovine Thyroid Cells in Culture," January 17, 1994.

KODRIC-BROWN

Department of Ecology and Evolutionary Biology, University of Arizona, "Sexual selection in pupfish," Tucson AZ, September 15, 1994.

LOKER

Department of Zoology, Oregon State University, "Parasite driven changes in immunocompetence," Corvallis OR, April 25, 1994.

1994 Blankenbaker Lecturer, Department of Veterinary Molecular Biology, Montana State University, "On being a parasite in an invertebrate host: A short survival course," May 3, 1994.

Department of Biology, University of New Mexico, "Immunology and ecology: Are trematode parasites caught in the middle?," Albuquerque NM, 27 October, 1994

Department of Biological Sciences, University of California, "Immunoecology of larval trematode-snail associations," Santa Barbara CA, December 1994.

LOWREY

UNM Department Biology Evolution and Ecology Noon Seminar Presentation, "Sex expression in the Compositae," November 1994.

MARSHALL

"Non-random mating in wild radish," Department of Biology, University of Costa Rica, May 1994.

MILNE

"Phase transitions in woodland ecotones," UNM, Spring 1994.

MOLLES

Departmental Seminar, Department of Zoology, University of Coimbra, "Ecological influences of experimental flooding on the Rio Grande Riparian Ecosystem," Coimbra, Portugal, June 1994.

NATVIG

Several (3-5) presentations to the Fungal Genetics group meeting.

NELSON

"Sexuality in fungi: A very close (molecular) look," Special Topics in Cell/Molecular Biology Series, Department of Biology, UNM, January 28, 1994.

"Sexual development in *Neurospora crassa,*" Frontiers in Biomedical Sciences, UNM Medical School, August 31, 1994.

SNELL

Invited Seminar Series Presentation: Department of Biology, New Mexico State University Seminar Series, "The roles of sexual and natural selection in the evolution of sexual dimorphism in size: Measures of selection in Galápagos Lava Lizards." Las Cruces NM, October 1994.

Ecology Brown Bag Seminar Series Presentation. Department of Biology, University of New Mexico, "Covarying allometries of predators and prey: Which came first, the gape or the girth?", Albuquerque NM, September 1994.

STRICKER

"Starfish early development: Are calcium dynamics important?", UNM Department of Biology, November 1994.

Invited seminar, "The role of calcium transients during starfish development," Department of Cell Biology, University of Arizona, November 1994.

THORNHILL

Departmental Seminar, Department of Biology, University of South Carolina, "Fluctuating asymmetry," September 1994.

TOOLSON

Department of Ecology and Evolutionary Biology, University of California, Irvine CA.

Lovelace Research Institute, Albuquerque NM.

VOGEL

Department of Biomedical Engineering, Technion, Haifa, Israel, March 1994.

Research conference, Department of Orthopaedics, UNM Hospital, April 1994.

WERNER-WASHBURNE

"Using yeast to study cancer," UNM Cancer Center, July 1994.

YATES

Invited seminar, Tulane University, Department of Ecology, Evolution and Organismal Biology, "Research collections and public health," New Orleans LA, November 18, 1994.

C. INVITED AND PLENARY TALKS AT PROFESSIONAL MEETINGS, WORKSHOPS, ETC.

BARTON

A television workshop, Waste-Management Education Research Consortium summer research series, "Immobilization of uranium in groundwater," July 26, 1994.

BROWN

Invited Talk, Symposium on Biodiversity, Meeting of American Society of Mammalogists, Washington DC, June 21, 1994.

Invited Talk, Madrean Archipelago Conference, Arizona, September 21, 1994.

DUSZYNSKI

Invited to participate as a moderator of the Mobilization and Public Outreach group at the Biodiversity Workshop, American Society of Parasitologists 69th Annual Meeting, Ft. Collins CO, August 1994.

GOSZ

Annual Society Meeting, Ecological Society of America

Strategic Research at the National Science Foundation, Knoxville TN, August 8, 1994.

LOKER

Loker, E.S. and C.M. Adema. 1994. The immunoecology of trematode-snail relationships. Presented at the Eighth International Congress of Parasitology, Izmir, Turkey, October 10-14, 1994.

LOWREY

Invited presentation, Scoping Workshop on Research for Enhancing Survival of Threatened, Endangered and Sensitive Plant Species on Military Lands, U.S. Army C.E.R.L and U.S. Fish and Wildlife Service, "Case studies of rare plants on the Pohakuloa Military Training Area, Hawaii," Albuquerque NM, November 1994.

"Systematics and biology of sex expression in the Compositae," Second International Compositae Symposium, Royal Botanic Gardens, Kew, London, England.

MARSHALL

"Non-random mating in wild radish: On beyond inbreeding," Symposium presentation to the Crop Science Society, Seattle WA, November 1994.

MILNE

Invited symposium on Spatial Statistics, Ecological Society of America, "The necessity for sampling at multiple scales," Knoxville TN, August 1994.

Invited INTELCOL symposium, The Silver Jubilee of Statistical Ecology, Manchester, England.

MOLLES

Invited talk, US Fish & Wildlife Service, "Effects of annual flooding on Rio Grande Riparian forests, Bosque del Apache National Wildlife Refuge, San Antonio, New Mexico," May 1994.

NELSON

"Molecular and genetic analysis of sexual development genes in *Neurospora crassa*," Gordon Conference on Fungal Metabolism, Plymouth NH, June 19-24, 1994.

SNELL

Invited International Symposium Presentation, Charles Darwin Foundation for the Galápagos Islands Sponsored Symposium, "Conservation and research in the Galápagos Islands," "Myths and realities about sustained use and development, and the contribution of basic research," Universidad Catolica, Quito, Ecuador, November 7, 1994.

Invited International Symposium Presentation, Max-Planck Institute Sponsored Symposium, "The Galapagos Islands," "The biological diversity of the Galápagos Islands: Development of new metric," Max-Planck Institute, Anders, Germany, April 1994.

THORNHILL

Keynote address, Ontario Entomological Society Meeting, "Fluctuating asymmetry," St. Catherines, Ontario, September 1994.

VOGEL

Symposium, Biophysical Regulation of Metabolism, Growth, and Remodelling in Musculoskeletal Tissues, Experimental Biology 1994, "The development of cartilage in tendon," Anaheim CA, April 1994.

Workshop, Repetitive Motion Disorders of the Upper Extremity, NIH, AAOS, "Fibrocartilage in tendon: A response to compressive load," Bethesda MD, June 1994.

WERNER-WASHBURNE

Cell Cycle Workshop, organizer and moderator, Yeast Genetics Meeting, Seattle WA, August 1994.

YATES

President's Symposium, 69th Annual Meeting American Society of Parasitologists, "Hantavirus in North America: Historical diversity or recent emergence?", Ft. Collins CO, August 1994.

D. CONTRIBUTED TALKS AT PROFESSIONAL MEETINGS, WORKSHOPS, ETC.

ALTENBACH

Workshop, Inactive Mines as Bat Habitat: Guidelines for Research, Survey, Monitoring and Mine Management in Nevada, "When, where and why do bats use inactive mines in western North America?", Reno NV, January 21-22, 1994.

Michigan, Wisconsin and Minnesota Departments of Natural Resources, "The evaluation of abandoned mines for bat use and habitat. Workshop on bats and abandoned mines," Iron Mountain MI, October 11-12, 1994.

BACA

Aragon, A.S., H.A. Pereira and O.G. Baca. 1994. "A synthetic bactericidal peptide based on the human neutrophil's antimicrobial CAP37 protein enhances *Coxiella burnetii* infection of host cells." Abstracts of the 11th Sesqui-Annual Meeting of the American Society for Rickettsiology and Rickettsial Diseases, St. Simon's Island GA, September 17-20, 1994.

Baca, O.G., Y.-P. Li and H. Kumar. 1994. "Purification and characterization of *Coxiella burnetii*'s acid phosphatase." Abstracts of the 11th Sesqui-Annual Meeting of the American Society for Rickettsiology and Rickettsial Diseases, St. Simon's Island GA, September 17-20, 1994.

BROWN

Southwestern Association of Biologists, New Mexico, October 1, 1994.

DUSZYNSKI

Wilson, W.D., J.A. Hnida and D.W. Duszynski. "Parasites of mammals on the Sevilleta National Wildlife Refuge, Socorro, New Mexico: *Cuterebra* spp. (*Diptera: Cuterebridae*) from *Neotoma* and *Peromyscus*." Presented at the 70th Annual Meeting, American Society of Parasitologists, Ft. Collins CO, August 11, 1994.

Wilber, P.G. and D.W. Duszynski. "Patterns of parasite infection in Townsend's ground squirrels (*Spermophilus townsendii*) during and following drought." Presented at the 70th Annual Meeting, American Society of Parasitologists, Ft. Collins CO, August 11, 1994.

Wilber, P.G. and D.W. Duszynski. "The effect of parasites on Townsend's ground squirrels at the Snake River Birds of Prey Area, Idaho." Presented at the Annual Meeting of the Wildlife Society of America, Albuquerque NM, September 21-25, 1994.

JOHNSON, G.

Poster. Johnson, G.V. and N. Shah. 1994. "Iron and soybean nodulation and nitrogen fixation: Comparison of *Bradyrhizobium* strains differing in growth in iron deficient medium." Fifth International Symposium on Genetics and Molecular Biology of Plant Nutrition, Davis CA, July 17-24, 1994.

Poster. Johnson, G.V. and A.H. Heilman. 1994. "Tissue culture and regeneration of African violet: A plant physiology laboratory exercise." Annual Meeting of the American Society of Plant Physiologists, Portland OR, July 30–August 3, 1994.

KODRIC-BROWN

International Behavioral Ecology Congress, "Fluctuating asymmetry in pupfish (*Cyprinodon pecosensis*), an indicator of male quality," University of Nottingham, Nottingham, UK, August 14-20, 1994.

LOKER

Loker, E.S., C.M. Adema, D.F. Arguello II and S.A. Stricker. 1994. "Trematode larvae affect snail hemocyte behavior *in vitro*." American Society of Parasitologists Annual Meeting, Ft. Collins CO, August 9-13, 1994.

Adema, C.M., E.S. Loker, D.F. Arguello II and S.A. Stricker. 1994. "Trematode larvae affect snail hemocyte behavior *in vitro*." Presented at the Sixth ISDCI Congress on Developmental and Comparative Immunology, Wageningen, The Netherlands, July 31–August 5, 1994.

Mkoji, G.M., B.V. Hofkin, J.H. Ouma, A.M. Kuris, D.K. Koech and E.S.Loker. 1994. "Schistosomiasis transmission in small man-made impoundments in Kenya and potential strategies for its control." Presented at the Eighth International Congress of Parasitology, Izmir, Turkey, October 10-14, 1994.

Loker, E.S. and C.M. Adema. 1994. "The immunoecology of trematode-snail relationships." Presented at the Eighth International Congress of Parasitology, Izmir, Turkey, October, 10-14, 1994.

LOWREY

American Institute of Biological Sciences meeting, Lowrey, T.K., D. Daniels, R. Chan and R. Whitkus, "Duplication of cytosolic NADP-IDH in *Tetramolopium* (Compositae; Astereae): Phylogenetic and biogeographic implications," Knoxville TN, August 1994.

MARSHALL

Marshall, D.L, M.W. Folsom, C.A. Hatfield and T. Bennett. 1994. "Exploitation vs. interference competition among pollen grains: Which has a greater effect on seed paternity?" Annual meeting of the Ecological Society of America, Knoxville TN, August 1994.

MILNE

Milne, B.T., A.R. Johnson, T.H. Keitt, C.A. Hatfield, J. David and P. Hraber. 1994. "Indicators of spatial phase transitions and critical densities in woodland landscapes." Annual Meeting of the International Association for Landscape Ecology, Tucson AZ.

Symposium on long-term protection of waste sites at Los Alamos National Laboratory, Los Alamos National Laboratory, Santa Fe NM, January 1994.

MOLLES

Workshop presentation, Rio Grande Basin Research Planning Meeting, Sevilleta LTER, "The Bosque biology program at the Department of Biology, UNM," Sevilleta Field Station NM, February 1994.

Poster presentation, International Conference on Sustaining the Ecological Integrity of Large Floodplain Rivers, National Biological Survey, "Manipulative flooding on the Middle Rio Grande as a management tool for restoration," La Crosse WI, July 1994.

Poster presentation, Ecological Society of America Annual Meeting, "Experimental flooding of a riparian forest along the Rio Grande: Influence on populations and ecosystem processes," Knoxville TN, August 1994.

Contributed talk, National Association of Biology Teachers, "A recipe for teaching the scientific method: Old ingredients in a new mix," St. Louis MO, November 1994.

STRICKER

"Calcium dynamics during starfish early development," Southwest Regional Developmental Biology, Houston TX, 1994.

"Calcium dynamics during starfish early development," American Society for Cell Biology National Meetings, San Francisco CA, 1994.

THORNHILL

Thornhill R. and S.W. Gangestad. 1994. "Fluctuating asymmetry and models of sexual selection." Human Behavior and Evolution Society Annual Meeting, Ann Arbor MI, June 1994.

Gangestad, S.W. and R. Thornhill. 1994. "Fluctuating asymmetry and relationship dynamics." Human Behavior and Evolution Society, Ann Arbor MI, June 1994.

VOGEL

40th Annual Meeting of Orthopedic Research Society, "The interaction of decorin and biglycan with collagen *in vitro* is differentially affected by phosphate concentration," New Orleans LA, February 1994.

Meeting of the Western Connective Tissue Society, "The effect of *in vitro* cyclic compressive loading on turnover of newly-synthesized proteoglycans in fetal tendon," Albuquerque NM, May 1994.

WERNER-WASHBURNE

"Stationary phase in yeast," Yeast Genetics Meeting, Seattle WA, August 1994.

YATES

Miyashiro, J.B.M. and T.L. Yates. 1994. "The phylogenetics of members of the tribe Phyllotini as determined by allozyme data." 75th Annual Meeting American Society of Mammalogists, Washington DC, June 1994.

Miyashiro, J.B.M. and T.L. Yates. 1994. "Systematic relationships of the tribe Phyllotini based on protein electrophoretic data." 41st Annual Meeting Southwestern Association of Naturalists, Emporia KS, April 1994.

Frey, J.K., D.J. Hafner, T.L. Yates and C.G. Schmitt. 1994. "Allozyme and mtDNA variation in migratory sandhill crane (*Grus canadensis*)." 41st Annual Meeting Southwestern Association of Naturalists, Emporia KS, April 1994.

E. ATTENDANCE AT PROFESSIONAL MEETINGS, WORKSHOPS, ETC.

BACA

Annual Meeting of the American Society for Rickettsiology and Rickettsial Diseases, St. Simon's Island GA, September 17-20, 1994.

Fall meeting of the New Mexico Branch of the American Society for Microbiology, Albuquerque, NM.

BROWN

Annual Conference, American Society of Mammalogists, Washington DC, June 18-23, 1994.

Annual Conference, Southwestern Association of Biologists, New Mexico, September 30-October 2, 1994.

Biosphere 2 Meeting, Research Agenda Meeting, Arizona, December 16-18, 1994.

DUSZYNSKI

27th Annual Meeting, Southwestern Association of Parasitologists (SWAP), Lake Texoma OK, April 14-16, 1994.

Annual Meeting, WICHE Veterinary Medicine Advisory Council, Salt Lake City UT, June 10-11, 1994.

Annual Meeting, American Society of Parasitologists (ASP), Ft. Collins CO, August 9-13, 1994.

JOHNSON, C.

Fifth Internationa Symposium on Genetics and Molecular Biology of Plant Nutrition, Davis CA, July 17-24, 1994.

Annual Meeting of the American Society of Plant Physiologists, Portland OR, July 30–August 3, 1994.

KODRIC-BROWN

Southwest Association of Biologists Annual Meeting, Ghost Ranch, Abiquiu NM, October 15-17, 1994.

International Behavioral Ecology Congress, University of Nottingham, Nottingham, UK, August 14-20, 1994.

LOKER

Southwest Association of Parasitologists, 26th Annual Meeting, The University of Oklahoma Biological Station, April 14-16, 1994.

Annual Meeting of the American Society of Parasitologists, Ft. Collins CO, August 9-13, 1994.

Eighth International Congress of Parasitology, Izmir, Turkey, October 10-14, 1994.

LOWREY

Rocky Mountain Sectional meeting of the American Association for the Advancement of Science, Durango CO, May 1994.

Annual AIBS Meeting, Knoxville TN, August 1994.

Second International Compositae Conference, Royal Botanic Gardens, Kew, London, England, July 1994.

MARSHALL

Annual AIBS meeting, Knoxville TN, August 1994.

MILNE

International Association for Landscape Ecology, Tucson AZ.

INTECOL, Manchester, England.

LTER All-Scientists Meeting, Colorado, September 1994.

MOLLES

Riparian Management Get-Together, Bosque del Apache National Wildlife Refuge, May 17-18, 1994.

Ecological Society of America Annual Meeting, Knoxville TN, August 1994.

National Association of Biology Teachers, St. Louis MO, November 1994.

NATVIG

Annual Conference of the Society for Advancement of Chicanos and Native Americans in Science, Chicago IL, March 24-28, 1994.

"Achieving Excellence in Minority Engineering Education," an NSF Chautauqua conference.

NELSON

Sixth Annual Structural Biology Symposium, "Molecular Strategies for Drug Design," Santa Fe NM, May 13, 1994.

Gordon Conference on Fungal Metabolism, Plymouth NH, June 19-24, 1994.

RIEDESEL

American Physiological Society with Federation of American Societies for Experimental Biology, Anaheim CA, April 24-28, 1994.

SNELL

General Assembly Meeting of the Charles Darwin Foundation for the Galápagos Islands, Quito, Ecuador, November 1994.

Executive Council Meeting of the Charles Darwin Foundation for the Galápagos Islands, Anders Germany, April 1994, and Quito, Ecuador, November 1994.

STRICKER

"Calcium dynamics during starfish early development," Southwest Regional Developmental Biology, Houston TX, 1994.

"Calcium dynamics during starfish early development," American Society for Cell Biology National Meetings, San Francisco CA, 1994.

NSF Diversity in Sciences, Washington DC, October 1994.

THORNHILL

Human Behavior and Evolution Society Annual Meeting, Ann Arbor MI, June 1994.

VOGEL

Orthop. Research Society, New Orleans LA, February 1994.

FASEB, Experimental Biology 1994, Anaheim CA, April 1994.

Western Connective Tissue Society, Albuquerque NM, May 1994.

Conference of Colleges of Arts and Sciences—New Deans' Seminar, Williamsburg VA, June 1994.

American Society for Cell Biology, San Francisco CA, December 1994.

WERNER-WASHBURNE

Yeast Genetics Meeting, Seattle WA, August 1994.

NSF Diversity in the Workforce Meeting, Washington DC, September 1994.

SACNAS meeting, Chicago IL, March 1994.

YATES

Annual meetings of: American Society of Mammalogists
American Society of Parasitologists
Southwestern Association of Naturalists
National Association of Colleges and Universities

Workshop on Collection and supply of biological materials, animals and plants. National Research Council, Washington DC, March 1994.

F. TESTIMONY IN A SCHOLARLY CAPACITY AT HEARINGS OF COMMISSIONS, LEGISLATIVE COMMITTEES, ETC.

MILNE

The New Mexico Finance Committee on behalf of a bill to establish a Center of Environmental Biology at UNM.

G. PRESENTATIONS TO GENERAL AUDIENCE IN A SCHOLARLY CAPACITY.

ALTENBACH

Invited Keynote Address, National Parks Week: Exploring Sustainability, "Bat conservation in the Southwest," Carlsbad Caverns National Park NM, May 27, 1994.

DUSZYNSKI

Guest Speaker, Biol. 296, Diseases and Parasites of the Southwest, "Parasites are pervasive," TVI, Albuquerque NM, September 26, 1994.

MILNE

Appeared in the UNM KNME-24 TV film, "*Where Edges Meet*," broadcast February 1995, filmed in 1994. Served on the advisory panel to the producers.

MOLLES

Volunteer Training, Rio Grande Nature Center. "Geological history and climatology of the Rio Grande Basin," Albuquerque NM, February 1, 1994.

Volunteer Training, Rio Grande Nature Center. "Recent history and ecology of the Rio Grande Bosque," Albuquerque NM, February 8, 1994.

WERNER-WASHBURNE

"Using yeast to study cancer," UNM Cancer Center, July 1994.

YATES

Talk on Hantavirus, Albuquerque Dept. of Environmental Health, October 1994.

"Mice and men: The role of small mammals in the natural world, New Mexico Museum of Natural History, April 1994.

H. SERVICE IN A SCHOLARLY CAPACITY AS MEMBER OF LOCAL, STATE OR NATIONAL PANEL, COMMITTEE, OR COMMISSION, FOR PURPOSE OF REVIEWS OF PUBLIC POLICY ISSUES, SCIENTIFIC EVALUATIONS, AWARDS OF GRANTS OR FELLOWSHIPS OR PRIZES, ETC.

ALTENBACH

Scientific Advisor to The Nature Conservancy on The Journad del Muerto, Lava Bat Cave.

BACA

Reviewer for the NSF's Instrumentation & Laboratory Improvement panel.

Panelist of the NSF's Instrumentation and Instrument Development Advisory Panel; Division of Biological Instrumentation and Resources (1993-96).

Panelist on the National Research Council's Genetics and Molecular Biology II panel (to evaluate applicants for Howard Hughes predoctoral fellowship awards)

BARTON

1994 Chairman of Awards Committee of New Mexico Chapter of Sigma Xi for the purpose of recognizing an outstanding undergraduate student graduating from UNM and recognizing of an excellent dissertatiion by a graduating doctoral student.

Reviewer of two research proposals to DOE.
Reviewer of one grant to the Water Resources Research Institute.
Reviewer of one proposal to NSF.
External reviewer for promotion/tenure of Dr. David E. Crowley, Department of Soil and Environmental Sciences, University of California–Riverside.

BROWN

Reviewer for EPA Global Change Competition

COSZ

Executive Secretary, Subcommittee on Environmental Biology, FCCSET Committee on Life Sciences and Health, Washington DC.

NSF representataive, Biodiversity Task Group, Global Environmental Affairs, Presidental Review Directive NSC-12.

NSF representatiave, Forests Task Group, Global Environmental Affairs, Presidental Review Directive NSC-12.

Committee on Water Resources, FCCSET, Washington DC.

NSF Partnerships Task Force.

NSF representative, Subcommittee on Biodiversity and Ecosystems Dynamics, Committee on Environment and Natural Resources (CENR), Washington DC.

Chair, Writing Group for the Strategy Document for the Subcommittee on Biodiversity and Ecosystem Dynamics (CENR).

Chairman, Writing Group for the Section on Biological Impacts and Adaptation, Subcommittee on Biodiversity and Ecosystem Dynamics (CENR).

NSF representative, Office of Science, Technology and Policy Committee on the Mississippi Flood Evaluation.

NSF representative, Office of Science, Technology and Policy Committee on the Presidio.

NSF representative to the Committee for the National Center for Biodiversity Information.

NSF Coordinator for the Terrestrial Ecology Initiative for the U.S. Global Change Research Program.

Co-chair of the Global Change Process Working Group.

NSF Point of Contact, Subcommittee on Technology and Engineering Research (CENR).

NSF representative, Interagency Ecosystem Management Committee.

Committee member, NSF High Performance Computing and Communication Coordination Committee.

Committee member, Scientific Advisory Committee for the Chinese Ecological Research Network (funded by the World Bank).

JOHNSON, G.

Judge, State Science Fair, Chairman Senior Botany Division, Socorro NM, April 16, 1994.

KERKOF

Appointed by Dean Paul Roth of the UNM Medical School to be a member of a confidential Medical School Dean's Committee, Vitalethine Research Review Committee, Spring 1994.

LOWREY

Panel Member, Collections Panel, Division of Environmental Biology, Washington DC, October 1994.

Member, New Mexico Plant Recovery Team, US Fish and Wildlife Service.

MARSHALL

NYI panel, NSF, April 1994.

MILNE

Long-Term Ecological Research Network Coordinating Committee.

Organized and conducted the first meeting of the Rio Grande Basin Planning Group. Representatives from 12 federal, state and academic research groups attened to organize a mission to coordinate environmental research in the Basin, February 9-11, 1994.

Organized and conducted the second meeting of the Rio Grande Basin Planning Group, more than 50 attendees to review research activities in the Rio Grande Basin, USGS Albuquerque District Office, July 1994.

MOLLES

Technical advisor to the Rio Grande Nature Center, Albuquerque NM.

Design Charett, Documentary on the Rio Grande: "One River, Many Voices," Rio Grande Biological Park & KNME, December 1994.

NATVIG

Reviewer, NSF Systematic Biology and Genetics, approx. five proposals
Ad hoc Panel member, NIH, Microbial Physiology and Genetics, October 1994.

VOGEL

Regular member, NIH Study Section
Pathobiochemistry, February, June and October 1994

YATES

Served as a member of the NSF Biodiversity Review Panel, January 1994.

Served as member of a National Academy of Sciences Committe on Importation of Scientific Specimens.

Participated as an invited observer at the National Biodiversity information Network meetings, Smithsonian Institution, Washington DC, March 1994.

Served as member, Commission on Food, Environment, and Renewable Resources, National Association of State Universities and Land-grant Colleges, Chicago IL, November 1994.

I. SERVICE AS EDITOR OF SCHOLARLY JOURNAL.

BARTON

Editor-in-Chief of newly created journal Anaerobe, to be published by Academic Press, Inc., London.

BROWN

Journal of Biogeography
Associate Editor for North America, Biogeography and Global Change Letters

DUSZYNSKI

External Peer Reviewer, NSF. Refereed one grant proposal.

Panel Member, Biotic Surveys and Inventories, NSF. Declined to serve this FY for personal reasons.

Judge for the 1994 National Youth Science Camp applicants, Special Projects, Office of the First Lady Alice King, Santa Fe NM. Three applicatiions.

Judge for 1994 U.S. Department of Energy High School Science Student Honors Program, Department of Education, State of New Mexico, Santa Fe NM. Thirteen applications.

Judge of poster presentations, Third Annual Research Day, Department of Biology, UNM, April 8, 1994.

Judge evaluating all New Mexico high school applicants who applied to participate in the 1994 National Science Youth Camp. Appointed through the office of Governor Bruce King.

TVI Advisory Committee for Arts and Sciences (Appointed). 1991–96.

Appointed, New Mexico Representative, Student Exchange Programs, Advisory Board for the Western Interstate Commission for Higher Education (WICHE).

SNELL

Editor, Noticias de Galapagos

YATES

Review Editor, Journal of Mammalogy

Managing Editor, MSB Publications

Member Editorial Board, McGraw-Hill Science and Engineering Encyclopedia.

J. SERVICE ON EDITORIAL BOARD OF SCHOLARLY JOURNAL.

BARTON

Biometals, an international journal published by Rapid Communications, Oxford.

BROWN

Editorial Board, Evolutionary Ecology

GOSZ

Biogeochemistry

LOKER

Associate editor in charge of invertebrate host-parasite associations, Journal of Parasitology.

LOWREY

Member, Editorial Board, Madrono, Publication of the California Botanical Society.

MARSHALL

Member, Editorial Board for Ecology 1992-95; handle 25-30 manuscripts per year.

THORNHILL

Consulting Editor, Journal of Comparative Psychology
Advisory Editor, Zoology: Analysis of Complex Systems

VOGEL

Editorial Board, Archives for Biochemistry

Editorial Board, Eur. J. Cell Biol.

K. SERVICE AS OFFICER OF PROFESSIONAL ORGANIZATION (INDICATE WHETHER ELECTED OR APPOINTED).

BACA

Vice President (elected) of the American Society for Rickettsiology and Rickettsial Diseases (term ended Fall 1994).

President (elected) of the American Society for Rickettsiology and Rickettsial Diseases (term from Fall 1994–Fall 1996).

Councilor (elected) of the New Mexico Branch of the American Society for Microbiology.

Member of the American Society for Microbiology's Council (elected).

BARTON

Vice-President of UNM Chapter of Sigma Xi (elected).

The International Steering Committee for the "International Symposium on Iron Nutrition and Interactions in Plants" (appointed).

DUSZYNSKI

National Program Officer, American Society of Parasitologists. Appointed and confirmed by ASP Council. 1988–96.

Archivist, Annual Coccidiosis Conference. Appointed.

Archivist, Southwestern Association of Parasitologysts. Appointed.

Member, Meeting-Site Selection Committee for 1993–96, American Society of Parasitologists. Appointed.

Research Affiliate, The Harold W. Manter Laboratory of Parasitology, University of Nebraska State Museum, Lincoln NE. Elected.

National Program Officer, Society of Protozoologists, Appointed by the President and confirmed by their Council, for their 1996 Annual Meeting to be held in Tucson AZ as a Joint Meeting with the ASP.

GOSZ

Chairman, Network Office and Coordinating Committee for the Long Term Ecological Research (LTER) Network (elected).

LOKER

Secretary-Treasurer, Southwest Association of Parasitologists, elected 1992-95.

LOWREY

Chairman, Systematic Section, Botanical Society of America. August 1991–August 1993. Elected.

Secretary-Treasurer, Midcontinent Section, Botanical Society of America-May 1993–May 1995. Elected.

MARSHALL

Chair, Plant Population Biology Section of the ESA, elected.
Member, ESA Council, elected from Board of Editors.

MILNE

Nominated for President of the US Chapter of the International Association for Landscape Ecology (not elected).

SNELL

Vice President for North America, Charles Darwin Foundation for the Galápagos Islands.

WERNER-WASHBURNE

Board of Directors, Society for the Advancement of Chicanos and Native Americans in the Sciences (SACNAS).

Minority Affairs Committee, American Society for Cell Biology.

YATES

Member Board of Directors, American Society of Mammalogists.

Trustee and Board Member, Southwestern Association of Naturalists.

L. LIST JOURNALS AND THE NUMBER OF PAPERS YOU REFEREED FOR EACH IN 1994

ALTENBACH

Southwestern Naturalist (1)
Journal of Mammalogy (2)

BACA

New Mexico Historical Review (1)
Infection and Immunity (2)

BARTON

Journal of Applied and Environmental Microbiology (2)
Biometals (6)
Anaerobe (55 papers & 4 review articles)

BROWN

Many.

DUSZYNSKI

Journal of Parasitology (10)
Proceedings of the Biological Society of Washington (1)
Journal of Wildlife Diseases (1)
Ecological Society of America Monographs (1)
Journal of Eukaryotic Microbiology (1)
Journal of the Helminthological Society of Washington (1)

KODRIC-BROWN

Behavioral Ecology and Sociobiology (3)
Evolution (2)
Environmental Biology of Fishes (4)
Canadian Journal of Zoology (2)
American Naturalist (7)
Behavioral Ecology (3)
Science (1)
Ethology (3)

LOKER

Invertebrate Biology (1)
Comparative Biochemistry and Physiology (1)
Biological Bulletin (1)
Canadian Journal of Zoology (1)
The Israel Science Foundation (1)
Evolution (1)
Developmental and Comparative Immunology (2)
Journal of Invertebrate Pathology (1)
Experimental Parasitology (1)
Journal of Parasitology (16)

LOWREY

American Journal of Botany (1)
Annals of Missouri Botanical Garden (1)
Conservation Biology (1)
Madrono (2)
Smithsonian Institution (1)
Systematic Botany (2)
National Science Foundation (30 proposals)

MARSHALL

Ecology (30)
Evolution (1)
American Journal of Botany (1)

MILNE

American Naturalist (2)
Ecology (1)
Landscape Ecology (5)
Columbia University Press (1)
NSF (3)
USDA (1)

MOLLES

Copeia (1)
Ecology (1)
JNAB (1)
NSF proposals (1)
Book chapter, McGraw-Hill (1)

NATVIG

Genetics (2)

NELSON

Genetics (1)
Proceedings of the National Academy of the Sciences (1)
Experimental Mycology (1)
NSF (1)

SNELL

NSF proposals (2)

STRICKER

Developmental Biology (4)

THORNHILL

Numerous journals in fields of psychology, anthropology and biology.

TOOLSON

Proceedings of the Royal Society (1)
Physiological Zoology (2)

VOGEL

Archives for Biochemistry (7)
Europ. J. Cell Biology (11)
Journal of Orthop. Research (4)
Journal of Cell Physiology (1)
Journal of Biol. Chem. (1)

WERNER-WASHBURNE

Experimental Cell Research (1)
Journal of Bacteriology (1)

YATES

Journal of Mammalogy (2)
Science (1)
Southwestern Naturalist (1)

III. GRANTS, EXTRAMURAL AND INTRAMURAL

A. SUBMITTED TO ALL AGENCIES IN 1994.

BARTON

"Indefinite Delivery Contract to Provide Services for the Army Environmental Policy Institute (AEPI) to Conduct Environmental Studies, Analysis and Evaluation in the Formulation of Proactive Policies and Strategies to Address Environmental Issues for the Department of the Army"; L.L. Barton, E. Nuttall, W. Lutza, R. Ewing, H. Jenkins-Smith and S. Heger, co-PIs; funds will depend on the task, 1994–98.

"Groundwater Remediation Work for the UMTRA Sites Tuba City, AZ and Shiprock, NM"; L.L. Barton, H.E. Nuttall, W. Lutze and B.M. Thomson, co-PIs; DOE, Albuquerque Office; $3,600,000, May 1994–May 1999.

"Development of Biosensors for Monitoring Environmental Waste Systems"; L.L. Barton and T. Ross, co-PIs; WERC/DOE at New Mexico State University; $120,000, 1994–96.

"Nitrogenase in Alfalfa is Influenced by Iron Metabolism of Root Nodule Bacteria"; L.L. Barton and D.O. Natvig, co-PIs; USDA; $183,921, 1995–98.

BROWN

"A BIO Research Training Group in Ecological Complexity"; J.H. Brown, PI; NSF; $1,700,000, 1995–99. Not awarded.

DUSZYNSKI

"Tropical Biology: What Are The Tropics and Why Are They In Trouble?"; D.W. Duszynski, PI; UNM-TAS; $3,600, Spring Semester 1994, submitted January 1994. Not funded.

"Tropical Biology: An Undergraduate Course To Support UNM's Hemispheric Initiative"; D.W. Duszynski, PI; Mutual of Omaha Programs in Ecology and Conservation; $11,172, submitted Fall Semester 1994 for Spring Semester Biol. 461L course. Pending.

"Sevilleta LTER II: Biome-Level Constraints on Population, Community and Ecosystem Responses to Climatic Fluctuation. Parasite Subproject"; B. Milne PI, J.H. Brown, J.W. Brundt, C.N. Dahm, D.W. Duszynski, A.S. Evans, D.C. Lightfoot, R.R. Parmenter, P.M. Rich, C.S. White, T.L. Yates, Co-PIs; NSF, BSR-8811906; $3,780,000, October 1994–September 2000.

"'Tropical Biology: What Are The Tropics & Why Are They In Trouble?', An Undergraduate Course To Support UNM's Hemispheric Initiative"; D.W. Duszynski, PI; Office of Biodiversity Programs, National Museum of Natural History, Smithsonian Institution, Washington DC; Submitted October 1994, $23,424. Pending.

"Molecular Systematics and Population Genetics of Parasitic Protozoans: A Model for the Use of the Random Amplified Polymorphic DNA Assay"; D.W. Duszynski, PI, J.A. Hnida co-PI; NSF Doctoral Dissertation Improvement Grant, DEB-9423462; $16,222, April 1995–April 1996. Pending.

"Historical Biodiversity of the Parasites of Small Mammals Collected on the Sevilleta National Wildlife Refuge, Socorro, New Mexico: 1989–2000"; D.W. Duszynski PI, M.D. Dailey, co-PI; NSF, DEB-9505025; $394,294, May 1995–May 1998. Pending.

"International Biological Expeditions (IBE)–UNM": Travel funds for Biology 461L–Tropical Biology students to Jamaica; D.W. Duszynski & students in the class, co-PIs; Associated Students of the University of New Mexico (ASUNM); Spring Semester 1994, $3,000. Funded.

"IBE–UNM": Travel funds for Biology 404L–Marine Invertebrate Lab students to Puerto Penasco, Sonora, Mexico; D.W. Duszynski & students in the class, co-PIs; Fall Semester 1994, $3,100. Funded.

JOHNSON, G.

"A Plant Growth Chamber for Research in Plant Physiology"; G.V. Johnson, PI; USDA; $8,575 (matching grant), July 1994–July 1995, $8,575/yr.

Matching funds from UNM (Dept. of Biology, College of Arts & Sciences, and Associate Provost for Research); $8,575, July 1994–July 1995, $8,575/yr.

LOKER

"The Role of Lectins in Snail-Trematode Associations"; E.S. Loker, PI; NIH; $185,819, December 1, 1993–November 30, 1994, $185,819 (non-competing continuation).

"Biology of Trematode-Snail Associations"; E.S. Loker, PI; NIH; $1,172,448, December 1, 1994–November 30, 1999, Year 1: $166,248, Year 2: $154,281, Year 3: $160,454, Year 4: $166,872, Year 5: $173,548.

LOWREY

"Genetic Variation in Rare Species of *Erigeron* in New Mexico"; T.K. Lowrey, PI; State of New Mexico; $5000.

"REU Supplement: Evolutionary Genetics of Adaptive Radiation in *Tetramolopium*"; NSF; $10,000.

MARSHALL

"Can Non-random Mating Result in Evolutionary Change?: A Selection Experiment Using Wild Radish as a Model System"; D.L. Marshall and A.S. Evans, co-PIs; NSF; $507,000, June 1, 1995–May 31, 2000.

"Can Non-random Mating Result in Evolutionary Change?: A Selection Experiment Using Wild Radish as a Model System"; D.L. Marshall and A.S. Evans, co-PIs; NSF; $518,246, July 1, 1995–June 30, 2000.

"Pollination and Post-pollination Effects on Non-random Mating in Wild Bladderpod, *Lesquerella fendleri*"; R.J. Mitchell and D.L. Marshall, co-PIs; NSF; $261,719, July 1, 1995–June 30, 1998.

"REU supplement to PYI award"; D.L. Marshall, PI; NSF; $2,812, June 1, 1994–March 31, 1995.

MILNE

"Supplement to Sevilleta LTER: Development of a Collaborative Research Program between Sevilleta and Jornada LTER Sites and the Mapimi MAB Research Station"; B.T. Milne, PI; NSF; $3,570, September 1, 1994–January 1995.

"A BIO Research Training Group in Ecological Complexity"; J.H. Brown, PI; NSF; $562,500, August 1995–August 2000.

"Sevilleta LTER II: Biome-Level Constraints on Population, Community and Ecosystem Responses to Climate Fluctuations"; B.T. Milne, PI; NSF; $3,780,000, October 15, 1994–October 14, 2000.

MOLLES

"The Effects of Annual Flooding on the Rio Grande Bosque: Bosque del Apache National Wildlife Refuge"; M.C. Molles, Jr. and C.S. Crawford, PIs; US Fish & Wildlife Service; $93,960; May 1993–April 1994.

"Experimental Flooding at Bosque del Apache National Wildlife Refuge, Rio Grande, New Mexico"; H.M. Valett, M.C. Molles, Jr., C.S. Crawford and M.E. Campana, PIs; NSFs; $599,687; April 1994–April 1997.

"Experimental Flooding at Bosque del Apache National Wildlife Refuge, Rio Grande, New Mexico"; H.M. Valett, M.C. Molles, Jr., C.S. Crawford and M.E. Campana, PIs; NSFs; $25,000; May 1994–May 1995.

"Interaction of Ecosystem Processes in the Rio Grande Basin"; M.C. Molles, Jr, PI; USDA Forest Service; $17,000; August 1994–August 1996.

"Riparian Ecosystem Restoration at the Bosque del Apache National Wildlife Refuge"; H.M. Valett, M.C. Molles, Jr., C.S. Crawford and M.E. Campana, Pis; NSF; $200,000; March 1995–March 1999.

NATVIG

"The Neurospora Genome Project at UNM: A Genome Characterization Training Program"; D.O. Natvig, PI, M.A. Nelson, M. Werner-Washburne and R. Miller, Co-PIs; NSF, RIMI; $499,961,1995–98.

NELSON

"The *Neurospora* Genome Project at UNM: A Genome Characterization Training Grant"; D.O. Natvig, PI, M.A. Nelson, M. Werner-Washburne and R.D. Miller, Co-PIs; NSF; May 1, 1995–April 30, 1998, $499,961.

SNELL

Renewals of:

"The Roles of Sexual and Natural Selection in the Evolution of Sexual Size-Dimorphism"; H.L. Snell and D.B. Miles, Co-PIs;. NSF; September 1993–December 1995, $202,000, approximately $67,000/yr.

"Status of *Sceloporus graciosus arenicolous* in the Mescalero Sands of Southeastern New Mexico"; H.L. Snell, W. Gorum, L. Fitzgerald, D. Sias and A. Landwer, Co-PIs; New Mexico Department of Game and Fish; May 1991–June 1995, $80,000.

STRICKER

"Calcium Dynamics during Marine Invertebrate Early Development"; S.A. Stricker, PI; NSF (Developmental Mechanisms); $246,772.

THORNHILL

"Fluctuating Asymmetry and Sexual Selection"; R. Thornhill and P. Watson, co-PIs; NSF; not awarded.

TOOLSON

"Thermal Physiological Ecology and Enzyme Adaptations of Cicadas"; E.C. Toolson, PI; NSF; not funded.

TRUJILLO

"A Minority Biomedical Research Support Grant"; J.L. Trujillo, Program Director; NIH; $3,238,951.

VOGEL

"Proteoglycan Structure, Metabolism and Role in Tendon"; K.G. Vogel, PI; NIH; $1,129,386; January 1, 1995–December 31, 1999, Year 1: $160,498.

Associate Investigator, Minority Biomedical Research Support Program; E. Goldberg, PI.

WERNER-WASHBURNE

"Characterization of a Novel, Stationary-phase Gene in the Yeast *Saccharomyces cerevisiae*"; M. Werner-Washburne, PI; $950,000 over 5 years; NSF; 1995-2000. Awarded.

"The Neurospora Genome Sequencing Program"; M. Werner-Washburne, Co-PI; $500,000 over 3 years; NSF, 1995-98. Pending.

"Minority Biomedical Research Opportunities at UNM"; M. Werner-Washburne, Co-PI; $3,200,000 over 5 years; NIH; 1995-2000.

YATES

"Surveillance and Monitoring of Hantavirus in wild rodent populations"; T.L. Yates, PI; Centers for Disease Control and Prevention; $173,000, February 1, 1994–September 30, 1994.

"Longitudinal studies of Hantavirus in wild rodent populations"; T.L. Yates. Centers for Disease Control and Prevention. $155,000. October, 1, 1994–September 30, 1996. $155,000/ year.

"Evolution and Speciation of New World Hantaviruses"; B.L. Hjelle and T.L. Yates, PIs; NIH; $725,244, July 1, 1995–June 30, 1998; $235,000/year.

"Phylogeny of Two Genera of South American Sigmodontine Rodents: The Evolution of South American Grasslands"; T.L. Yates and Jorge Salazar-Bravo, PIs; NSF; $20,750, November 1, 1994–October 31, 1996.

"Population Dynamics in Rodent Populations in Grants, New Mexico"; T.L. Yates, PI; Indian Health Service; $5,000, October 1, 1994–January 31, 1995.

"REU–Mammalian Diversity in Bolivia: The Yungas and Valle"; T.L. Yates, PI; NSF: $10,000, May 1, 1994–May 31, 1995.

"Sevilleta LTER, Round II"; B.T. Milne, M.C. Molles, T.L. Yates, et al.; NSF; $3,800,000, October 1, 1994–September 30, 2000, $633,000/ year.

B. AWARDED WITH 1994 INITIAL START DATE.

ALTENBACH

"Evaluation of Bat Use and Habitat in Abandoned Mines in New Mexico"; J.S. Altenbach, PI; New Mexico Department of Energy, Minerals and Natural Resources, Abandoned Minelands Bureau; $6,550, 1994–95.

"Cold Season Evaluation of the Mariscal Mercury Mine, Big Bend National Park, for Bat Use and Occupancy"; J.S. Altenbach, PI; National Park Service; $2,000.

"Monitoring of Period of Residence, Roost Site Choice and Food Habits of *Leptonycteris nivalis* and *Leptonycteris curasoae* in the Animas Mountains, Hidalgo Co., NM"; J.S. Altenbach, PI; Animas Foundation; $3,000.

BARTON

"Groundwater Remediation Work for the UMTRA Sites Tuba City, AZ and Shiprock, NM"; L.L. Barton, H.E. Nuttall, W. Lutze and B.M. Thomson, co-PIs; DOE, Albuquerque Operations Office; July 1, 1994.

"Development of Biosensors for Monitoring Environmental Waste Systems"; L.L. Barton and T.J. Ross, co-PIs; WERC/DOE at New Mexico State University; $120,000, 1994–96.

BROWN

"Anatomy of the Geographic Range: Spatial Variation in Abundance"; J.H. Brown, PI; NSF; $170,000, 1994–96.

"Sevilleta LTER"; B.T. Milne, PI; NSF; $3,780,000, 1994–2000.

DUSZYNSKI

"Training and Development of Minority Undergraduate Students in Environmental Biology"; R. Parmenter and J. Brunt, PIs, J. Brown, D.W. Duszynski, A. Evans, G. Johnson, T. Lowrey, D. Marshall, B. Milne and C. White, Co-PIs; NSF Proposal for Minority Undergraduate Research.

"Sevilleta Lter Ii: Biome-Level Constraints on Population, Community, and Ecosystem Responses to Climatic Fluctuation. Parasite Subproject"; NSF.

JOHNSON, G.

"A Plant Growth Chamber for Research in Plant Physiology"; G.V. Johnson, PI; USDA; $8,575 (matching grant), July 1994–July 1995, $8,575/yr.

Matching funds from UNM (Dept. of Biology, College of Arts & Sciences, and Associate Provost for Research); $8,575, July 1994–July 1995, $8,575/yr.

KODRIC-BROWN

"A Video-Imaging Technique for the Analysis of Mate Choice in Fishes"; A. Kodric-Brown, PI; NSF; $120,000, January 1994.

LOKER

"Biology of Trematode-Snail Associations"; E.S. Loker, PI; NIH; $973,132, December 1, 1994–November 30, 1999, direct costs as follows: Year 1: $137,986, Year 2: $128,055, Year 3: $133,176, Year 4: $138,504, Year 5: $144,044.

LOWREY

"REU Supplement: Evolutionary Genetics of Adaptive Radiation in *Tetramolopium*"; NSF; $10,000, June 1, 1994–August 31, 1994.

MARSHALL

"REU supplement to PYI award"; D.L. Marshall, PI; NSF; $2,812, June 1, 1994–March 31, 1995.

MILNE

"Sevilleta LTER II: Biome-Level Constraints on Population, Community and Ecosystem Responses to Climate Fluctuations"; B.T. Milne, PI; NSF; $3,780,000, October 15, 1994–October 14, 2000.

MOLLES

"The Effects of Annual Flooding on the Rio Grande Bosque: Bosque del Apache National Wildlife Refuge"; M.C. Molles, Jr. and C.S. Crawford, PIs; US Fish & Wildlife Service; $93,960; May 1993–April 1994.

"Experimental Flooding at Bosque del Apache National Wildlife Refuge, Rio Grande, New Mexico"; H.M. Valett, M.C. Molles, Jr., C.S. Crawford and M.E. Campana, PIs; NSFs; $599,687; April 1994–April 1997.

"Experimental Flooding at Bosque del Apache National Wildlife Refuge, Rio Grande, New Mexico"; H.M. Valett, M.C. Molles, Jr., C.S. Crawford and M.E. Campana, PIs; NSFs; $25,000; May 1994–May 1995.

"Interaction of Ecosystem Processes in the Rio Grande Basin"; M.C. Molles, Jr, PI; USDA Forest Service; $17,000; August 1994–August 1996.

"Riparian Ecosystem Restoration at the Bosque del Apache National Wildlife Refuge"; H.M. Valett, M.C. Molles, Jr., C.S. Crawford and M.E. Campana, Pis; NSF; $200,000; March 1995–March 1999.

TRUJILLO

"Site-directed Mutagensis of Human Liver Phosphofructokinase-1"; J.L. Trujillo, PI; Research Allocations Grant; $2,500.

YATES

"Surveillance and Monitoring of Hantavirus in Wild Rodent Populations"; T.L. Yates, PI; Centers for Disease Control and Prevention; $173,000, February 1, 1994–September 30, 1994.

"Longitudinal Studies of Hantavirus in Wild Rodent Populations"; T.L. Yates, PI; Centers for Disease Control and Prevention; $155,000, October 1, 1994–September 30, 1996, $155,000/year.

"Phylogeny of Two Genera of South American Sigmodontine Rodents: the Evolution of South American Grasslands"; T.L. Yates and J. Salazar-Bravo, PIs; NSF; $20,750, November 1, 1994–October 31, 1996.

"Population Dynamics in Rodent Populations in Grants, New Mexico"; T.L. Yates, PI; Indian Health Service; $5,000, October 1, 1994–January 31, 1995.

"REU–Mammalian Diversity in Bolivia: The Yungas and Valles"; T.L. Yates, PI; NSF; $10,000, May 1, 1994–May 31, 1995.

"Sevilleta LTER, Round II"; B.T. Milne, M.C. Molles, T.L. Yates, et al.; NSF; $3,800,000; October 1, 1994–September 30, 2000, $633,000/year.

C. IN FORCE FROM PREVIOUS YEARS.

ALTENBACH

"Evaluation of Bat Use and Habitat in Abandoned Mines in New Mexico"; J.S. Altenbach, PI; New Mexico Department of Energy, Minereals and Natural Resources, Abandoned Minelands Bureau; $5,000, 1993–94.

BACA

"Phosphatase as a Virulence Factor in Q fever"; O.G. Baca, PI; United States Public Health Service/National Institutes of Health, Grant No. RO1 AI 32492; $434,762 direct costs; 1993-96; approximately $144,000/year.

"Morbidity/Mortality in the Tome-Valencia-Peralta Area, Late 1700's through the 1940's"; O.G. Baca, PI; UNM's Center for Regional Studies; $18,500; 1991-94; average of $4,600/year.

BARTON

"Control of Uranium Migration by Microbial Action"; L.L. Barton and B.M. Thomson, co-PIs; WERC/DOE at New Mexico State University; $179,643, 1993–95.

"Application of Microbial Mats in the Construction of Barrier Systems for Management of Hazardous Wastes"; L.L. Barton, PI; Army Policy Institute, Champaign, IL; $120,000, 1993–94.

"Evaluation of Biocorrosion and Flocculation by ESEM"; L.L. Barton and Timothy Ross, co-PIs; WERC/DOE at New Mexico State University; $180,000, 1990–94.

BROWN

"Long-term Monitoring and Manipulation of the Desert Granivory System"; J.H. Brown, PI; NSF; $267,653, 1988–97.

"LTER Sevilleta"; J.R. Gosz, PI; NSF; $2,400,000, 1988–94.

"Regional Structure of Species Assemblages and Conservation of Small Mammals in South America" (Dissertation Improvement Award for Pablo Marquet); J.H. Brown, PI; NSF; $10,000, 1993–94.

DUSZYNSKI

"Ecological-Climatic Gradients on the Sevilleta National Wildlife Refuge-A Long Term Ecological Research (LTER) Site"; J.H. Brown, J.R. Gosz, B.T. Milne, M.C. Molles, PIs, D.W. Duszynski one of 12 co-PIs; NSF; $2,400,000, 1988–94, $400,000/yr. (finished September 1994).

"IBE-UNM" Travel Funds for biology students enrolled in Bio. 461L (Spring) and 404L (Fall) to participate in field trips to foreign countries; $6,100 awarded from ASUNM and another $2,400 awarded as scholarship money from Vice President O. Forbes' Office.

JOHNSON, C.

"Sevilleta Long Term Ecological Research (LTER)"; I am one of approximately 15 PIs; NSF; $2,400,000; October 1988–October 1994; $400,000/yr.

KERKOF

"Minority Access to Research Careers (MARC)"; A. Atencio and M. Garberina, PIs; National Institute of General Medical Science (NIGMS); total amount of award unspecified, June 1989–June 1994, $10,500.

LOKER

"The Role of Lectins in Snail-Trematode Associations"; E.S. Loker, PI; NIH; $185,819, December 1, 1993–November 30, 1994, $185,819 (Year 5, a non-competing continuation).

"The Impact of Crayfish on Schistosomiasis Transmission and Non-Target Organisms in Man-Made Habitats in Central Kenya"; E.S. Loker, PI; US Agency for International Development grant; $150,000, September 1993–September 1996.

LOWREY

"Evolutionary Genetics of Adaptive Radiation in *Tetramolopium*"; NSF; $222,739, July 1, 1992–June 30, 1995.

MARSHALL

"Confocal Microscope Facility"; S. Stricker, PI, E. Loker, D. Marshall, K. Vogel and M. Werner-Wasburne, Co-PIs; NSF; $179,000, October 1, 1992–September 31, 1995.

"Molecular Biology Facility"; M. Washburne, PI, E. Loker, D. Marshall, D. Natvig and M. Nelson, Co-PIs; NSF; $321,000, October 1, 1992–September 31, 1995.

"Presidential Young Investigator Award"; D.L. Marshall, PI; NSF; total NSF award, $290,000, minimum $25,000/year, $62,500 for 1994, 1989-94.

"Long-Term Ecological Research on the Sevilleta Wildlife Refuge"; one of 16 Co-PIs; NSF; $2,400,000, October 15, 1988–October 14, 1994.

MILNE

"LTER: Long Term Ecological Research on Ecological/Climatic Gradients on the Sevilleta"; B.T. Milne, PI; NSF; $3,021,751, October 15, 1988–December 31, 1994.

"Presidental Young Investigator Award"; B.T. Milne, PI; NSF; $199,000, July 15, 1990–July 14, 1995.

"Phase Transitions and Critical Phenomena in Woodland Ecotones"; B.T. Milne, PI, A. Johnson, Co-PI; NSF; $300,000, June 15, 1991–June 14, 1994.

"Fractal Indicators of Ecological Responses to Climate Change"; B.T. Milne, PI; Electric Power Research Institute; $112,500 matching for the PYI Award, January 1, 1992–December 31, 1994.

MOLLES

"The Ecological Effects of Introduced Plants: Do They Follow Established Ecological Principles?"; M.A.S. Graça and M.C. Molles, Jr., PIs; Junta Nacional de Investigação Cientifica e Tecnologica, Portugal; $40,000; 1992–1994.

"The Effects of Annual Flooding on the Rio Grande Bosque: Bosque del Apache National Wildlife Refuge; M.C. Molles, Jr. and C.S. Crawford, PIs; US Fish & Wildlife Service; $93,960; May 1993–April 1994.

NATVIG

"Establishment of a Molecular Biology Facility"; M. Werner-Washburne, PI, M.A. Nelson, D. Marshall, D. Natvig and E. Loker, Co-PIs; NSF, RIMI; $244,135, 1992–94.

NELSON

"Molecular Analysis of Sexual Development in Neurospora"; M.A. Nelson, PI; NIH; May 1, 1992–April 30, 1997, $519,578.

"Comparative Analysis of Mating and Meiotic Functions in the Filamentous Fungi, *Neurospora crassa* and *Podospora anserina*"; N.L. Glass, M.A. Nelson and M. Picard, Co-PIs; International Human Frontier Science Program Organization; September 1, 1992–August 31, 1995, $147,000 (amount of the award to M.A. Nelson).

"Establishment of a Molecular Biology Facility"; M. Werner-Washburne, M.A. Nelson, D. Marshall, D.O. Natvig and E.S. Loker, Co-PIs; NSF; September 15, 1992–September 14, 1995, $321,000.

"Molecular Analysis of Sexual Development in Neurospora (Minority Undergraduate Supplement)"; M.A. Nelson, PIs; NIH; June 15, 1994–May 30, 1995, $37,592.

RIEDESEL

"Physiological Responses to Tilt Bed with and without Countermeasures Post-Bedrest"; M.L. Riedesel, PI; NASA; $85,000, September 1992.

SNELL

"The Roles of Sexual and Natural Selection in the Evolution of Sexual Size-Dimorphism"; H.L. Snell and D.B. Miles, Co-PIs;. NSF; September 1993–December 1995, $202,000, approximately $67,000/yr.

"Status of *Sceloporus graciosus arenicolous* in the Mescalero Sands of Southeastern New Mexico"; H.L. Snell, W. Gorum, L. Fitzgerald, D. Sias and A. Landwer, Co-PIs; New Mexico Department of Game and Fish; May 1991–June 1995, $80,000.

STRICKER

"Confocal Microscope"; Stephen A. Stricker, PI, E. Loker, D. Marshall, K. Vogel and M. Werner-Washburne, Co-PIs; NSF, RIMI Program and Instrumentation and Instrument Development; $179,000, 1992-95.

VOGEL

"Proteoglycan Structure, Metabolism and Role in Tendon;" Kathryn G. Vogel, PI; NIH; Year 8: $177,038, extended without additional funds; September 23, 1985–August 31, 1996.

Howard Hughes Medical Institute—Undergraduate Education Program; $1,000,000; July 1992–June 1997.

WERNER-WASHBURNE

"Establishment of a Molecular Biology Facility"; M. Werner-Washburne, PI; NSF, HRD; $328,000 plus $300,000 in matching funds; September 15, 1992–September 14, 1995.

"Confocal Microscope Facility"; Steve Stricker, PI; NSF, HRD; $172,000 plus matching funds listed above; September 15, 1992–September 14, 1995.

"The Role of Gene Regulation in Starvation-Induced Arrest in the Yeast *Saccharomyces cerevisiae*"; M. Werner-Washburne, PI; Presidential Young Investigator Award, NSF; up to $500,000 for 5 years; July 1, 1990–June 30, 1995.

"The Role of Gene Regulation in Starvation-induced Arrest in the Yeast *Saccharomyces cerevisiae*"; M. Werner- Washburne, PI; NSF, DCB-9000556; $600,000, including supplements; November 15, 1989–April 30, 1995.

YATES

"Sevilleta LTER"; J.R. Gosz et al.; NSF; $2,400,000, October 1988–September 1994, $400,00/year.

"Mammalian Diversity in Bolivia: The Yungas and Valles"; T.L. Yates, PI; NSF; $340,000 (total including supplements), March 1990–May 31, 1995, $68,000/year.

"Evolutionary Relationships among Taxa of the Genus *Thylamys* (Marsupialia: Didelphidae) in Southern South America"; T.L. Yates and Eduardo Palma, PIs; NSF; $18,900, October 15, 1992–September 30, 1995.

"Response of Southwestern Montane Mammal Communities to Global Change"; T.L. Yates, PI; NBS; $250,000, October 1, 1993–September 30, 1998, $50,000/year.

"Genetic Analyses of Endangered Species: Mexican Voles"; T.L. Yates and J.K. Frey, PIs; Arizona Dept. of Game and Fish; $4,700, January 1, 1994–February 28, 1995.

IV. GRADUATE EDUCATION. *Include student's name, title of thesis or dissertation, semester awarded.*

A. MASTERS DEGREES AWARDED

BACA

Adam S. Aragon. "The Effect of Acid Phosphatase Inhibitors and a Synthetic Antimicrobial Peptide on *Coxiella burnetii*"; Fall 1994 (degree awarded through the Dept. of Microbiology where I have a joint appointment; the work was performed in my laboratory; I chaired the committee).

KERKOF

Argyres, Dean: MS II, May 1994

LOKER

DeGaffe, Guenet: "Mechanisms of Trematode-induced Interference: Correlating *in vitro* Assays with *In Vivo* Realities," 1994.

Boyce, Tracy: "The Use of a Geographic Information System (GIS) in ARC/INFO to Analyze the Distribution of the Human Schistosome-transmitting Snails in Kenya," 1994.

LOWREY

Chan, Raymund: "Phylogenetic Analysis of Sequence Variation in the ITS Region of rDNA in Hawaiian and Cook Island *Tetramolopium*," (Natvig, Co-chair), Fall 1994.

MILNE

Chong, Geneva: "Recommendations to Improve Revegetation Success in a Piñon-juniper Woodland in New Mexico: A Hierarchical Approach."

Tarbox, Sharon: defense held, but final document was incomplete.

MOLLES

Cox, Nancy: "The Effects of Human Traffic on Birds," Spring 1994.

NATVIG

Chan, Raymund: "Molecular Phylogenetic Relationship of Hawaiian *Tetramolopium* Species (Compositae) using DNA Sequence Data from the Internal Transcribed Spacer (ITS) Regions," (T. Lowrey, Co-chair), Fall 1994.

SNELL

Jordan, Mark: "The Relationship of Metabolic Rate to Body-mass in the Galápagos Land Iguana (*Conolophus subcristatus*)," Fall 1994.

TOOLSON

Gonzales, Rayna: "Effects of Gender and Body Temperature on Survival, Metabolic Rate and Ventilation in Hypoxic Rats," Fall 1994.

YATES

Zalles, Marcelo: "Survey of Bolivian Capybara (*Hydrochaeris hydrochaeris*): Conservation, Management and Variability," Spring 1994.

B. DOCTORS DEGREES AWARDED.

BROWN

Guo, Qinfeng: "Dynamic Desert Plant Community Ecology: Changes in Space and Time," Spring 1994.

Shepherd, Ursula: "Species Richness, Taxonomic Richness and Morphological Diversity: How Mammalian Communities Change Across Gradients of Elevation and Latitude in North America," Spring 1994.

DUSZYNSKI

Patrick, Michael J.: "Parasite Community Dynamics in the Kangaroo Rat, *Dipodomys merriami,*" December 1994.

GOSZ

Loftin, Samual R.: "Sewage Sludge Application to Semi-arid Grassland: Effects on Soil, Vegetation and Surface Hydrology, Fall 1994.

SNELL

Landwer, Allan: "The Cost of Reproduction in a New Mexico Population of the Tree Lizard, *Urosaurus ornatus*," Spring 1994.

WERNER-WASHBURNE

Stone, Brad: "Targeted RNA Fingerprinting: Cloning of Novel Differentially Expressed Zinc Finger Containing cDNAs," UNM Department of Cell Biology, Spring 1994.

YATES

Palma, Eduardo: "Historical Relationships of South American Mouse Opossums (Thylamys: Didelphidae): Evidence from Molecular Systematics and Historical Biogeography."

Frey, Jennifer K.: "Testing among Modes of Allopatric Speciation: A Hypothetico-deductive Approach."

C. BONA FIDE GRADUATE COURSES AND NUMBER OF STUDENTS ENROLLED. INDICATE NEW COURSES (FOR YOU) WITH AN ASTERISK.

BROWN

Spring:	Biol. 515F, Field Research in Biology, 15 students
Fall:	Biol. 511, Community Ecology, 24 students

DUSZYNSKI

Spring: Biol. 461L, Tropical Biology, 17 students
Fall: Biol. 404L, Marine Invertebrate Lab, 15 students

KERKOF

Spring: Biol. 549, Molecular Cell Biology II, 11 students
Fall: Biol. 502, St/Cell/Molecular Seminar, 3 students.

KODRIC-BROWN

Spring: Biol. 515F, Research in Field Ecology, 12 students
Fall: Biol. 521L, Advanced Behavioral Ecology, 6 students

LOKER

Spring: Biol. 480, Biology of Disease Vectors, 5 graduates
Fall: Biol. 402/502, Parasites and Hosts, 5 graduates

LOWREY

Spring: Biol. 521, Principles of Systematics, 12 students

MARSHALL

Spring: Biol. 502, Topicos En Biologia, 1 student
Biol. 568, Plant Reproductive Ecology, 7 students
Fall: Biol. 502, Topicos en Biologia, 2 students

MILNE

Spring: Biol. 576, Landscape Ecology & Macroscopic Dynamics, 6 students.

MOLLES

Spring: Biol. 507, Bosque Biology, 5 students
Fall: Biol. 507, Bosque Biology, 5 students

NATVIG

Spring: Biol. 402/502, Fungal Molecular Genetics, 5 students
Biol. 522, Molecular Biology and Evolution, 15 students
Fall: Biol. 446/546, Laboratory Methods in Molecular Biology, 16 students

NELSON

Spring: Biol. 402/502, Advanced Fungal Genetics, 7 students
* Biol. 402/502, Special Topics in Cell & Molecular Biology, 7 students
Fall: Biol. 402/502, Advanced Fungal Genetics, 6 students

RIEDESEL

Spring: Biol. 402/502, Space Physiology, 8 students.

SNELL

?? Biol. 402/502, Ecology Noon Seminar, 10 Students

STRICKER

Spring Biol. 547, Advanced Techniques in Light Microscopy, 10 students.

TOOLSON

Spring: * Biol. 502, Phylogenetics and the Comparative Method, 8 students.

TRUJILLO

Spring: Biol. 520, Energy and Metabolism, 12 Students

VOGEL

Spring: Biol. 582, Advanced Cell Biology, ~30 students [taught 3-week block on extracellular matrix].

WERNER-WASHBURNE

Fall: Biol. 444, Molecular Biology, 22 students (6 were graduate students)
Biol. 502, Advanced Fungal Genetics, Fall, 4 graduate students

YATES

Spring: Biol. 523, Advanced Systematics, 20 students.
Fall: Biol. 489, Mammalogy, 16 students
Biol. 502, Topic in Advanced Systematics, 6 students enrolled (many more attended)

D. NAMES OF 551, 599 AND 699 STUDENTS.

BARTON

Spring: Biol. 551, M. Alvarado-Zink, K. Choudhury, F. Jordan,
Fall: Biol. 551, K. Choudhury, F. Jordan, H.A. Noskin
Biol. 599, F. Jordan,
Biol. 699, H.A. Noskin

BROWN

Spring: Biol. 551, Brian Enquist
Biol. 699, Jean-Luc Cartron, Qinfeng Guo, Laura Gonzales-Guzman, Douglas Kelt, Dave Mehlman, Shahrouk Mistry, Ursula Shepherd, Rob Taylor
Summer: Biol. ???, Douglas Kelt
Fall: Biol. 699, Jean-Luc Cartron, Laura Gonzales-Guzman, Douglas Kelt, Dave Mehlman, Shahrouk Mistry, Rob Taylor

DUSZYNSKI

Spring: Biol.699, M.J Patrick; P.G. Wilber
Fall: Biol.551, J.A. Hnida
Biol.699, M.J. Patrick; P.G. Wilber

JOHNSON, G.

Spring: Biol. 551, Arlene R. Heilman (2)
Fall: Biol. 551, Arlene R. Heilman (2)

KERKOF

Spring: Biol. 551, Pat Dolan, Glenn Chaffee (2 Cr. Hr.), Fiona Jordan
Summer: Biol. 699, Pat Dolan
Fall: Biol. 699, Pat Dolan

KODRIC-BROWN

Spring: Biol. 551, D. Gray, K. Gordon
Biol. 699, S. Nordell
Fall: Biol. 551, D. Gray, M. Kiflavi
Biol. 699, S. Nordell, D. Tull

LOKER

Spring: Biol. 551, Barber, Sapp
Biol. 599, Boyce, DeGaffe

Summer:	Biol. 551, Barber, Sapp
	Biol. 599, Boyce, DeGaffe
Fall:	Biol. 551, Barber, Leonard, Sapp

LOWREY

Spring:	Biol. 599, R. Chan, S. Reed
	Biol. 699, P. Barlow
Fall:	Biol. 551, C. Frazier, K. Conwell
	Biol. 599, R. Chan, S. Reed
	Biol. 699, P. Barlow

MARSHALL

Spring:	Biol. 551, Anna Sher
	Biol. 599, Toby Bennett
	Biol. 699, Bob Cabin
Fall:	Biol. 551, Anna Sher
	Biol. 599, Toby Bennett
	Biol. 699, Bob Cabin

MILNE

Fall:	Biol. 599, S. Tarbox & P. Hraber
	Biol. 699, S. Grogan, C. Hatfield, T. Keitt, Y. Marinakis
Summer:	Biol. 699, S. Grogan & Y. Marinakis

MOLLES

Spring:	Biol. 599, James Daly, Nancy Cox
Fall:	Biol. 551, Keith Gido
	Biol. 599, Keith Gido
	Biol. 699, Tad Crocker

NATVIG

Fall:	Biol. 551, James Baldwin, Kenneth Sylvester
	Biol. 699, William Dvorachek
Spring:	Biol. 699, William Dvorachek

NELSON

Spring:	Biol. 551, James Baldwin
	Biol. 599, Sandra T. Merino
Summer:	Biol. 551, James Baldwin
Fall:	Biol. 551, James Baldwin, Sandra T. Merino, Kenneth Sylvester

SNELL

Spring:	Biol. 551, Donald Sias
	Biol. 599, Marco Altamirano, Lee Pierce
	Biol. 699, Paul Stone
Fall:	Biol. 551, Marco Altamirano, Thalia East Grant, Mark Jordan, Lee Pierce, Donald Sias
	Biol. 599, Mark Jordan
	Biol. 699, Paul Stone

STRICKER

Spring:	Biol. 599, Kenneth L. Conwell, II
Fall:	Biol. 599, Kenneth L. Conwell, II

TOOLSON

Spring:	Biol. 551, Rayna Gonzales, Todd Thompson
	Biol. 559, Patricia Ashby, John Roach
Fall:	Biol. 551, Todd Thompson
	Biol. 559, Patricia Ashby, Rayna Gonzales, John Roach

TRUJILLO

Spring:	Biol. 551, Lara Hays
	Biol. 599, Edwin Weeber
Fall:	Biol. 551, Lara Hays
	Biol. 599, Edwin Weeber

VOGEL

Spring:	Biol. 699, James Robbins
Fall:	Biol. 699, James Robbins

WERNER-WASHBURNE

Spring:	Biol. 551, Ed Braun
	Biol. 699, Edward Braun
Fall:	Biol. 551, Pam Padilla

YATES

Fall:	Biol. 551, Jorge Salazar, Morgan Ernest
	Biol. 599, Jennifer Miyashiro
	Biol. 699, Forest Davis, Jennifer Frey, Eduardo Palma
Summer:	Biol. 551, Heather Smith

Spring: Biol. 551, Jorge Salazal, Marcelo Zalles
Biol. 599, Carol Malcolm, Jennifer Miyashiro, Travis Perry, Marcelo Zalles
Biol. 699, Forest Davis, Jennifer Frey, Eduardo Palma

E. YOUR SERVICE ON GRADUATE STUDENT COMMITTEES, NOT AS CHAIR, IN SEMESTER ORAL EXAM WAS GIVEN.

BARTON

P. Reimus, Department of Chemical Engineering, UNM
M. Tucker, Department of Civil Engineering, UNM
A. Shah, Department of Civil Engineering, UNM

BROWN

Six.

DUSZYNSKI

Spring: Tracey Boyce (Loker), Guenett DeGaffe (Loker); L. Marcello Zalles (Yates)

JOHNSON, C.

Fall: Loftin, Samuel R. "Sewage Sludge Application to Semiarid Grasslands: Effects on Soil, Vegetation, and Surface Hydrology."

Note: I was not Sam Loftin's dissertation advisor; however, I served as the committee chair for the final examination.

Summer: Chong, Geneva, MS
Fall: Tarbox, Sharon, MS

MILNE

Summer: Loftin, Samuel R.

MOLLES

Spring: Sandy Brantley

NATVIG

Spring: Daniel Kim (Cell Biology, UNM Medical School), M.S. defense
Summer: Jennifer Frey (Biology), Ph.D. defense
Spring: Ed Braun (Biology), Ph.D. comprehensive

NELSON

Spring: Edward Braun, Doctoral Comprehensive Exam
William Dvorachek, Doctoral Comprehensive Exam
Fall: Patricia Dolan, Doctoral Comprehensive Exam
Raymund Chan, Master's Examination

STRICKER

Dean Argyres, Department of Biology, M.S. II exam.
Yue-mei Geng, Department of Biology, oral exam.
Michael Kempe, Department of Physics, Ph.D. exam.
Fritz Thurmond, Department of Anatomy, Ph.D. exam.

TOOLSON

Jordan, Mark, MS

TRUJILLO

Fall: Scott Roberts, Exercise Physiology

VOGEL

Summer: Guenet De Gaffe, M.S. (exam, June 1994)

YATES

Laura Gonzales, Comps
Patricia Wibur, Comps

F. PROFESSIONAL ACCOMPLISHMENTS AND AWARDS OF YOUR GRADUATE STUDENTS, EXCLUSIVE OF THOSE ON WHICH YOU WERE A CO-AUTHOR OR PARTICIPANT.

BROWN

DOUG KELT: American Society of Mammalogists' Shadle Fellowship.

DUSZYNSKI

JOHN A. HNIDA:
Presentations: Wilson, W.D., J.A. Hnida and D.W. Duszynski. Parasites of mammals on the Sevilleta National Wildlife Refuge, Socorro, New Mexico: *Cuterebra* spp. (Diptera: Cuterebridae) from *Neotoma and Peromyscus*. Presented at the 70th Annual Meeting, American Society of Parasitologists, Ft. Collins CO, August 11, 1994.

Publications: • Fitzgerald, L. and J.A. Hnida. 1994. Blood from a stone, or retrieval of urine from dik dik for hormone analysis. Animal Keepers' Forum 21:161-163.
• Fitzgerald, L. and J.A. Hnida. 1994. Detection of estrus in Gunther's dik dik (*Madoqua guentheri*) through urinary hormone analysis and behavioral observation. Animal Keepers' Forum 21:201-207.
• Wilber, P.G., J.A. Hnida, M.J. Richard and D.W. Duszynski. 1994/5. *Caryospora simplex* (Apicomplexa: Eimeriidae) from a captive Kaznakov's viper (*Vipera kaznakovi*). Journal of Wildlife Diseases 30: Accepted, in press.

Grants Submitted/Funded: • NSF Doctoral Dissertation Improvement Grant, DEB-9423462, "Molecular Systematics and Population Genetics of Parasitic Protozoans: A Model for the Use of the Random Amplified Polymorphic DNA Assay." Pending.
• OGS Research Grant, "Molecular Systematics and Population Genetics of Parasitic Protozoans: A Model for the Use of the Random Amplified Polymorphic DNA Assay." $1,000, Funded.
• SRAC & RAC Grants, "Molecular Systematics and Population Genetics of Parasitic Protozoans: A Model for the Use of the Random Amplified Polymorphic DNA Assay." $300, Funded.

Professional Meetings Attended: • ASP, Colorado State University, Ft. Collins CO, August 9-13, 1994.
• SWAP, University of Oklahoma Biological Station, Lake Texoma OK, April 21-23, 1994.

Honors, awards, scholarships: • Scholarship ($600), Tropical Biology Field Trip, Biol. 461L.
• Outstanding TA, Fall Semester 1993 (honor received in 1994), UNM Biology.
• Outstanding Recognition Award, American Association of Zoo Keepers, Certificate of Excellence Award for best scholarly article published in Animal Keepers' Forum in 1994 (for article in 21(6):201-207).

MICHAEL PATRICK:

Presentations: Patrick, M.J. Worms in desert mammals. Presented at the 70th Annual Meeting, American Society of Parasitologist, Ft. Collins CO, August 11, 1994.

PATRICIA G. WILBER:

Presentations: • Wilber, P.G. Patterns of parasite infection in Townsend's ground squirrel (*Spermophilus townsendii*) during and following drought. Presented at Third Annual Research Day, Department of Biology, UNM, April 8, 1994.
• Wilber, P.G. Patterns of helminth infection in Townsend's ground squirrels (*Spermophilus townsendii*) following drought. Presented at Annual Meeting of the Southwestern Association of Naturalists, Emporia KS, April 21-24, 1994.
• Wilber, P.G. and D.W. Duszynski. Patterns of parasite infection in Townsend's ground squirrels (*Spermophilus townsendii*) during and following drought. Presented at the 70th Annual Meeting, American Society of Parasitologists, Ft. Collins CO, August 11, 1994.
• Wilber, P.G. and D.W. Duszynski. The effect of parasites on Townsend's ground squirrels at the Snake River Birds of Prey Area, Idaho. Presented at the Annual Meeting of the Wildlife Society of America, Albuquerque NM, September 21-25, 1994.

Publications: • Wilber, P.G., M.J. Patrick and B. Van Horne. 1994/5. Helminth infections in the Townsend's ground squirrel during drought. Journal of the Helminthological Society of Washington 61: Accepted, in press.
• Wilber, P.G., J.A. Hnida, M.J. Richard and D.W. Duszynski. 1994/5. *Caryospora simplex* (Apicomplexa: Eimeriidae) from a captive Kaznakov's viper (*Vipera kaznakovi*). Journal of Wildlife Diseases 30: Accepted, in press.
• Wilber, P.G., B. Hanelt, B. VanHorne & D.W. Duszynski. 1994. Two new species and temporal changes in the prevalence of eimerians in a free-living population of Townsend's ground squirrels (*Spermophilus townsendii*) in Idaho. Journal of Parasitology 80:251-259.
• Wilber, P.G., K. McBee, D.J. Hafner, D.W. Duszynski. 1994. A new coccidian (Apicomplexa: Eimeriidae) in the northern pocket gopher (*Thomomys talopides*) and a comparison of oocyst survival rates in hosts from radon-rich vs. radon poor soils. Journal of Wildlife Diseases 30:359-364.
• Wilber, P.G., D.W. Duszynski and B. Van Horne. The parasite community of Townsend's ground squirrels. Snake River Birds of Prey Annual Report, 1994, for the Bureau of Land Management. Pp. 226-232.

Honors, Awards, Scholarships: Second place, Best Student Paper Award, Third Annual Research Day, Department of Biology, UNM, April 8,1994.

WADE D. WILSON:

Presentations: Wilson, W.D., J.A. Hnida and D.W. Duszynski. Parasites of mammals on the Sevilleta National Wildlife Refuge, Socorro, New Mexico: *Cuterebra* spp. (Diptera: Cuterebridae) from *Neotoma and Peromyscus*. Presented at the 70th Annual Meeting, American Society of Parasitologists, Ft. Collins CO, August 11, 1994.

Publications: Hertel, L.A., S.A. Stricker, F.P. Monroy and W.D. Wilson. 1994. *Biomphalaria glabrata* hemolymph lectins: Binding to bacteria, mammalian erythrocytes, and to sporocysts and rediae of *Echinostoma paraensei*. Journal of Invertebrate Pathology 64:52-61.

KERKOF

PATRICIA DOLAN (a Ph.D. student in my laboratory): received a $48,000, three-year award from the Graduate Studies Office of the UNM Graduate School.

LOKER

KELLI SAPP: Outstanding TA, Fall 1994.

LOWREY

PATRICIA BARLOW: Attended Second International Compositae Symposium, Royal Botanic Gardens, Kew, London, England, July 1994.

MARSHALL

ROBERT CABIN: Won second place poster award at UNM Dept. of Biology Third Annual Research Day. Presented a paper at the 1994 meeting of SSE.

ANNA SHER: Poster presentation, UNM Dept. of Biology Third Annual Research Day.

TOBY BENNETT: Poster presentation, UNM Dept. of Biology Third Annual Research Day.

MILNE

G. CHONG (1), C. HATFIELD (2) & T. KEITT (2): presentations at national meetings.
T. KEITT: Participation in the Habitat Recovery Team for the Mexican Spotted Owl.

NATVIG

WILLIAM DVORACHEK: comprehensive exam, Spring.
RAYMUND CHAN: M.S. defense, Spring.

KEN SYLVESTER: "Phenotype of DNA repair/oxidatively stressed double mutant in *Neurospora crassa*," UNM Department of Biology Third Annual Research Day, April 1994.

WILLIAM DVORACHEK: "Construction of an sod-2 mutant strain of Neurospora crassa," UNM Department of Biology Third Annual Research Day, April 1994.

NELSON

SANDRA T. MERINO: Awarded a Patricia Roberts Harris Fellowship (stipend of $10,000/year, tuition & additional sums for educational expenses)

TOOLSON

PATRICIA ASHBY: Outstanding TA award

RAYNA GONZALES: First Place, Third Annual Research Day Poster Presentations, UNM Department of Biology, April 1994.

TRUJILLO

EDWIN WEEBER: Patricia Harris Fellowship (Stipend)

YATES

JORGE SALAZAR:
Papers Presented: Research Day; American Society of Mammalogists annual meeting, Washington, D.C.; Southwestern Association of Naturalists annual meeting, Emporia, Kansas.
Paper Published: Salazar, J., M.L. Campbell, S. Anderson, S.L. Gardner, and J.L. Dunnum. New records for Bolivian mammals. Mammalia, 58(1): 125-130.
Grants & Awards:
NSF Dissertation Improvement grant, $20,750.
Latin American Institute Field research Grant, $1,800.

Second Best Proposal, American Society of Mammalogists, $1,000.
Award, Office of Graduate Studies, $1,000.
Judged second best student oral presentation, Research Day.

JENNIFER K. FREY:
Papers presented (two eclusive of my name): the National mammal meetings in Washington DC and at the SWAN meetings in Emporia KS.
Papers Published: • Frey, J.K. and F.C. Bermudez. 1994. Cordilleran flycatchers nesting within a cave. New Mexico Ornithological Society Bulletin, 22: 23-24.
• Childs, J.E., T.G. Ksiazek, C.F. Spiropoulou, J.W. Krebs, S. Morzunov, G.O. Maupi, K.L. Gage, P.E. Rollin, J. Sarisky, R.E. Enscore, J.K. Frey, C.J. Peters and S.T, Nichol. 1994. Serologic and genetic identification of Peromyscus maniculatus, as the primary reservoir for a new Hantavirus in the Southwestern United States. Journal of Infectious Diseases, 169: 2171-2180.

TRAVIS PERRY
Papers presented: • the National Mammal meetings, Washington DC; • the Southwestern Association of Naturalists, Emporia KS; • the Southwestern Association of Biologists, Ghost Ranch NM, September 1994.

EDUARDO PALMA
Paper presented: American Society of Mammalogists, Washington, D.C.
Post-Doctoral Award received, $37,500/year, two years, Department of Genetics, University of Chile, Santiago, Chile. Funding agency: CONICYT.

V. UNDERGRADUATE EDUCATION.

A. BONA FIDE UNDERGRADUATE COURSES YOU TAUGHT EACH SEMESTER AND NUMBER OF STUDENTS ENROLLED. INDICATE NEW COURSE (FOR YOU) WITH AN ASTERISK.

ALTENBACH

Spring:	* Biology 121, Principles of Biology, 250 students
	Biology 435L, Animal Physiology, 35 students
Fall:	Biology 121, Principles of Biology, 450 students

BACA

Spring:	Biol. 239, Microbiology for the Health Sciences, 124 students
Fall:	Biol. 239, Microbiology for the Health Sciences, 124 students

BARTON

Spring:	Biol. 350L, General Microbiology, 96 students
Fall:	Biol. 350L, General Microbiology, 96 students

0405

BOURNE

Spring: Biol. 237, Human Anatomy and Physiology I, 251 students
Biol. 238, Human Anatomy and Physiology II, 271 students
Biol. 416, Histology, 51 students
Fall: Biol. 237-001, Human Anatomy and Physiology I, 244 students
Biol. 237-002, Human Anatomy and Physiology I, 145 students
Biol. 238-001, Human Anatomy and Physiology II, 144 students

BROWN

Spring: Biol. 494, Biogeography, 75 students

DUSZYNSKI

Spring: Biol.382L, Introductory Parasitology, 14 students

JOHNSON, C.

Spring: Biol. 478, Plant Physiology, 9 students
Biol. 478L, Plant Physiology Laboratory, 9 students
Fall: Biol. 440, The Soil Ecosystem, 9 students
Biol. 440L, The Soil Ecosystem Laboratory, 9 students

JOHNSON, W.

Spring: Biol. 123, Biology for Health-Related Sciences & Non-Majors, 137 students
Biol. 221, Introductory Genetics, 92 students
Biol. 222-001, Introductory Genetics Problems, 11 students
Biol. 222-002, Introductory Genetics Problems, 13 students
Fall: Biol. 221, Introductory Genetics, 96 students
Biol. 223L-001, Introductory Genetics Laboratory, 19 students
Biol. 223L-002, Introductory Genetics Laboratory, 19 students
Biol. 222, Introductory Genetics Problems, 23 students
Biol. 428, Human Heredity, 33 students

KERKOF

Spring: Biol. 449, Molecular Cell Biology, 43 students
Biol. 439L, Molecular Cell Biology Lab., 14 students
Summer: Biol. 439L, Molecular Cell Biology Lab., 10 students
Fall: Biol. 429, Molecular Cell Biology, 135 students

KODRIC-BROWN

Spring: Biol. 455, Ethology/Animal Behavior, 47 students
Biol. 457L, Ethology/Animal Behavior Lab, 12 students

LOKER

Spring:	Biol. 402/502, Parasites and Hosts, 2 undergraduates
	Biol. 480, Biology of Disease Vectors, 8 undergraduates
Fall:	Biol. 371, Invertebrate Zoology, 31 students

LOWREY

Spring:	Biol. 122, Principles of Biology, 200 students
	Biol. 461L, Introduction to Tropical Biology, 18 students
Fall:	Biol. 363, Flora of New Mexico, 29 students

MARSHALL

Spring:	Biol. 402, Topicos en Biologia, 3 students
	Biol. 468, Plant Reproductive Ecology, 4 students
Fall:	* Biol. 260, Introductory Botany, 33 students

MILNE

Fall:	Principles of Ecology (Biol. 200), 24 students

MOLLES

Spring:	Biol. 122, Principles of Biology, 200 students
	Biol. 407, Bosque Biology, 18 students
Fall:	Biol. 407, Bosque Biology, 18 students
	Biol. 487, Ichthyology, 20 students

NATVIG

Spring:	Biol. 402, Seminar for Hughes undergraduate researchers, 6 students
	Biol. 402/502, Fungal Molecular Genetics, 5 students
Fall:	Biol. 446/546, Laboratory Methods in Molecular Biology, 16 students

NELSON

Spring:	* Biol. 425, Molecular Genetics, 33 students
	* Biol. 402/502, Special Topics in Cell and Molecular Biology, 7 students
	Biol. 402/502, Advanced Fungal Genetics, 7 students
Fall:	Biol. 221, Introductory Genetics, 130 students
	Biol. 402/502, Advanced Fungal Genetics, 6 students

RIEDESEL

Spring:	Biol. 430, Vertebrate Physiology, 37 students
Fall:	Biol. 430, Vertebrate Physiology, 35 students

0407

SHELL

Fall:	Biol. 122, Principles of Biology, 150 students
	Biol. 379, Conservation Biology, 50 students

STRICKER

Spring:	Biol. 412, Developmental Biology, 64 students
Fall:	Biol. 121-001 & -002 (Principles of Biology) for the first half of the semester, 700 total students

THORNHILL

Spring :	Biol. 365, The Evolution of Human Sexuality, 135 students
Fall:	Biol. 190, Human Nature: The Darwinian Conception, 35 students

TOOLSON

Spring:	Biology 122 , Principles of Biology, 400+ students
Fall:	Biology 435L, Animal Physiology, 38 students

TRUJILLO

Spring:	Biol. 497, Principles of Gene Manipulation, 34 Students
Fall:	Biol. 452, Vertebrate Endocrinology, 24 Students

VOGEL

Spring:	Biol. 402, Seminar Topics/Proteoglycans, 5 students
Fall:	Biol. 402, Seminar Topics/Proteoglycans, 3 students
	Biol. 456, Immunology, 90 students

WERNER-WASHBURNE

Spring:	Biol. 229, Principles of Cell Biology, 58 students
Fall:	Biol. 402, Advanced Fungal Genetics, 4 undergraduate students
	Biol. 444, Molecular Biology, 16 undergraduates

YATES

Fall	Biol. 489L, Mammalogy, 16 students

B. NAMES OF BIOLOGY 400 AND 499 STUDENTS YOU SUPERVISED.

BARTON

Spring:	Biol. 400, M. Laughlin
	Biol. 499, M. Hankins
Fall:	Biol. 400, M. Laughlin
	Biol. 499, K.D. Schitoskey, R.G. Short

DUSZYNSKI

Spring:	Biol. 499, B.A. Wickesberg (3 hrs)
Fall:	Biol. 499, R.L. Saiers (2 hrs)

JOHNSON, C.

Summer:	Steven Aeschliman (1 credit)
Fall:	Michael Burckley (2 credits), Meggie Randall (1 credit)

JOHNSON, W.

Spring:	Biol. 499, Kristen E. Sharp
Fall:	Biol. 499, Moira L. Finley

KERKOF

Spring:	* Biol. 499, Eric Thomas, 3 Cr. Hr., Research in Med. School
Summer:	* Biol. 499, Stoney Case, 3 Cr. Hr., Research in Med. School
	* Biol. 499, James Hamilton, 3 Cr. Hr., Forensics Unit, APD
Fall:	Biol. 499, Sarah Higgs, 2 Cr. Hr.
	* Biol. 499, Victor Ulibarri, 3 Cr. Hr., Research in Med. School

KODRIC-BROWN

Spring:	Biol. 499, A. Adams

LOKER

Spring:	Biol. 499, Mauldin
Fall:	Biol. 400, Meyer
	Biol. 499, Hanelt

LOWREY

Spring:	Biol. 499, Jona Goucher

MARSHALL

Spring: Biol. 400, Joy Avritt

Joy won first-place poster at UNM Dept. of Biology Third Research Day, an award from the Iris Society, and was named ab outstanding graduating senior in Biology.

MILNE

Fall: Biol. 499, M. Bertram & Sandra Brantly.
Spring: Biol. 499, 2 students (Independent study with me in lieu of Biol. 401L [Biometrics], which had too few students to make enrollment requirements.)

MOLLES

Spring: Niels Hobbs, Harold Medina

NATVIG

Fall: Biology 499, Keith Kolozsy

NELSON

Spring: Biol. 400, Rachel Palmer
Biol. 499, Gregory Duran, Kirsten Green, Julie Anne Knight
Summer: Biol. 400, Tae-Hee Rosa Kim
Fall: Biol. 400, Tae-Hee Rosa Kim, Rachel Palmer
Biol. 499, Maysoun Assed, Julie Anne Knight, Lisa Oldrup

SNELL

Spring: Biol. ???, Billy Gorum
Fall: Biol. 499, Billy Gorum

THORNHILL

Spring: Biol. 499, Wayne Honilla
Summer: Biol. 499, Bryant Furlow, Wayne Honilla
Fall: Biol. 499, Steve Aeschliman, Dee Dee Brown, B. Furlow, Otto Han, Donny Johnson

TOOLSON

Spring: Biol. 499, Anne Lee
Fall: Biol. 499, Anne Lee, Peter Bockhorst

TRUJILLO

Spring:	Biol. 499, Annabelle Allison, Mattison Davis, Cyra Ann Franco, Theresa Marie Garduno, Susan Adele Oakes, Annette Padilla
Fall:	Biol. 499, Julian Thomas Pierce, Mark Daniel Schor, Kevin Thurman Vicenti, Rebecca Deme Vasilion

VOGEL

Spring:	Biol. ??, Jason Moran
	Biol. ??, Sean Quigley
Summer:	Biol. ??, Matthew Berenson
	Biol. ??, Daniel Hsu
	Biol. ??, Jason Moran
	Biol. ??, Sean Quigley
Fall:	Biol. ??, Sean Quigley
	Biol. ??, Jason Moran
	Biol. ??, Rosemary Castorina
	Biol. ??, Sarah Beers
	Biol. 499, Carrie Gurule (with Carolyn Mold)

WERNER-WASHBURNE

Spring:	Biol. 499, Don Benn, Elizabeth Diaz-Strandberg, Maria Gomez, Peggy Rodriguez, Sudhita Subbarao, April Maritinez
Fall:	Biol. 499, Maria Gomez, Katherine Skenendore

YATES

Spring:	Biol. 400, Suzanne Perauch (graduated with honors Spring, 1994)
??:	Biol. 499, Jerome Stewart, Jane Taylor

VI. DEPARTMENTAL HIGHLIGHTS.

A. SYMPOSIA, WORKSHOPS, CONFERENCES, ETC., SPONSORED, HOSTED, ORGANIZED.

SNELL

Organized the Symposium of the Charles Darwin Foundation for the Galápagos Islands "Conservation and Research in the Galápagos," held in Quito, Ecuador, November 1994.

WERNER-WASHBURNE

Brought 12 students from Navajo Community College for Research Day.

Hosted Math Deomonstration Day for NCC science honors program.

Set up molecular biology workshops for students and study groups for several classes.

B. INDIVIDUAL HONORS: AWARDS, PRIZES, FELLOWSHIPS, LECTURESHIPS, TEACHING DISTINCTION, ETC.

BACA

President, American Society for Rickettsiology & Rickettsial Diseases (elected).

BROWN

Awarded the second Joseph Grinnell Medal, Museum of Vertebrate Zoology, University of California-Berkeley; and gave an address at award ceremony, October 22, 1994.

DUSZYNSKI

Nominated by Dr. John O. Corliss to fill a vacancy as Commissioner on the International Commission of Zoological Nomenclature, February 1994; letter from P.K. Tubbs, Executive Secretary ICZN, confirming my candidacy, June 1992. Pending.

Feature article written by Sherry Robinson in the Fall 1994 issue of Mirage (UNM Alumni Association) entitled, "Tropics Topics: Paradise Lost," which featured the uniqueness of my Tropical Biology course.

In August 1994, UNM selected my Tropical Biology course (Biol. 461L) as the only UNM course description submitted to the National Association of State Universities and Land Grant Colleges (NASULGC). My course was included in a NASUGLC Report to Congress, the media, and other NASULGC institutions on "How Our Member Universities and Colleges Are Making Strides in Expanding the Ways Science Is Taught to Undergraduate Students on Our Campuses, Are Improving Science Literacy for Non-majors and Creating a New Populations of Citizens with Greater Science Awareness."

LOKER

UNM Regent's Lecturer, 1994-97

1994 Blankenbaker Lecturer, Department of Veterinary Molecular Biology, Montana State University

WERNER-WASHBURNE

Alumni Foundation Award for Teaching and Service to Students

Elected to Society for Advancement of Chicanos and Native Americans in the Sciences (SACNAS) board of directors.

C. DISTINGUISHED DEPARTMENTAL VISITORS YOU HOSTED.

BARTON

Edward Laishley, Department of Biology, University of Calgary, Alberta, Canada.
Judy Bender, Department of Biology, Clark-Atlanta University, Atlanta GA.
Peter Phillips, Department of Biology, Clark-Atlanta University, Atlanta GA.
Francisco Tomei Torez, Army Environmental Policy Institute, Atlanta GA.

BROWN

Dr. Craig Benkman, Professor, Department of Biology, New Mexico State University.
Dr. Dolph Schluter, Department of Surgery, University of British Columbia.
Dr. Jerry Franklin, University of Washington.

DUSZYNSKI

Dr. Carolyn Roberts, Associate Dean, College of Veterinary Medicine, Kansas State University, Manhattan KS, March 30, 1994.

Dr. Brad Smith, Associate Dean, College of Veterinary Medicine, Oregon State University, Corvallis OR, October 24, 1994.

Dr. Janice K. Moore, Department of Biology, Colorado State University, Ft. Collins CO, Departmental Seminar Speaker, January 24-25, 1994.

Dr. Ghery Pettit, Associate Dean, College of Veterinary Medicine, Washington State University, Pullman WA, September 21, 1994.

JOHNSON, C.

Dr. David Wing, Departemnt of Biology, New Mexico Tech, February 18, 1994.
Dr. Stephen Sain, Albuquerque NM, September 16, 1994.

KERKOF

Dr. Jamshed R. Tata, National Institute for Medical Research, London, England, February 1994.

LOKER

Dr. Alice R. Wattam, Department of Entomology, University of Arizona AZ.
Dr. Matty Knight, Biomedical Research Institute, Bethesda MD.

MILNE

Prof. Richard Forman, Harvard University.

Organized US itinerary for Dr. Bert Harms, Director, & Dr. Jan Klijn, Associate Director, Institute for Nature Management, Wageneigen, The Netherlands.

MOLLES

Dr. Charles Hawkins, Department of Fisheries & Wildlife, Utah State University, Logan UT, deparmental seminar on "Influence of an Herbivore on the Long-Term Dynamics of Stream Communities."

NELSON

Dr. Dennis Vik, Department of Microbiology, UNM, February 25, 1994.
Dr. Linda Saland, Department of Anatomy, UNM, March 4, 1994.
Dr. David Chen, Los Alamos National Laboratories, March 25, 1994.

WERNER-WASHBURNE

Dr. Judith Jaehnning, Professor, University of Colorado Health Sciences, Denver CO.

YATES

Many, including Dr. Vicki Funk, Smithsonian Institution; Dr. David Hillis, University of Texas at Austin; Dr. John Kirsh, University of Wisconsin at Madison; Dr. Sydney Anderson, American Museum of Natural History.

D. MUSEUM CURATOR, UNDERGRADUATE ADVISOR, ASSISTANT CHAIR, EM DIRECTOR, ETC.

BACA

Graduate Student Advisor

BARTON

Director of Media Prep and Cell Center for micorbiology classes.

DUSZYNSKI

Founder and Treasurer, Biological Society of New Mexico
Departmental Advisor, Pre-veterinary medicine

JOHNSON, C.

Undergraduate Advisor

JOHNSON, W.

Transfer Student Advisor

KODRIC-BROWN

Associate Chair

LOWREY

Curator, UNM Herbarium, Museum of Southwestern Biology

MILNE

Undergraduate research project advisor for M. Chavez

MOLLES

Curator, Ichythyology Division, Museum of Southwestern Biology
Associate Chair, Fall 1994
Undergraduate Advisor

NATVIG

Faculty advisor to the Biology Club

SNELL

Curator of the Herpetology Division, Muesum of Southwestern Biology

STRICKER

Director, Electron Microscopy and Confocal Microscopy Facilities

THORNHILL

Associate Chair, 1994

VOGEL

Director, Howard Hughes Research Program for undergraduate students: 15 students for 10-week summer program, 7 students in academic-year program.

Plan and carry out two large group advisement sessions for Biology majors, February and September 1994.

WERNER-WASHBURNE

Manage RIMI laboratory

Manage departmental minority recruitment/retention—this has involved setting up a buddy system, designing and paying for graduate recruitment materials, supporting

recruitment travel to approximately 15 neighboring colleges and universities Fall of 1994, supporting approximately 7 undergraduate students in labs within Biology and in Biochemistry, supporting 9 students and 3 faculty to attend the SACNAS meeting in Chicago, providing support for the annual student surveys, etc.

YATES

Curator, Divisions of Mammals, Birds, and Biological Materials, Museum of Southwestern Biology
Director, Museum of Southwestern Biology

E. COMMITTEE SERVICE.

1. Departmental committees served on in 1994 (indicate chair with asterisk).

ALTENBACH

* Graduation Committee, Chair

BACA

Search Committee for Immunologist/Neurobiologist (1993-94)
Search Committee for Terrestrial Arthropod Ecologist (1994-95).

BROWN

Promotion and Tenure

DUSZYNSKI

* Biological Society of New Mexico Committee
Graduation Committe

JOHNSON, C.

Greenhouse Committee

JOHNSON, W.

Media Prep/Culture Collection Committee

KODRIC-BROWN

Graduate Student Selection Committee
Graduate Policy Committee

LOKER

Biology Graduate Unit Review Committee
Graduate Student Selection Committee
Chair, Faculty Search Committee for Immunologist/Neurobiologist
Graduate Advisor

LOWREY

Greenhouse Management Committee
Graduate Policy Committee
Ecology/Evolution Faculty Search Committee

MARSHALL

Associate Chair, 1993-95
* Greenhouse Committee, Chair, 1991-95
* Annual Research Day Committee, Chair, 1993-95
Graduate Student Selection Committee, 1993-94
Promotion and Tenure Committee, 1993-94

MILNE

* Computer Use Committee: Assisted graduate students in writing a proposal to obtain support from the Graduate Student Association for computer system upgrades.
Graduate Student Selection Committee
Graduate Program Review Committee

MOLLES

* Undergraduate Policy Committee
* Teaching Evaluation Committee
Phylogeneticist/Plant Morphology Search Committee
* Terrestrial Arthropod Ecologists Search Committee

NATVIG

Undergraduate Policy Committee
Tenure and Promotion Committee
Hughes Program Committee

NELSON

Undergraduate Policy Committee
Hughes Program Committee
RIMI Committee
Library Liaison
Immunologist/Neurobiologist Search Committee

* Seminar Committee

RIEDESEL

Animal Care and Use Committee

SNELL

Terrestrial Arthropod Ecologist Search Committee

STRICKER

Graduate Student Selection Committee
Immunologist/Neurobiologist Search Committee

THORNHILL

* Phylogeneticist/Plant Morphologist Search Committee
Graduate Student Selection Committee

TOOLSON

Undergraduate Policy Committee (Chair, 1993-94; member, 1994-95)
Cell-Molecular Biology Search Committee
Terrestrial Arthropod Ecologist Search Committee

TRUJILLO

Undergraduate Advisor
Applications For Degree
Search Committee, Reconstruction Phylogenist 1993-94.

VOGEL

Graduate Program Review—Self Study

WERNER-WASHBURNE

Graduate Review Committee
Graduate Student Selection Committee
Science-Technology Building Task Force

YATES

Phylogenetic Reconstructionist Search Committee
* Space Committee

2. College/University committees served on in 1994 (indicate chair with asterisk).

BACA

A & S Graduate Committee
Athletic Council
A & S Tenure & Promotion Committee—senior committee
Legislative Coordinating Committee
UNM Institutional Biosafety Committee on Recombinant DNA
MARC advisory committee; UNM SOM (1994-present)

JOHNSON, G.

* Faculty Senate Library Committee

JOHNSON, W.

* UNM Undergraduate Committee (Spring)
Health Sciences Advisory Committee
UNM Admissions & Registration Committee

KERKOF

Spring: * University Teaching Enhancement Committee
Fall: * University Teaching Enhancement Committee

As chairman of the University Teaching Enhancement Committee, I preside at the meetings of the parent committee and oversee the activities of the five subcommittees and one task force of the Teaching Enhancement Committee.

KODRIC-BROWN

Faculty Senate
Faculty Senate Library Committee

LOKER

Radiation Control Committee, Spring 1994

MARSHALL

A&S Junior Promotion and Tenure Committee, 1993-94

MILNE

Departmental laision to High Performance Computing Program

NATVIG

MEMS (Minorities in Mathematics, Engineering and Sciences) Committee

NELSON

MARC Advisory Committee

TRUJILLO

Minority Graduate Student Retension Committee (through Ellen Goldberg's Office)

WERNER-WASHBURNE

Minorities in Engineering, Math, and Sciences (MEMS) Committee
Advisory Panel, Minority Programs in the Medical School
Undergraduate Curriculum Committee
Graduate student Convocation Committee
Assist with undergraduate recruitment (Santa Fe)
A&S Faculty/Student Services Joint Committee

YATES

* Main Campus Animal Care and Use Committee
Council on the Americas

F. OTHER.

BACA

Research Professor of Microbiology
Associate of UNM's Southwest Hispanic Research Institute
Member of New Mexico State's Recombinant DNA Committee

BARTON

Judge Chairman, Microbiology Section, Northwestern Regional New Mexico Science Fair.

BOURNE

Health Profession Advisor

DUSZYNSKI

UNM (and State of NM) Advisor, Pre-veterinary Medicine; in 1994 I counseled 37 students for about 30 minutes each.

Took more than 25 individuals in Marine Invertebrate Biology class (Biol. 404L) to the Centro de Esdudio de Desierto y Oceanos (CEDO, Inc.), Puerto Penasco, Sonora, Mexico on field trip, October 15-21, 1994.

Took 23 individuals in Introduction to Tropical Biology class (Biol. 461L) to the Hofstra University Marine Laboratory (HUML), St. Ann's Bay, Jamaica, West Indies on a field trip, March 13-24, 1994.

Helped the Department of Athletics recruit student athletes, three for football and one for gymnastics.

Presented Outstanding Undergraduate Award to graduation seniors at the Department of Biology's Sixth Annual Graduation Ceremony, May 14, 1994.

Helped charter and served as Faculty Advisor for "International Biological Expeditions-UNM," an official ASUNM student organization. As a chartered student organization, we were awarded $3,000 during Spring Semester 1994 by the Student Fee Review Board, through Vice President Orcilia Zuniga Forbes' Office for Student Affairs. These funds were used to help defray the cost of the field trip to Hofstra University Marine Lab for Biol. 461L Tropical Biology students. In addition, during the Fall Semester 1994, we again applied to ASUNM and were awarded $3,100 to help defray the cost of students enrolled in Biol. 404L Marine Invertebrate Laboratory for their field trip to Puerto Penasco, Sonora, Mexico.

JOHNSON, G.

Judge for posters, UNM Department of Biology Third Annual Research Day, April 8, 1994.

Directed research of a Howard Hughes Summer student, Maia Lapus, Summer 1994.

Served as mentor for one student going to State Science Fair.

Arranged for two off campus speakers for The UNM Cell/Molecular/Microbiology

KERKOF

Christopher Sundberg, poster presentation, 1994 UNM Department of Biology Third Annual Research Day. "The Effect of TSH on Metabolism and Gene Expression in a Continuous Thyroid Gland Cell Line (FRTL-5)."

KODRIC-BROWN

Promoted to Full Professor.

LOKER

Collaborated with colleagues at the Kenya Medical Research Institute in Nairobi, Kenya, for three weeks in January 1994.

LOWREY

Promoted to Associate Professor.

MARSHALL

One-on-One Volunteer, 1990-91, 1994-95
Mentor for Regent's Scholar, 1991-95
Helped coordinate the "Expanding Your Horizons" Conference for the New Mexico Network for Women in Science and Engineering

MILNE

Judge for the Third Annual Research Day, April 8, 1994.

MOLLES

Ecology text writing for McGraw-Hill, Inc. Project on schedule, approximately 80% of first draft completed. Outside reviews very positive. Expected completion Fall 1995.

NELSON

Mentored two students in UNM's "One-on-One" Program for new students.

Served as a judge in the Third Annual Biology Research Day, April 8, 1994.

Participated in the Science and Engineering Women's Career Development Conference & Mentorship Program, March 5, 1994; mentored one student.

Mentor for a Regents' Scholar (Leslie Reeves).

RIEDESEL

Supervised Holly Hlava, participant, Hughes Foundation Summer 1994 Research Program, Kathryn Vogel, Director.

Supervised Mia Spooner, participant, NIH High School Apprentice Program, M. McCabe and R. Gomez, Directors.

SNELL

On Sabbatical Leave most of the year.

STRICKER

Served on Following Committees and had meeting during 1994 (without oral exam):

Biology:	Kenneth L. Conwell (chair of committee)
	Jacqueline Miralles
	Kelly Sapp
Cell Biology:	Steve Jett

Mentored Rudy Perea, Jr., a high school student (helped with research and three oral presentations at local and national meetings).

TOOLSON

One of my electron micrographs was used in an introductory biology textbook, published by Brown Publishing (don't know the author's name).

Poster judge, UNM Department of Biology Third Annual Research Day, April 1994.

Supervised one Hughes student (Gretchen Ehrenkofer)

Supervised one RIMI student (Don Ben) for three semesters

VOGEL

Associate Dean, College of Arts and Sciences

WERNER-WASHBURNE

Promoted to Associate Professor
Advisor for high school science fair project, Kim Butler
Taught a 5th-grade science class at Bandelier elementary
Moderator at "Chicanas in the Sciences," a presentation by Hispanic Student Services
Hosted visit by 5th grade class to the Biology Department
Science Fair judge for Bandalier elementary school

YATES

Promoted to Full Professor.

APPENDIX D

OUTSIDE REVIEW COMMITTEE'S GRADUATE PROGRAM REPORT & DEPARTMENTAL RESPONSE

THE UNIVERSITY OF NEW MEXICO

OFFICE OF GRADUATE STUDIES

DATE: May 9, 1995

TO: Mary Sue Coleman, Provost and Vice President for Academic Affairs
Ellen H. Goldberg, Associate Provost for Research and Dean of Graduate Studies
William Gordon, Dean, Arts and Sciences
David Ligon, Chair, Biology Department
Diana Marshall, Associate Chair, Biology Department
Edward DeSantis, Assistant Dean of Graduate Studies

FROM: Virginia Seiser, Chair, Senate Graduate Committee

RE: Graduate Unit Review Written Report

==========

Enclosed is the written report of the external Graduate Unit Review for the Biology program. We will be back in touch with you regarding the scheduling of the meeting.

In the interim, David Ligon will prepare a brief written summary of the unit's response to the report. This document should address all the salient points of the report and end with a prioritized list of graduate program needs. The summary should be distributed before the meeting.

If you have any questions, contact me (7-6401) or Mariana (7-2334).

Thank you.

Enc.

COMPOSITION OF THE REVIEW COMMITTEE

Chair

Gilbert A. Castro, Ph.D.
Professor of Integrative Biology
Associate Dean for Special Projects
Medical School
The University of Texas-Houston Health Science Center

Members

Jeffrey D. Esko, Ph.D.
Professor
Department of Biochemistry
University of Alabama

Ellen D. Ketterson, Ph.D.
Professor of Biology
Co-Director, Center for the Integrative
Study of Animal Behavior
Indiana University

Barry S. Kues, Ph.D.
Chair
Department of Earth and Planetary Sciences
University of New Mexico

William H. Schlesinger, Ph.D.
James B. Duke Professor
Departments of Botany and Geology
Duke University

BACKGROUND

Scope of the Review

The Biology Department at the University of New Mexico (UNM) made a thoughtful effort to report the present status and future plans for graduate education in biology. Information was provided through (1) the report of the committee that reviewed the Biology Department in 1985 and responses to that report, (2) the departmental self study, (3) interviews with faculty, students, and administrators, (4) the department's Five Year Plan, and (5) the statement of the department's goals. The committee assessed the biology graduate program in terms of quality and appropriateness, taking into consideration its relationship to the Five Year Strategic Plan of the College of Arts and Sciences, and UNM 2000, the university's statement of directives and goals for entering the 21st century. The following summary focuses on strengths, areas of concern, and realistic recommendations for departmental and administrative considerations.

Prior Graduate Program Review—1985

The Biology Department was last reviewed in the spring of 1985, with the review team making a number of specific recommendations. In the opinion of the current (1995) committee, some of the problems and concerns that led to the prior recommendations were addressed by the department and are no longer pressing issues. Other "old" problems, although still bothersome to some degree, do not constitute major current concerns. On the other hand, several of the problems that elicited recommendations from the 1985 review team continue to impede the optimal development of the department. It is important to note that resolution of many of the continuing problems requires help from the university administration. A prevailing opinion among biology faculty members is that during the last decade they have maintained and enhanced the department's national reputation and fulfilled their obligations to the state and university without substantial help and/or new resources from the UNM administration. The following is a summary of the departmental responses to 1985 recommendations.

Recommendations to which the department responded:

1. Ecology and evolutionary biology should continue to be the major programmatic focus.

This area of strength has been maintained and bolstered by the hard work and initiative of the individual faculty members in these areas and also by the added strength provided by the cell/molecular biology component of the department.

2. Tensions between cell/molecular and ecology/evolution groups within the department should be resolved.

This is no longer a major concern. There is considerable evidence of cross sharing of expertise, resources, and interests within the department. The cell/molecular component has emerged during the last decade as a real strength and has gained departmental-wide admiration. This is due in large part to the industriousness and good examples set by members of the cell/molecular group.

3. Expertise and facilities for data analysis should be increased.

The department has attempted to address this issue by relying on expertise in the Math Department to help train students in quantitative biology. Although an impressive number of personal computers have been garnered for student use, the department appears to remain underpowered in this area.

4. Women need to be better represented on the faculty.

Ten years ago there was one woman on the faculty; now there are six. This represents a significant gain. However, the department should have a definite recruitment goal. For example, the goal might be to develop a faculty with a gender ratio representative of that in the student body.

5. Individual faculty members need to better understand the work of their colleagues.

This area continues to improve as a result of growing interaction among the faculty.

6. Student access to computerized literature searches should be facilitated.

Because of the wide availability of personal computers and low-cost or free searches of data bases, there has been some improvement in this area.

7. The UNM administration should assist and coordinate efforts to cooperate with the Medical School.

The department, with help from the administration, has initiated teaching and research projects with the Medical School and has plans that will improve this effort even further.

Recommendations to which the department partially responded:

1. Broaden the graduate curriculum to encourage interactions among cell/molecular and ecology/evolution groups within the department and with the Medical School.

The graduate curriculum has been changed to allow more flexibility of course choices. Ecology/evolution students are using more molecular techniques. The core curriculum was also broadened to include courses offered at the Medical School. A program was initiated that allows students to apply to both biology and Medical School programs simultaneously.

2. Develop a better and broader cell/molecular biology curriculum.

There has been some improvement in this area, but the heavy teaching loads in the undergraduate curriculum hamper development of the graduate curriculum.

Recommendations to which the department did not or could not respond:

1. Double faculty size to reduce teaching loads and increase course coverage.

Faculty size has increased 5 percent since 1985 while the number of biology majors has risen from 460 to 800.

2. Increase faculty salaries.

While salaries are higher, there is greater disparity than there was 10 years ago between salaries of biology faculty and those of faculty in other departments within the College of Arts and Sciences. Biology associate professor- and professor-level salaries are significantly below the college average.

3. Decrease graduate student teaching loads.

This problem has not been alleviated but remains a high priority in requests from the department to the UNM administration.

4. Increase teaching assistant stipends.

Teaching assistant stipends in the Biology Department remain quite low by university, regional, and national standards.

5. Increase the ratio of faculty to biology majors.

The situation is worse now, with 800 undergraduate majors, than it was 10 years ago.

6. Increase university support for graduate student research and travel.

Although there has been some improvement, support is still less than desirable, considering the high quality and diverse scholarly activities of biology graduate students.

7. Ensure that graduate students take courses in both major areas of the department.

This has not been done.

8. Hire a statistical consultant.

This has not been done. The Biology Department relies on the Math Department to satisfy its need for expertise in biometrics.

Departmental Self-Study

The departmental self-study, consisting of 40 pages and a voluminous data base/appendix section, was quite informative. Major sections of the self-study were (1) growth and development within the last 10 years, (2) the graduate curriculum, (3) quality of research, (4) quality of library holdings, (5) quality of graduate students, (6) level of funding and assistance, and (7) a critical statement of the department's self perception.

The faculty and student images of themselves are extremely positive, despite the department's overall perception that its advances and accomplishments have not been adequately recognized by the UNM administration during the past decade. This self-image is based on a foundation of confidence gained through a sense of unity and accomplishment and on high morale derived from individuals knowing that they have contributed to a group effort. There is an uncommonly strong sense of participation by faculty and students alike. By any normal measure of scholarship, the department has made remarkable strides during the past 10 years. The department has been highly successful in obtaining extramural funding, publishing, developing multidisciplinary programs, recruiting and training graduate students, and teaching undergraduates. Considering the many

successes associated with training 104 graduate students and 800 biology majors, the greatest accomplishment of the department has been the recruitment and retention of outstanding faculty. The accomplishments of the department in recruiting women faculty are especially laudable.

In order to sustain the competitiveness of its nationally recognized program in ecology and evolution and to enhance the visibility of its emerging cell- and molecular biology program, the department senses several major needs that can be met only through the help of the administration. These include an increase in state budget to hire new faculty and purchase instructional equipment and supplies required to meet undergraduate teaching demands, an increase in space to accommodate new faculty hires and alleviate overcrowded conditions plaguing current programs, faculty salary increases—an absolute necessity, and finally, increases in the salaries of graduate students.

SUMMARY OF FINDINGS: STRENGTHS AND CONCERNS

The Graduate Review Committee observed the following departmental strengths:

1. Departmental unity.

The department is highly competitive compared with other UNM science departments and with similar departments nationwide that have graduate programs leading to the Masters and Ph.D. degrees. The Biology Department at UNM comprises a wide range of interests among its faculty members, with particular historic and current strengths in the areas of ecology and evolutionary biology. Recent growth in the areas of cell and molecular biology has capitalized on important interactions between faculty in these areas and on the need for evolutionary and systematic biologists to use molecular approaches in their work. Diverse course offerings ensure that students can obtain broad exposure to a variety of subjects. The program also provides excellent opportunities for students to gain experience in teaching. Thus, at a time when many departments have fragmented, separating cell/molecular biologists from those interested in organismal and ecosystem approaches, the Biology Department at UNM has remained unified and, in general, happy to be together. This is one of its greatest strengths.

2. Quality of the biology faculty.

The strength of the Biology Graduate Program can be directly attributable to the dedication, breadth, and stature of its 31 faculty researchers. The faculty is dedicated to the school and enthusiastically participates in student education. Several UNM biologists are recognized world authorities in their fields. A large majority of the faculty publish regularly in refereed journals in their fields; some faculty prodigiously so.

As a whole, the faculty embodies the institutional values—excellence, integrity, caring, diligence and industry, and diversity. Although intangible, these values are indispensable to high morale. It was clear to the committee that the faculty members are highly individualistic. It was equally clear that they are believers in education, in serving their state, training people to avert

environmental disasters and maintain biodiversity, and in cooperating for the good of the department and university communities.

3. Success in acquiring extramural research funding and in participating in a program for the sharing of indirect costs from research grants that the faculty perceives as fair.

4. Ability to recruit nationally competitive faculty.

Recruitment of talented and productive faculty members in recent years and the development of an *esprit de corps* has helped bridge the natural schism resulting from the presence in the department of two major groups with conceptually different interests, i.e., interests in ecology/evolution and cell/molecular biology, respectively. Resulting from a mutual respect for one another's abilities is an ambience that is conducive to student interaction and high morale, and a department with unusual strength and diversity that might best be described as integrative biology.

5. Diversity.

Diversity goes beyond academic interests to include gender and ethnic balance among departmental students, faculty, and staff. The number of female trainees has increased dramatically over the last decade, reflecting the general increase in the number of women entering science programs nationwide. Minority representation (mostly Hispanic) is apparent. Intense effort by several departmental faculty members has paid excellent dividends in the recruitment and retention of minority students at both the undergraduate and graduate levels. The department is a campus leader in this area.

6. Graduate students.

The department has 104 graduate students. These students are loyal, dedicated, articulate, and informed. They represent a diverse group and play a constructive role on numerous committees and study groups that are setting future directions for the school. Students actively serve on every departmental committee. They play a role in faculty evaluation and recruiting. The sense of participation goes beyond departmental borders into the Graduate School and the College of Arts and Sciences. Self-governance through the Graduate Student Association (GSA) is recognized as an important responsibility. The students use GSA and their participation on departmental committees to develop leadership skills and as a forum for discussing ideas of general interest to the department, college, and university. The review team was struck by the enthusiasm of the students, their sense of belonging to a successful program, and their feelings that job opportunities await them upon completion of their studies.

7. International recognition of departmental programs, museums, and field station.

The department possesses, as judged by national and international standards, outstanding facilities and collections in the areas of ecology and evolutionary biology. The Review Committee was most impressed by the active management and use of these collections. Unlike many institutions, UNM

faculty employ these collections in current research. For example, the collection of mammals was instrumental in tracing the origin and dispersal of the recently recognized *Hantavirus* that affects small mammals and humans. The herbarium is an important resource in the Program of Long-Term Ecological Research (LTER) at the Sevilleta field station.

The Sevilleta field station and LTER project are clear statements of academic and administrative leadership and grantsmanship. They represent unique strengths that provide a strategic advantage in the future growth and development of the department. The Sevilleta field station is one of the finest of such facilities in the United States. It offers state-of-the-art field laboratories and computational facilities to undergraduate students across the nation, as part of the Department's NSF-funded summer program—Research Experience for Undergraduates (REU). This program brings students from across the United States to New Mexico where they train with faculty, utilize facilities, and witness the potential for graduate work at UNM. The field station is also "summer home" to a large number of UNM graduate students and visiting scientists from across the United States. It is increasingly being used as a retreat for meetings of LTER scientists nationwide. In conjunction with the LTER program, the Sevilleta Field Station will be instrumental in efforts to establish the Rio Grande Basin Initiative—a current UNM proposal to study the impact of rapid population growth in the Rio Grande Valley that spans New Mexico.

8. Excellent core facilities.

Core facilities, such as the RIMI laboratory for molecular biology and the Confocal Microscopy Center are major resources for productive faculty and student interactions. These additions to the department in recent years are central to the maintenance and improvement of its research training activities.

9. Collaborations with faculty at the UNM Medical School.

This is a unique strength that provides a strategic advantage in future planning. Collaborations could impact on both research and teaching activities. Several biology faculty members have taken advantage of this opportunity for interaction.

10. Positive perceptions of and interactions with current administration.

In contrast to an historical feeling of neglect by the UNM administration, there is a current and widespread opinion among departmental members that key administrators—Provost, Vice Provost and Dean of the Graduate School, and Dean of Arts and Sciences—who have assumed their present positions within recent years, are dedicated to the well being of the university, the school, and the department. The Review Committee shares the perception with the department that the current administration can be counted on as an ally in future growth and development.

The Graduate Review Committee noted the following areas of concern:

1. Weak salary support for faculty.

Relatively low salaries, particularly within the senior faculty ranks, compared with those in other departments comprising the College of Arts and Sciences and with comparable institutions in the southwest, have led to a feeling of dismay among the biology faculty. This feeling is not without foundation considering that the salaries of full- and associate professors are significantly below the average for the College of Arts and Sciences while the department's scholarly and educational achievements are much above average. Continued neglect of fair monetary reward for faculty members performing meritorious work cannot help but contribute to "burn out" in the short term and migration to more lucrative positions at other institutions in the long term.

2. Lack of a well formulated departmental plan for the career development of tenured faculty and for assignment of administrative responsibilities.

The awarding of tenure typically accompanies promotion to the rank of associate professor. The department appears to be handling this matter satisfactorily. However, there appears to be no formal procedure for reviewing and recommending associate professors for promotion. Furthermore, a small number of mid-career faculty, who are critical to maintaining the strong momentum in the department, are over-burdened. If not addressed, this disparity in workload could result in detrimental consequences affecting the department, i.e., loss of grants and the ability to attract high profile graduate students. Mid-career people are running labs, teaching their full share, and carrying significant administrative loads. Although these individuals are highly capable and energetic, they are too involved in administrative work. This is a particular concern when coupled with low faculty salaries. We are concerned that because of low faculty salaries, individuals may be tempted to take on administrative jobs that offer financial remuneration when their time could be better spent on research. The Review Committee recognizes that the department could not have maintained its strength or grown in cohesiveness were it not for effective leadership during the past ten years. However, demands on the faculty's time are increasing. The new chair will face a new set of concerns and problems in the coming decade. The Review Committee strongly recommends that the new Chair pay particular attention to faculty development, and formulate a plan for the equitable distribution of duties among the faculty so that individuals do not become overloaded.

3. Lack of space for growth.

Lack of adequate space for new faculty hires and lecture rooms is a continuing concern, and laboratories and student office space are crowded. However, the department and administration are working earnestly and creatively to cope with this problem. Partial solutions appear to be in hand with the renovation of the campus bookstore and its conversion to "museum space."

4. Lack of long-term support for core facilities.

Because grant support for key departmental core facilities is coming to an end and these facilities are critical to the training activities of the department, immediate consideration must be given to future support.

5. Weak support for courses that involve field studies.

Field trips, which are essential to the programs in ecology, are not fairly funded. The department's instructional budget, which must include support for training students in the field and in the lab, has not kept up with the department's expansion in these areas.

6. Weak support services for students.

Health care is a major deficiency. Most students have no medical insurance. This is an appalling situation.

7. Poor salary support for teaching assistants.

There is a general consensus among the faculty that the teaching assistants in the department are underpaid as compared with comparable positions in some other UNM science departments and with other universities. However, the Dean of the College of Arts and Sciences is cognizant of and is addressing this problem.

8. Inequitable distribution of graduate students among faculty.

There is concern among some biology faculty that graduate students are not equitably distributed. The committee shares this concern but is worried also that some students may not attain an adequate education if placed in laboratories that are marginally productive.

9. Lack of a departmental strategic plan.

Although the department has developed a plan to support research, the optimal direction for growth and a strategic approach to the future should be clearly formulated.

10. "Core curriculum" that is not a core curriculum.

The current graduate core curriculum is too permissive to imprint adequately on students the strength of the department, which is integrative biology.

11. Administration of the LTER.

Several productive and nationally recognized members of the department's faculty participate in the NSF-funded LTER program at the Sevilleta National Wildlife Refuge. However, their contribution to the administration of the LTER is unclear. There was a strong feeling among the

members of the committee that Dr. Milne is a key player and is doing an excellent job administratively. However, given the early stages of his career and the magnitude of the administrative duties associated with the program, it is imperative that more staff and research support personnel be dedicated to this effort.

12. Weak staff support within the department.

The faculty spends large amounts of time performing routine secretarial activities, such as photocopying, typing, purchasing, and accounting. Increasing the number of staff would minimize the problem, and better automation could reduce the workload. The UNM administration should make a concerted effort to improve the career tracks and advancement opportunities for its classified personnel so that they can be retained as long-term employees.

RECOMMENDATIONS

Responses to specific questions posed to the Review Committee by the Graduate College

1. What mechanisms or strategies can you suggest to help the department cope with the rapid increase in undergraduate enrollment?

Capping enrollments in introductory classes or capping the number of undergraduate majors is a possibility that will have to be weighed in the future by the biology faculty. To manage faculty teaching loads, some courses could be offered less frequently, but to greater numbers of students than at present. Other classes, especially those with large components of field work, should continue to be offered to limited numbers of students, perhaps by requiring permission of the instructor before registration.

Another possible mechanism for reducing teaching demands of the faculty is to hire teaching postdoctoral fellows. Because of space and monetary limitations, it is unrealistic to expect that many new research faculty can be hired in the near future to contribute to the teaching duties of the department. An alternative could be to hire postdoctoral fellows to teach. While reducing the teaching loads of permanent faculty and adding to the intellectual life of the department, the postdocs would benefit by gaining new colleagues and professional contacts and by acquiring lecture-style teaching experience while seeking permanent career positions.

The department needs to take a hard look at not only how much it teaches but also how it teaches. In the next decade the department should definitely begin to employ new modes of teaching such as the use of CD ROM technology. It is difficult to imagine the department sustaining its national image while continuing to employ only traditional teaching techniques. The employment of new technologies is one way to reduce teaching loads while increasing research time. This would appear to be a much more realistic approach to enhancing research output than expecting to double the number of faculty.

2. Is the workload expected of teaching assistants appropriate? Is compensation adequate?

These issues were addressed by the Review Committee under "concerns." The workload for teaching assistants, while not oppressive, is excessive. We recommend that teaching assistants not be assigned to more that one class per semester, meaning no double preparations. Offering some upper-level classes at less frequent intervals may allow more flexibility in the assignment of teaching assistants. This could maximize both faculty and student satisfaction across the department.

We believe that the current level of compensation for teaching assistants is too low but have learned from the administration that substantial increases are already earmarked for the 1995-1996 academic year. Additionally, immediate attention should be directed toward providing health care coverage to all teaching assistants.

3. Are students moving through the program at the expected rate? Is time-to-degree comparable to other programs around the country?

Students at UNM, on average, complete the Ph.D. requirements in about five years. This is a typical time frame at many universities in the United States.

4. Are courses offered with sufficient frequency to meet student needs? Is the range of courses offered appropriate?

The breadth of both graduate and undergraduate courses offered by the department is most impressive. Recognizing that some courses must be offered to small numbers of students (e.g., field courses), we suggest that reductions in the frequency of some course offerings, perhaps at the cost of higher enrollments, might alleviate demands on faculty time and allow more flexibility in the allocation of graduate teaching assistants.

5. Does the curriculum adequately provide for the needs of undergraduate majors planning to enter health-oriented professions?

The undergraduate curriculum appears to provide ample coverage of classes for students pursing health occupations or graduate training in the biomedical sciences and biotechnology. However, it was difficult to assess the proportion of undergraduate students that actually enter professional programs. Training students to enter health occupations did not appear to be a major area of emphasis within the department. Pre-professional programs have an unusually low profile for a biology department the size of that at UNM.

6. A number of courses typically taken by biology graduate students for graduate credit during their first two years are 400-level courses, primarily filled with undergraduates. What impact does this have on the quality of graduate education?

The committee foresees no negative impact of a large number of 400-level classes in the graduate curriculum because there is such a large number of 500-level classes also available to graduate

students. Courses at the 400-level are constructed to be useful both to advanced undergraduate and beginning graduate students. Having separate courses on the same subject at the 400- and 500-levels would result in a needless proliferation of specialized courses, the teaching of which would further overload the biology faculty.

7. Is cooperation between the Biology Department and the Biomedical Sciences Program working well? Are there ways it can be strengthened?

The current and developing cooperation between biology and medical faculty in the areas of cell and molecular biology is impressive. A number of faculty share teaching responsibilities in classes and several are co-investigators on extramural grants funded to UNM. The current departmental brochure clearly describes the research interest of these groups as a coordinated unit. A definite way to enhance interaction is through joint research efforts. The administration could encourage more interaction by providing nominal seed money to support collaborative research initiatives between the schools. Also, the Biology Department should interact with the biomedical professional schools on campus in developing its pre-professional programs.

8. Members of the department have expressed concern about the need to improve recruitment of graduate students in the area of molecular/cell biology. Do you have recommendations?

There is great national competition for graduate students in the area of cell and molecular biology, and frequently an offer of a teaching assistantship at UNM cannot compete effectively with greater levels of support offered at other universities. Fortunately, a number of the faculty in the area of cell and molecular biology at UNM have grants and can offer research assistantships to their most promising applicants. The RIMI and Hughes grants also make UNM very attractive to graduate applicants.

We have two recommendations. First, in line with our overall recommendation (see next section) to promote a departmental theme of adaptation to environmental stress, we suggest that faculty recruitment in the area of cell and molecular biology be planned carefully. We recommend a focus in a sub-area of this field which UNM can utilize to achieve a clear strategic advantage and national stature. Second, we recommend continued focus on the recruitment of gifted minority students, who may be attracted to UNM due to its geographic familiarity. The University of New Mexico could be a funnel for the entry of minority graduate students into the national arena in cell and molecular biology. In short, the department should recruit graduate students in this area based on its unique strengths and the opportunities it can offer, not on a notion that it can compete nationally in the general area.

9. Given resources available at UNM, what is the optimal size for the Biology Department in terms of undergraduate and graduate enrollment and number of faculty?

It would be easy to recommend an increase in the size of the biology faculty at UNM, given the current load of undergraduate biology majors. However, this would be a cavalier recommendation because the prospect of large increases in faculty positions at UNM are very slim, and because the space currently and soon to be available is limited and cannot support a substantial increase

in faculty. Alternatively, we recommend the judicious replacement of faculty as they retire, with new hires planned and recruited within the context of an underlying theme that unifies the existing strengths of the department.

Freely generated recommendations:

1. Support the Biology Department through a new "presidential initiative."

The highly meritorious strengths of the Biology Department should be preserved and weaknesses obviated in order for UNM to strategically position itself to accomplish its mission. The University has made a commitment, as stated in UNM 2000, to identify and secure greater financial resources for the development of areas of emphasis or general themes around which a broad range of programs and activities can flourish. The Biology Department should play a central role in this effort, as its accomplishments mark it as a "center of excellence" within the university. Therefore, greater financial support needs to be given to the department. In this regard the Review Committee recommends that the UNM administration, through a new "presidential initiative," provide the Biology Department with $250,000 of new, annual funding, starting in 1996 and continuing through the year 2000. The intent would be to embark on a plan designed to ensure that by the beginning of the next millennium the department and the university emerge as internationally recognized, scholarly enterprises that serve the educational needs of the state and the nation. These funds should be used by the department to enhance its strengths, to alleviate current weaknesses, and to plan, strategically, for its role in the university during the next decade. It is further recommended that receipt of these funds be **contingent** upon the department developing and presenting to the administration a written strategic plan on how the monies will be used to meet specific departmental needs or objectives in prioritized fashion. Furthermore, in its plan, the department should state how the funds will be leveraged.

The Review Committee further recommends that the strategic plan for the department be considered within the context of a unifying theme that fosters collaboration among the biology faculty, while integrating complementary activities of other UNM departments and developing partnerships with other institutions. The committee suggests that an obvious theme or common thread that describes departmental activities and strengths is biological **adaptation** to environmental **stress**. Adaptation can be considered from evolutionary, ecological, genetic, and/or physiological points of view and can be examined at scales ranging from the molecular, to the organism, to entire ecosystems. Furthermore, stress can be considered as any environmental change, e.g., that induced by infectious or parasitic agents, noninfectious disease processes, genetic anomalies, and weather and climate. The department is strategically positioned to capitalize on this because of its unique strength in integrative biology.

A recognized departmental theme would aid in selecting new faculty that complement existing strengths. The committee believes that a healthy balance exists within the department between botanical and zoological sciences. New hires should be sought to link existing areas of strength, even if a few gaps remain in the coverage of the entire field of biology. The committee suggests that the department resist the urge to hire a new member simply because "an area is not now represented."

2. Revise the graduate program core curriculum.

The current course requirements should be revised. At present the requirement that graduate students select 3 courses from among 11 areas does not foster the interdisciplinary training for which the department is so well suited. It is possible, for example, for a student of cell and molecular biology to select courses among the areas of molecular biology, cell biology, and biochemistry, thus avoiding any exposure to ecology and evolutionary biology. We recommend that the current 11 core areas be collapsed into 4 areas—molecular biology, cell biology, organismal biology, and ecology. Each of these areas could include a number of courses that would fulfill the requirement. We recommend that the department consider the use of courses in other departments or at the Medical School as options for satisfying core area requirements.

The Department of Earth and Planetary Sciences may be able to contribute to the current list of "tools" courses that are required of graduate students in biology. Some examples lie in the application of modern analytical techniques (electron microprobe, stable isotope analysis) that would be useful to students of ecology who are examining soil and plant materials.

3. Encourage more interaction and collaboration among graduate students.

The department has a large faculty with broad interests. Both faculty and students should take an aggressive approach towards integrating the department and preventing fragmentation into the different specialty areas. The core curriculum provides one way to avoid disintegration. Another approach involves fostering informal interactions, for example through the departmental seminar series which students are encouraged to attend. Faculty attendance lacks consistency, which makes it difficult to convince students to attend seminars outside their immediate areas of interest. A pre-seminar for junior students to discuss the topic of an upcoming seminar with a senior student mentor might improve attendance. A student-organized luncheon with the seminar speaker might improve attendance at seminars.

The Sevilleta field station is a resource that can be used to encourage interactions. The department should consider holding an annual departmental retreat at the site. Retreats might include short talks by students, poster sessions, informal discussions of departmental issues, as well as social time. The retreat could also be used to make awards for teaching and research excellence.

4. Review graduate faculty individually every five years; adjunct faculty each year.

The credentials of all departmental faculty members should be reviewed every five years by the Graduate School to ensure continued suitability to serve as graduate student advisors and to maintain the strength and vigor of the graduate program. Likewise, adjunct appointments should be reviewed each year to ensure that the department continues to derive some benefit from these appointments.

5. Use computers more extensively in the department.

The department needs to use high speed networking for transferring information between labs and the central office. Purchasing and accounting should be automated and centralized to reduce the redundant paperwork. These activities may require the UNM administration to standardize accounting methods, but the department could streamline some of these activities internally. A central repository for software with site licenses would reduce the amount of money spent by individual laboratories for common programs. A central server would also support student recruitment efforts. The department should invest in computer access to programs available through the Internet. One faculty member already provides a Web site for the LTER and for personnel in his own laboratory, but the whole department needs to develop this resource. Minority recruitment programs, course descriptions, the graduate program, a roster of students, the faculty and their interests, and other recruiting information should be made available on-line.

6. Concentrate on the recruitment of underrepresented minorities.

This important effort not only addresses social and economic needs of the state and strengthens the graduate program, but also provides a basis to obtain grant support in the future. A strong and well planned program in this area will provide a distinct advantage over many majority universities in competing for specifically earmarked funds at the federal level.

CONCLUSION

During the past decade the Biology Department has developed into a uniquely integrated interdisciplinary setting in which faculty members, under solid leadership from its chairs, have cooperated to build a graduate program of national stature. The many strengths of the department far outstrip weaknesses. A departmental by-word is diversity. Several faculty members have attained international leadership positions in their fields. The department is a major asset to the university in pursuing its mission. By any customary measure of scholarly accomplishment—discovery, teaching, integration, and application of new information—the department excels on an absolute scale and in relation to other biology units nationwide. Clearly, the department has the capacity to not only meet contemporary needs in graduate education, but to excel in this endeavor.

The department believes that its growth and development during the past 10 years have been facilitated by internal leadership and initiative rather than by help from the UNM administration. Although administrative input is often overlooked by those it serves, it is the perception of the Review Committee that the past administration took, or allowed itself to be perceived as taking, a passive stance in its relationship with the department. In contrast to this historical perspective, the current administration is viewed in the eyes of the department as an ally. Likewise, the administration should view the department as an instrument to utilize in meeting its commitment to the citizens of New Mexico and the nation.

Major leadership traits, whether ascribed to individuals or organizations, include making decisions on the basis of firsthand information, showing an appreciation for those who contribute, and setting examples worth following. Without doubt, the UNM administration, through this review, is being presented firsthand information on which to base its decisions regarding the future of the Biology Department. Considering the past industriousness, productivity, and scholarly achievements of the department, there is much for UNM to appreciate about this unit. We propose that the administration show its appreciation of the department's exemplary performance through the establishment of a presidential initiative that involves infusing, annually for the next five years, $250,000 of new monies into the department's programs and activities. We make this specific recommendation for financial support rather than one that focuses on addressing the many different needs of the department, one-by-one. As part of its responsibility for stewardship, the awarding of these funds should be contingent on the department providing a plan on how the funds will be used to build on current strengths and alleviate concerns revealed in the review. Also, the plan should involve interdepartmental collaborations, a time-line for achieving goals, and strategies for leveraging the funds. A major intent of this contingency is to have the department take responsibility for prioritizing its own needs and, in the words of the anthropologist Clifford Geertz, to "think about the way it thinks." In this regard the department needs to think more about its unique strengths and utilizing these strengths in competing with other biology programs nationwide. Therefore, development of the department around a central theme should be part of the strategic plan. While not compromising its values and ideals, the department must think about adapting to outside constraints that threaten its growth and development, and about becoming more opportunistic through careful planning and creative administration. The department needs to think about future expectations from its chair relative to shouldering responsibility for faculty development and making hard decisions related to internal affairs. The department needs to think about revising its core curriculum, encouraging more interactions among faculty and students, reviewing its faculty periodically, using computers more extensively, and recruiting underrepresented minorities. While the department's goals should be idealistic, its expectations should be realistic. With opportunity comes obligation. Given the opportunities inherent in the proposed presidential initiative and the characteristics and past performance of the faculty, there is every reason to anticipate that the Biology Department will fulfill its obligations and continue to set examples worth following well into the next decade.

The University of New Mexico

Department of Biology

Response to the

Graduate Program Review

September 1995

BIOLOGY DEPARTMENT RESPONSE TO THE GRADUATE REVIEW

SUMMARY

The Department of Biology is among the most diverse and productive in the nation. As with all such programs, however, the need for continual improvement is understood. In an effort to evaluate our current program and to make plans for the future, the department underwent an in-depth review of its graduate programs at the request of UNM College of Arts and Sciences and the Graduate School. We have welcomed the review process and were highly gratified by the overall opinion of the review team, perhaps best summarized in their concluding statement, as follows: "By any customary measure of scholarly accomplishment - discovery, teaching, integration, and application of new information - the department excels on an absolute scale and in relation to other biology units nationwide." At the same time, the review team identified areas requiring significant improvement, excerpted from their report as follows:

- Weak salary support for faculty. Full- and associate-professor salaries are significantly below the average for the College of Arts and Sciences.

- Faculty critical to maintaining the strong momentum in the department are overburdened.

- Current and future programs are severely constrained by lack of space.

- Long-term support for core facilities is lacking.

- Staff support is limited quantitatively and qualitatively.

- A strategic plan for the department is lacking.

Listed in order of importance is a summary of our responses to the Review Committee's report:

- Through a combined effort of A & S and a special "presidential initiative" suggested by the Review Committee, our highest departmental priority is to increase salaries of associate and full professors *to at least the levels enjoyed by other science departments in A & S.* Without significant increases in salary, it will be difficult to maintain the level of excellence attained by our department over the past 10 years, and we run a distinct risk of losing our most talented faculty to other institutions.

- To deal with the dramatic increase in undergraduates seeking access to our programs, we propose limiting the growth of biology majors while simultaneously instituting a phased and carefully targeted increase of net new faculty positions, thus attaining a student-faculty ratio typical of other A & S departments.

• Employment of part-time faculty, more TAs and teaching postdoctorates are also possible solutions to this problem but are viewed as stop-gap or short-term solutions.

• With the much-appreciated support of the administration, we will continue to pursue vigorously new space and are now considerably more optimistic over prospects for new space than in times past.

• We seek net new resources to facilitate maintenance of both the department's core research collections and much improved core facilities in cell-molecular biology. The role of a dedicated and over-worked staff in the day-to-day operations of our department is under-appreciated; we will seek new staff lines as well.

• *We have already scheduled a departmental retreat for mid-November* and the first item on our agenda is to formulate both short- and long-term strategic plans, in part stemming from the recommendations of the Graduate Review Committee. Also to be considered at the retreat is a more specific course of action for limiting the growth of biology majors.

• Several other items more under our direct control such as revision of our graduate core curriculum are actively being addressed by appropriate departmental committees and will be discussed at our departmental retreat.

DETAILED RESPONSE

I. Introduction

An in-depth review of the graduate programs in the Department of Biology was conducted during the spring semester of 1995. The last such review was 1985. The review process was costly in terms of human and other resources but was welcomed by the department because:

- We are proud of what we have accomplished over the last 10 years and our self-study has provided us the opportunity to make a compelling case for more resources.

- It has pointed out areas in which we need to improve.

- It has provided an opportunity for scholars from other institutions to examine our program, to offer suggestions, and to make their independent opinions available to the higher administration.

- The timing of the review coincided with a period when many of the Biology faculty felt as though they had done all they could possibly be expected to do to promote excellence in teaching and research.

    - We felt the review would provide independent credibility to our claim that additional support from within UNM is needed if we are to sustain the momentum and esprit de corps generated over the past decade.

    - We also felt that the timing of the review was good because there was an appreciative climate among university administrators. For example, we want to be recognized as a "pinnacle of excellence".

Although the review process has been stimulating, there remains considerable skepticism of the entire process for the following reasons:

- One of the first things noted by the 1995 review team was the number of items singled out by the 1985 review team that have never been satisfactorily addressed.

    - It is our perception that the most important of these items require bold administrative support. Our highest priorities for action in 1995 are in many ways the same as indicated in 1985:

        - a better faculty/student ratio
        - more equitable faculty salaries
        - reduced graduate student teaching loads

- Will the suggestions of the 1995 review team still be largely unheeded when we are examined by the 2005 review committee?

- Also, we spent an enormous amount of time and money preparing for the review. The university also expended significant resources organizing the review.

  - Will these turn out to be wise allocations if the recommendations from the review are ignored?

II. Significant Perceptions of the Review Team We Wish to Highlight

Although the Review Committee highlighted several strengths and areas of concern, from our perspective the following lists encapsulate their most significant comments.

Perceived Departmental Strengths

- p. 5, "the department is highly competitive compared with other UNM science departments and with similar departments nationwide"

- p. 5, "the Biology Department at UNM has remained unified and, in general, happy to be together. This is one of its greatest strengths."

- p. 6, "Intense effort by several departmental faculty members has paid excellent dividends in the recruitment and retention of minority students...The department is a campus leader in this area."

- p. 6, "The review team was struck by the enthusiasm of the (graduate) students, their sense of belonging to a successful program.."

- p. 7, "The Review committee shares the perception with the department that the current administration can be counted on as an ally in future growth and development."

- p. 15, "By any customary measure of scholarly accomplishment - discovery, teaching, integration, and application of new information - the department excels on an absolute scale and in relation to other biology units nationwide."

Perceived Areas of Concern

- p. 8, "Weak salary support for faculty ... full- and associate-professors are significantly below the average for the College of Arts and Sciences.."

- p. 8, "mid-career faculty, who are critical to maintaining the strong momentum in

the department, are over-burdened"

- p. 11, "The workload for teaching assistants, while not oppressive, is excessive."
- p. 8, "Lack of space for growth"
- p. 9, "Lack of long-term support for core facilities"
- p. 9, "Lack of a departmental strategic plan"
- p. 10, "Weak staff support within the department"

III. Departmental Response to the Review Committee's Specific Recommendations

Recommendations in Response to Questions Posed by the Graduate College

1. Coping with the rapid increase in undergraduate enrollment

• Capping enrollments and the number of majors, offering fewer courses and increasing course sizes were all suggested. We find these solutions less than completely satisfactory because they either deny students access to our programs or they dilute the quality of education we offer. However, we recognize the need to slow the rate of our growth and one of the most important items on the agenda for our retreat is to decide more specifically how this should be done. Our preferred solution also involves increasing the size of our tenure-track faculty to bring our faculty-student ratio more in line with the college average (see #9 below).

• Another suggested solution is to hire teaching postdoctoral fellows or to make increased use of part-time faculty. This approach would help to reduce teaching loads for regular faculty and may be the only realistic course of action given present-day financial and space constraints.

• Another possibility would be to increase the number of TA lines allocated to the department from the state budget and allow some of the more senior students to teach selected lecture sections. This solution would be beneficial to TAs in terms of providing direct lecture experience but would be limited to only one semester. It would also have the long-term benefit of reducing TA loads as these net new lines were returned to normal laboratory sections with the addition of new faculty.

• However, we view these options as short-term solutions or as stop-

gap measures for the following reasons. We are concerned that 1) such positions will experience high rates of turnover and that it will be difficult to continually fill these positions with excellent instructors, 2) these postdoctorates may be perceived as "second class citizens" and accordingly will have morale problems; and 3) this type of teaching-oriented position will not necessarily provide the best of postdoctoral environments for those involved.

• We feel the best long-term solution is a phased and highly targeted hiring of net new faculty members to share the load. As we have repeatedly pointed out to the administration, the number of biology faculty on our campus is much smaller than in our peer institutions in the Rockies. We are optimistic, thanks to strong and much appreciated support from the administration, that our current space problems are temporary. We feel that offering bona fide tenure-track faculty positions will continue to promote excellence and enhance our national and international reputations.

• We want to carefully hire long-term colleagues who are capable of making a major contribution to UNM and to their respective disciplines; we prefer not to continually have to replace a mobile pool of temporary colleagues.

• We also feel that part of the long-term solution is to request increases in the number of TA lines we are allotted. Not only have the number of undergraduate majors increased by 96% in the last 5 years, thus increasing our teaching obligations, but in 1992 we essentially lost 3 TA lines that were never replaced. We have been forced repeatedly to ask our museum and other core programs to volunteer their TA lines so that extra sessions of undergraduate courses could be taught, and to ask more and more from our TAs.

• If we are not given net new TA lines, we feel compelled to reduce enrollments in courses that are essentially offered as a service to other departments or colleges. Such reductions may adversely affect other spheres of activity also singled out as concerns by the committee (see point #5 below).

2. Teaching Assistant Workload, Compensation and Health Coverage

• Part of this concern has been addressed by a recent substantial raise in TA salaries, for which we are very grateful, and by the department cannibalizing 3 TA lines to increase salaries for the remaining TAs. We remain concerned about this issue because of rapidly escalating costs of living in the Albuquerque area. This issue directly impacts our recruitment efforts.

• The issue of summer support for our TAs has never been satisfactorily addressed. Unless a graduate student is able to procure support from their mentor or from an extramural grant, they may be forced to seek employment outside of the department or to work as a TA over the summer months. The rapid pace of summer courses effectively prevents these TAs from working on their research.

• Many of our TAs currently have "split teaching loads" (teaching in more than one course, requiring multiple preparations) and the standard load is still 3 laboratory sessions per week. When coupled with commitments for grading and exam proctoring, these loads are too high and severely compromise graduate student research efforts.

• Health coverage is grossly inadequate, especially for graduate students with families.

3. Do Graduate Students Move Through the Program at the Expected Rate?

• Neither the review team nor the Biology Department views this as a pressing problem at present although we remain concerned that heavy teaching loads for our TAs will slow their rate of progress. It most certainly affects their productivity which in turn affects job placement. The end result may be longer time in postdoctoral positions trying to "catch up" or taking less competitive positions.

4. Do We Offer Enough Courses to Meet Student Demands?

• Here our perception differs somewhat from the review team. We feel that, largely because of inadequate faculty size and of overwhelming undergraduate demands, that we are just barely able to offer graduate courses of sufficient breadth and depth to fulfill our students' needs. Hiring teaching postdoc would help, hiring more tenure-track faculty in key areas would be preferable.

5. Adequacy of Curriculum for Health-Oriented Undergraduates

• We agree with the Review Committee that we presently offer ample coverage of classes pursuing health occupations. In fact, some of these courses, such as Biology 247 and 248, are extremely popular among health-oriented students. However, we never are adequately compensated by administrators in the Colleges of Nursing and Pharmacy to teach these courses and unless significant new resources are forthcoming, we intend to scale back our offerings in this area.

• We agree with the review team that our pre-professional programs for

undergraduates have a low profile. We view this as yet another manifestation of insufficient manpower.

6. Graduate Students in 400-Level Classes

• We agree with the Graduate Committee's assessment that it is appropriate for our graduate students to take 400 level courses. Some of the best graduate courses in our curriculum are taught at that level.

• We disagree with their observation that there are sufficient numbers of 500-level courses available. For example, if it weren't for 500 level course offered in the Medical School and elsewhere, our graduate students in cell/molecular biology would have difficulty in finding enough purely graduate level course offerings in their area of specialization.

7. Cooperation Between Biology and Biomedical Sciences

• In 1995 we initiated a modified graduate application process that allows both Biology and Biomedical Sciences to view each other's applicants. This should increase our ability to attract qualified applicants to work in the areas of cell and molecular biology.

• Several of our faculty have joint appointments in the Medical School and we have initiated several collaborative research projects over the years. At the investigator level, there are many close ties with the Medical Faculty. We do not feel as though any institutional barriers prevent such interactions. Any perceived barriers have more to do with physical separation and differences in subdisciplines within biology.

• We agree with the Committee's recommendation to foster more interaction through providing seed money to support collaborative research initiatives.

• We agree that additional interactions to develop pre-professional programs are required. It is not clear who among our present faculty can be expected to take on this task given their preexisting work loads.

8. Improvement of Recruitment in Molecular/Cell Biology

• We agree with the Committee's recommendation to target particular sub-disciplines within cell/molecular biology for recruitment. This will be a lively subject for debate at our upcoming departmental retreat. These can function to attract a critical mass of graduate students.

• We also agree with the concept of vigorous recruitment of students,

particularly minority students, from our own state and city, with the thought that they could then be funneled into the national arena.

9. Optimal Size of the Biology Department

• We disagree with the assessment of the Committee that prospects for increasing the size of the faculty are dim. We instead recommend a phased increase in faculty size to accommodate the great interest in biology shown by UNM's undergraduate community and to consolidate and enhance our department's impact at national and international levels.

• We do not cavalierly advocate unbridled growth in our department but instead envision an eventual steady-state faculty size of 42-43 as compared to our current approximately 34 faculty.

• We realize that a department larger than 45 becomes very difficult to manage and we do not want to split. This would severely impact the collaborative and interdisciplinary nature of the department that has blossomed over the past 10 years, and that was frequently mentioned by the review team as one of our greatest strengths.

• We also realize that it is not realistic to expect sudden and large increases in faculty size. Several constraints exist, including space. However, we also recognize that current faculty are stretched to their limits and that they can not be expected to maintain their current level of effort without infusion of net new faculty lines. Furthermore, space prospects for Biology have brightened considerably making a few new faculty hires a much more feasible enterprise. Accordingly, we propose a phased and highly-targeted increase in faculty size. The expectation of significant increases in space must be realized, however, before this will be feasible.

• We advocate gradually adding a minimum of 8 net new faculty lines. The balance between organismal and cell/molecular biology would be struck to achieve the department's stated goal of strengthening cell/molecular biology while maintaining existing strengths in other areas. Several coalescing subgroups within our department are just 1 or 2 faculty members away from achieving a critical mass that would significantly enhance their ability to attract graduate students and to develop multi-investigator proposals. Such larger scale proposals built around common themes may become the most likely mechanism whereby extramural funds will be obtained in the future.

- This targeted hiring approach is in accord with the Review Committees recommendation to "resist the urge to hire a new member simply because 'an area is not now represented'."

Recommendations Freely-Generated by the Review Committee

1. A "Presidential Initiative"

- One of our most fervently held hopes is that the overall level of excellence displayed by our department will be recognized and singled out for special support. Therefore, the recommendation of a new "presidential initiative" to support this dream is a breath of fresh air to us. We embrace the committee's recommendation without reservation. It seems clear to us that appropriations through the normal budgeting process are not likely to be sufficient to meet our objectives.

- We welcome the challenge to develop a strategic plan as to how the monies will be used.

- Thematic areas around which such as presidential initiative could be constructed will be actively debated at our upcoming departmental retreat.

2. Revision of the Graduate Curriculum

- We heartily agree with the Committee's recommendation to revise the core curriculum in a way that facilitates greater interdisciplinary training. Specifically, by collapsing the current 11 core areas into the 4 suggested areas (molecular biology, cell biology, organismal biology and ecology), we could achieve this goal.

- We also note that cross-pollination between organismal and molecular aspects of biology presently freely occurs within the department anyway. In fact, the recent explosion of molecular approaches to all aspects of biological inquiry have done more to obliterate the boundaries between traditional biological disciplines and to knit us together as a department than any revision of graduate curriculum ever will.

3. Interaction Among Graduate Students

- We are of the opinion that our graduate students are highly interactive and that these interactions often cut across discipline lines.

• Our graduate policy committee will be asked to address this issue. We will encourage our graduate student organization, which is very active, to consider this matter as well.

4. Review graduate faculty every five years; adjuncts every year

• We welcome the concept of some type of regular review of individual faculty members for their suitability to mentor graduate students.

• We are concerned however about the logistics of this process. Who will carry out the review? Can it be incorporated into our ongoing annual departmental reviews or to the proposed post-tenure reviews? Will it turn out to be another significant drain on the productive time of the faculty involved in making decisions and recommendations?

• We also agree with the need to review all adjunct appointments on an annual basis. We are in the process of beginning such a review. Again we are concerned about the logistics of the process. We welcome suggestions for appropriate criteria by which to evaluate such appointments.

5. Computer Use in the Department

• We agree with all the suggestions made by the Review Committee. Access to state-of-the art computing facilities is vital to all areas of modern biology and the university must be prepared to make the financial commitment to ensure such access. Also urgently needed is additional technical support staff to help us all keep abreast of the ongoing computer revolution.

• We note that nearly all faculty members are on line and that we are trying to foster paper-less communications. The Biology Department, the LTER (Long-Term Ecological Research) site and the Museum of Southwestern Biology now also have a home page on the internet. We are currently in the process of purchasing a new departmental server to facilitate networking within the department and beyond. Significant deficiencies exist, however, in classroom accessibility. Computer literacy should be fostered among students by offering more classroom access to suitable technology.

• We welcome all attempts to speed up accounting and purchasing procedures through the use of computer networks within the department. This effort would be greatly facilitated by university-wide directives provided by the central accounting administration.

6. Recruitment of Minorities

• Again we agree with all the committee's recommendations. We have enjoyed considerably success in this area and are in a position to do more, having gotten our RIMI (Research Improvements at Minority Institutions) program refunded. With the administration's help, we have also facilitated the hiring of a college recruiter to contribute to this effort.

Special Comment on Faculty Salaries

• The single most contentious issue facing our department today is the reality that our salary levels, especially for associate and full professors, have not kept pace with those of other departments within A & S or with salaries at peer institutions. This was abundantly documented in our self-study. This is frankly inexplicable to us as we feel that by every measurable parameter we have excelled as a unit. Failure to address this reality will severely undermine the morale of the faculty and consequently, of the entire program. We have repeatedly made the plea for higher salaries, as have two different review teams. We emphasize that the success we have achieved is a very delicate entity and that failure to redress salary imbalances will run the risk of unraveling everything for which we have worked. Failure to address the issue of salaries will increase cynicism in the graduate review process across the college. Therefore, by whatever means available, we respectfully request that this item be the first item addressed by the administration. Here too a presidential initiative might be the best way to proceed.

Summary

We are grateful for the opportunity to have our graduate program reviewed. We have gained valuable insights into how to improve our program and the efforts of the Review Committee and Graduate College are sincerely appreciated. We are gratified that the review team has returned a decisive and flattering impression of our overall performance to the university administration. We also wish to thank the administration for very positive steps (increased TA salaries, support of multi-user facilities, willingness to hear our pleas for more space, etc.) they have taken on our behalf. We also wish to challenge the administration to recognize the excellence in Biology that is reflected in the Committee report, and to help us confront and overcome those obstacles that prevent us from being even better. In particular, we simply need net new resources to hire much-needed faculty, staff and TA lines and to acquire space to accommodate a burgeoning interest in biology at UNM. Strong positive action now by the University will be an important step in preservation and continued growth of one of the University's strongest units. It will have a value added component university-wide of demonstrating that reviews and self-studies can be worth the effort.

APPENDIX E

FACULTY & GRADUATE STUDENTS, FY 1994-95

GRADUATE STUDENTS AND FACULTY ADVISORS 94-95

Student	Advisor
Albrecht, D.	Kodric-Brown
Altamirano, M.	Snell
Ashby, P.	Toolson
Baker, M.	Dahm
Baldwin, J.	Natvig
Balistreri, M.	Altenbach/Brown
Barber, K.	Loker
Barlow, P.	Lowrey
Bennett, T.	Marshall
Brantley, S.	Crawford
Braun, E.	Werner-Washburne
Brown, G.	Gosz/Dahm
Buxbaum, C.	Gosz/Dahm
Cabin, R.	Marshall
Carr, D.	Dahm
Cartron, J.	Brown
Chan, R.	Lowrey
Choudhury, K.	Barton
Conwell, K.	Stricker
Crawford, M.	W-W/Nelson
Crocker, M.	Dahm
Crowell, E.	Johnson
Cryan, P.	Altenbach
Daniels(Read),D.	Lowrey
Davis, F.	Yates
DeGaffe, G.	Loker
Dolan, P.	Kerkof
Dvorachek, W.	Natvig
East(Grant), K.	Snell
Enquist, B.	Brown
Ernest, M.	Yates/Parmenter
Farley, G.	Ligon
Frazier, C.	Lowrey
Gannon, W.	Brown
Garcia, S.	Brown
Geng, Y.	Duszynski
Gido, K.	Molles
Gonzales, R.	Toolson
Gonzalez, L.	Brown
Gordon, K.	Kordic-Brown
Gray, D.	Kodric-Brown
Grogan, S.	Taylor
Haarman, T.	Crawford/Gosz
Hagelin, J.	Ligon
Hamilton, J.	Gosz
Harrison, R.	Crawford
Hatfield, C.	Milne
Hays, L.	Trujillo
Heinzelmann, F.	Crawford
Hnida, J.	Duszynski
Howe, K.	Nelson
Hraber, P.	Milne/Brown
Huckett, S,	Dahm
Johnson, V.	Crawford
Jordan, F.	Barton
Jordan, M.	Snell
Kaufman, D.	Brown
Keitt, T.	Milne
Kelt, D.	Yates/Brown
Kiflawi, M.	Kodric-Brown
Kimball, R.	Ligon
Kleyboecker, K.	Yates/Hafner
Leffler, A.J.	Johnson, G.
Leonard, P.	Loker
Loftin, S.	Gosz
Lowrey, S.	Molles
Marinakis, Y.	Gosz
Mehlman, D.	Brown
Merino, S.	Nelson/Natvig
Merola, M.	Ligon
Milford, E.	Altenbach
Mirrales, J.	Loker
Mistry, S.	Brown
Miyashiro, J.	Yates
Morrice, J.	Dahm
Mund,M.J.	Molles
Munyon, K.	Johnson
Newberry, T.	Gosz/Dahm
Nordell, S.	Brown
Norris, S.	Molles
Noskin, H.	Barton
Padilla,P.	Trujillo
Palma, R.E.	Yates
Patrick, M.	Duszynski
Perry, T.	Yates
Pierce, L.	Snell
Platania, S.	Snell
Potter, D.	Molles

GRADUATE STUDENTS AND FACULTY ADVISORS 94-95

Pratt, H.	Molles
Reed, S.	Lowrey
Roach, J.	Toolson
Robbins, J.	Vogel
Rowland, D.	Evans
Runyan, N.	Crawford
Salazar, J.	Yates
Sapp, K.	Loker
Sax, D.	Brown
Sher, A.	Marshall
Sias, D.	Loker/Dus/Snell
Stone, P.	Snell
Stuever, M.	Crawford
Sylvester, K.	Natvig
Tarbox, S.	Johnson/Evans
Taylor, R.	Brown
Thompson, T.	Toolson
Tull, D.	Kodric-Brown
Vulich, N.	Molles
Weeber, E.	Trujillo
Wilber, P.	Duszynski
Zwartjes, P.	Ligon

APPENDIX F

ANNUAL REPORT: LONG-TERM ECOLOGICAL RESEARCH PROGRAM

Sevilleta LTER Program – 1995

Sevilleta LTER II: Biome-level constraints on population, community, and ecosystem responses to climate fluctuation.

The Sevilleta LTER Program is conducted by the University of New Mexico's Department of Biology in close collaboration with the U.S. Fish and Wildlife Service. The LTER is funded by a major grant from the National Science Foundation. The Sevilleta LTER is part of a coordinated network of 18 LTER sites that span North America (including two sites in Antarctica). The Sevilleta LTER Program concentrates its research efforts on the Rio Grande Basin in central New Mexico.

The Sevilleta Long-Term Ecological Research Program (LTER) was initiated in October, 1988, and has focused on a suite of ecological hypotheses concerning climate dynamics and the responses of organisms in a biome transition zone in central New Mexico. The Sevilleta LTER research region straddles several major biomes of the Southwest, and the large geographic scale of the Sevilleta region is important for studies that range from genetics and physiology at the organismal level, to the dynamics of biome transition zones. The region is strongly influenced by the El Niño Southern Oscillation (ENSO), with major fluctuations in precipitation on semi-decadal time scales. To date, 76 LTER research papers have been published or are in press.

The Sevilleta LTER Program was recently renewed by NSF to continue its research through the year 2000. Under the renewed program, mathematical water balance models will provide a unifying synthesis of the LTER core topics and the various levels of organization studied by the participating investigators. The water balance approach will take advantage of continued studies from the first six years (e.g., vegetation, climate data, precipitation estimation from lightning, other GIS data, and remotely sensed imagery) and will provide a conceptual and quantitative context for a number of new studies that provide a richer and more complete characterization of the Sevilleta region. In addition, LTER scientists will implement a systems model of the CENTURY class in a geographical context, in which the water balance will be driven by the nonequilibrium water model. Thus, the models will provide a synthesis of existing and future data concerning the core areas of organic matter processing, primary production, and inorganic inputs. The synthesis will be of immediate use in relation to the disturbance and population core topics, including vegetation-environment relations, nutrient dynamics, species distributions and abundances, animal population studies, and population genetics. These field and laboratory studies will provide the necessary biological components that represent the contingencies and feedbacks that are both the responses to, and the constraints on, the dynamics of water.

For LTER Information, Contact: Dr. Robert R. Parmenter, Department of Biology,
167 Castetter Hall, University of New Mexico, Albuquerque, NM 87131.
Telephone: 505-277-7619 FAX: 505-277-5355 EMAIL: parmentr@sevilleta.unm.edu

---

LTER Site Description.

The University of New Mexico's Sevilleta Long-Term Ecological Research Program (LTER) in the central Rio Grande Basin is part of a National Science Foundation network of research sites that examines the responses of ecosystems to environmental changes. The Sevilleta LTER Program is located primarily at the Sevilleta National Wildlife Refuge (Socorro County, NM), but researchers also utilize areas in Cibola National Forest, Bosque del Apache National Wildlife Refuge, El Malpais National Monument, Bandelier National Monument, Pecos National Historical Park, Petroglyphs National Monument, Kirtland Air Force Base, and the USAF Melrose Range. These varied study sites include a wide range of ecosystem types, including Chihuahuan Desert, Great Plains Grassland, Great Basin Shrub-Steppe, Piñon-Juniper Woodland, Bosque Riparian Forests and Wetlands, Ponderosa Pine Forests, Mixed-Conifer Montane Forests, and Subalpine Forests and Meadows. The dominant theme of the Sevilleta LTER Program is to examine long-term changes in ecosystem attributes (e.g., population dynamics of plants and animals, nutrient cycling, hydrology, productivity, species diversity) as a result of both natural and man-made disturbances (e.g., global warming, acid rain, grazing, wildfires, droughts, and the "El Niño–Southern Oscillation" (ENSO)). Through these long-term studies, scientists will improve their understanding of the natural dynamics of ecosystems in the heterogeneous landscape of central New Mexico.

The Sevilleta LTER: A Regional Research Program

The Sevilleta research region spans the Rio Grande Basin. In the Socorro County area, study site elevations range from 1,350 m at the Rio Grande to 2,195 m in the Los Pinos Mountains in the east, to 2,797 m at Ladone Peak in the northwest, and to 3,450 m in the Magdalena Mountains to the southwest. Other important regional features include the San Agustin Plains to the west, and the Jornada del Muerto ("Journey of Death") valley to the south. The San Agustin Plains is an ancient lakebed, which has had a number of paleoecological studies that have characterized the long-term vegetation changes in the region; it is also the site of the Very Large Array Radio-telescope funded by NSF. The Jornada del Muerto extends southward some 125 km, and is largely uninhabited except for military personnel at the White Sands Missile Range, site of the first atomic bomb test. The Jornada del Muerto area is the northward extension of habitats characteristic of the Jornada LTER.

Variations in elevation, parent material and geomorphic setting have combined to produce a variety of soils and habitats ranging from thin and rocky residual soils to deep alluvium. For example, in the Sevilleta NWR outside of the floodplain, there are 3 orders, 6 suborders, 10 great groups, 17 subgroups, and 38 named series of soils represented. In the floodplain are additional Entisols and Vertisols. The variability attributed to topography, geology, and soils over a number of scales contributes directly to the variety of gradients in the region. There are wide ranges of variation in soil properties such as texture, depth, presence of argillic and calcic horizons, A-horizon organic matter content, temperature and moisture regimes, and salinity.

The imposition of climatic dynamics in combination with diverse microsite characteristics presents numerous, excellent opportunities for research on species and ecosystem dynamics.

Climatic dynamics occur over a range of time and space scales and the research region offers an opportunity to examine many of them. There is a rich set of "behaviors" in response to the dynamics of climate. At one end of the spectrum, areas as large as the Sevilleta or Magdalena Mountains can be viewed as a single pixel and will show variations in spectral reflectance from seasonal to annual time-scales and longer. At another point in the spectrum, species are subject to genetic change and demonstrate an evolutionary response to climate dynamics, at both fine and broad scales. In between these examples is a rich diversity of biological and ecological features that can be studied. The current research ranges from studies of genes to landscapes.

Although the dedicated research areas form the core of the site research, there are excellent opportunities to evaluate management influences on species or landscapes. Intensive grazing occurs outside the boundaries of the research areas and fence-line contrasts have been studied frequently. The Rio Grande provides irrigation water, and floodplain agriculture also has been studied. The juxtaposition of reserved and managed areas also allows studies of, for example, species' refuges, dispersal factors, the influence of exotics, and disturbed-land restoration.

LTER in a Biome Transition Zone

Topography, geology, soils, and hydrology, interacting with major air mass dynamics, provide a spatial and temporal template that has resulted in the region being a transition zone for a number of biomes. The region contains communities representative of, and at the intersection of, Great Plains Grassland, Great Basin Shrub-steppe, Chihuahuan Desert, Interior Chaparral, and Montane Coniferous Forest. The elevational gradient of the Magdalena Mountains provides further transitions for Interior Chaparral, Piñon-Juniper Woodland, Montane Conifer Forest, Subalpine Conifer Forest, and Subalpine Grassland (Brown 1982). The Magdalena Mountains represent the northeastern limit of Interior Chaparral and are unique in having both Subalpine Conifer Forest and Interior Chaparral on the same mountain range.

The regional location at the junction of a number of biomes is critical for quantifying (1) gradient relationships with distance, (2) the scale-dependent or independent nature of spatial variability, (3) how steep gradients influence system properties, (4) integrated responses across the region, and (5) biome responses to climate change (Gosz and Sharpe 1989).

Biodiversity

The size of the area, the heterogeneous topographic and geological features, and the characteristics of a biome transition zone have resulted in a rich diversity of species. At least 104 families, 1,201 species and 208 varieties of plants occur within the study region, and many species are at their distributional limits. For example, 54 plant species terminate their geographic distributions within the Sevilleta NWR. Some of these species represent major life forms and physiologies, such as the C_3 perennial grasses (*Oryzopsis*). The terrestrial vertebrate fauna includes 89 species of mammals, 353 birds, 58 reptiles, and 15 amphibians (Findley et al. 1975, Hubbard 1970, Snell unpubl.). A substantial proportion of these species have a

geographic distribution boundary within the region. Reptiles provide the most dramatic example, as 47 of the 58 species end their distributions in the vicinity of the Sevilleta (33 of these are northern limits of desert species). In addition, a high diversity of ground-dwelling arthropods, with distinctive habitat-specific assemblages, has been documented in recent (Crawford 1988) and ongoing studies.

An important feature of the biodiversity of this region is the number of examples of sympatric swarms of closely related species. This sympatry affords opportunities for studying the evolutionary differentiation of species. For example, six species of mice in the genus *Peromyscus* occur on the Sevilleta (a seventh may also occur), of which five have been found coexisting on a one hectare plot. Four species of *Bouteloua* grasses can be found in the same habitat, and seven species of lizards in the genus *Cnemidophorus* are present. Six of these seven lizard species are found in Sevilleta shrubland habitats, and all seven are present in the shrubland/piñon-juniper transition.

The LTER Program as an "Ecological VLA"

At a regional scale, the central New Mexico landscape is composed of a mosaic of biome types, many of which are represented by study sites in the Sevilleta LTER. The study region also straddles the boundary between major seasonal air masses (e.g., the "Arctic express" on the Great Plains influences Sevilleta's eastern edge; Great Basin polar air masses extend to Sevilleta's northern edge; the Bermuda High generates summer convective storms over the mountains, which track northeast across Sevilleta's lowlands). Superimposed on these spatial patterns are the temporal dynamics of the ENSO phenomenon. These climate phenomena are a function of orographic effects of the southern Rocky Mountains and the New Mexico basin-and-range topography.

Given the reasonably large latitudinal, longitudinal and elevational gradients found in the Sevilleta study region, Sevilleta LTER researchers have access to many representative biome "patches" that lie close to the edges of their continental distributions. The LTER capitalizes on this "biome diversity" to scale-up the population, community and ecosystem studies, and address biotic responses to climate change on a regional basis. To accomplish this, we have developed an ecological analog to NSF's Very Large Array Radiotelescope (VLA). The VLA is composed of a series of scattered, individual dish-antennae, that, when monitored simultaneously, reveal high-resolution data on obscure astronomical objects. As a rule, signal resolution increases with greater antennae numbers and spread-diameters.

In line with this approach, the LTER Program established a number of research sites (VLA antennae analogs) in various habitats ranging from Rio Grande riparian forest through grassland, shrub-steppe, desert shrubland, piñon-juniper woodland, mixed-conifer subalpine forest, and subalpine meadow. In combination with the Sevilleta LTER Program, the studies at Bosque del Apache NWR, Cibola National Forest, Kirtland Air Force Base, and four National Monuments are becoming important components of the New Mexico "Ecological VLA." With this network of sites, that spans a two-fold gradient in precipitation amount (VLA spread-diameter analog),

we can address problems that require simultaneously-measured, multi-biome data. Such topics include the role of drought or wet cycles on (1) primary production, decomposition and nutrient cycling budgets at a regional scale, (2) species diversities and trophic structures of biotic assemblages across landscapes, and (3) population dynamics and demographics of plants and animals with multi-biome distributions. The benefit of this approach is enhanced greatly by the fact that all these regional research sites are subjected to the same regional climate dynamics; e.g., a drought year for one site is a drought year for all. With the ecological VLA approach, the LTER Program can conduct a "natural experiment," examining proportionate or disproportionate responses of biome types under a similar climatic "treatment."

Description of Hypotheses Addressed by the LTER Program

The LTER Program addresses a number of ecological questions, including: 1) How do the El Niño/La Niña climate dynamics influence ecological processes, such as nutrient cycling and energy flows, as well as the population abundances and spatial/temporal distributions of plants and animals; 2) What effects do climate dynamics have on the species compositions and trophic structures of the various biome types; 3) Across the central New Mexico landscape mosaic, are there similar or disproportionate responses among communities in various biome types when subjected to a common, regional climate change (e.g., drought); 4) Are patterns of plant and animal demographics, density/abundance, survivorship, and reproduction associated with habitat-specific variables (e.g., primary production, precipitation, soil moisture, temperature); 5) How does the heterogeneity of habitat mosaics, in concert with their ecotones, influence floral and faunal distributions, and which species might be poised for habitat invasion/retreat following abrupt or long-term climate changes?

Project Description

The following pages provide provide a conceptual description of the Sevilleta research program's present status and future direction, based largely on current trends and national funding priorities in ecological research. Following this section is a more detailed projection of the long-term future of the Sevilleta LTER Program.

The primary values of the research region include: (1) the dedicated research areas occupying a large area (150,000 ha), (2) the location at transitions spanning a number of biomes, and (3) the high biological and environmental diversity. The transitions can express themselves in a number of ways, as various gradients of soils, geology, and topography change through space and time. Climate change will also express itself over a range of time and space scales and the ecological transitions of the Sevilleta region represent an opportunity to examine many of them. We anticipate that the area will demonstrate a wide range of "behaviors" in response to the dynamics of climate. For example, the 1950's drought caused marked vegetation boundary movement in much of the region. The 1988-89 La Niña event produced a strong winter drought that prevented spring production of C_3 grasses. Other wet years in the early 1990's caused increased production and expansion of C_3 perennial grasses (*Oryzopsis*). The area is expected to

provide a rich set of ecological "tools" capable of quantifying the range of responses to environmental dynamics.

The high biodiversity is related to the large area, heterogeneous habitats and the transitional area for so many biomes. This offers excellent possibilities to understand the factors that contribute to the high diversity, including the high degree of sympatry for closely related species. Population studies are focusing on the interaction between climate change and evolutionary change. Climate change may both stretch the limits of response and change the process of evolution through climate-induced changes in population structure. The effects of a dynamic and heterogeneous environment are expected to be magnified for species at the margins of their ranges. Such species, near the limits of physiological tolerance, are most likely to be affected by short time scale changes, and their population dynamics may reflect the rapid environmental changes typical of this region.

Disturbance patterns and frequencies are important forcing functions for the ecology of the area. "Disturbance" is viewed and studied across many scales that range from antelope hoof-marks in the soil crust between plants, to individual plant mortality (gap dynamics), to mammal mound activity, to frequency and intensity of flooding/scouring in ephemeral streams, to the grassland and forest fires that are increasing in frequency in the protected areas, and to decadal patterns of climate dynamics.

Landscape dynamics also receive significant attention. The hundreds of square kilometers surrounding the Sevilleta Field Station provide a natural laboratory for studying the interplay between temporal environmental variation and the spatial patterning of habitat. Viewed from afar, the extensive landscape exhibits repeating patterns of low-elevation grassy plains punctuated by ascending topography that may be viewed as a superstructure upon which environmental gradients are arrayed. As precipitation and temperature vary temporally, we expect to see spatially correlated shifts in the distributions of habitats, and consequently species distributions may be envisioned as ever expanding and contracting mosaics constrained by the shifting habitats. An interesting analogy between the landscape dynamics and the annealing of alloys provides a theoretical framework for the envisioned fluctuations. Annealing is the process of repeated heating and cooling of mixtures. Heating excites the component molecular species to seek new configurations that result in minimized free energy levels upon cooling. Variation in annual precipitation constitutes an "excitation" of the system, thereby allowing the entire collection of species to seek new "free energy levels" which may be characterized by such measures as genetic similarity, species richness (per area), primary production, or by multivariate vectors of community composition. The free energy achieved depends on the organismal, demographic, community, and ecosystem level interactions of the populations involved.

Restoration biology also is an area of intense interest in the region. The grassland and desert shrub areas of most of New Mexico were heavily grazed for centuries. The research areas allow experiments and studies of natural succession and recovery. Species reintroductions also are being planned, such as the native Desert Bighorn Sheep in the Sierra Ladrones and pronghorn antelope on the Sevilleta NWR west of the Rio Grande. The riparian cottonwood forest along the Rio Grande also has been greatly altered by harvesting, river control from impoundments,

and invasion by exotics. UNM and FWS ecologists have initiated a new research program at Bosque del Apache NWR that examines aspects of cottonwood forest restoration, focusing particularly on flood manipulations of the Rio Grande and the effects on riparian forest ecosystem processes.

Summary of "Core" Program Studies

The Sevilleta LTER Program is an integral part of the regional research effort, and has already proven to be a tremendous asset to both resident and visiting research scientists. The "long-term" nature of the LTER funding schedule (6-yr intervals) contributes a large degree of continuity and stability to the region's research program, ensuring consistent collections of important "core" data sets. The following sections summarize the various ecological research programs that continually accumulate these "core" data sets, all of which are accessible to any interested scientist. The existence of these ongoing projects greatly enhances the data bases available to scientists during all phases of project implementation, from hypothesis development and experimental design through data analysis and interpretation. The LTER "core" projects take advantage of the region's large size and valuable characteristics as a biome transition zone. The approaches are designed to emphasize a variety of scales and levels, including landscapes, phenotypic plasticity, and evolution. Numerous other ongoing studies in geology, anthropology, hydrology and geomorphology will not be discussed because of space limitations.

Meteorological Studies

The Sevilleta NWR has been instrumented with 7 fully-equipped meteorological stations and data-loggers, over 50 rain gauges, and an additional 20 collectors for precipitation chemical analysis. The Langmuir Laboratory and the Bosque del Apache riparian forest site are also equipped with meteorological stations. Historical weather records (100+ yr) for the region are available from the Socorro, NM, weather station. The LTER also acquires lightning strike data (frequencies and locations) for the entire central New Mexico region. All weather data are archived in the Sevilleta Information Management System (SIMS), and are available on request.

Vegetation Assemblage Studies

The principal, large-scale environmental gradients are related to the north-south and east-west characteristics of meteorologic dynamics and topography. Major transects 3 km wide, 30 to 50 km long are designed to traverse the transitions between biome types as well as maximize or minimize environmental gradients (e.g., temperature and precipitation) and elevation. Transects of this scale allow remote sensing analyses from aircraft and satellite to be coordinated with balloon photography and ground truthing to identify gradients in spectral reflectance, species distributions, and substrates. Within the transects, 1 km^2 plots concentrate traditional plant (as well as animal) measurements and permanent photography quadrats.

Watershed Studies

The justifications for including a watershed approach within the region are: (1) water courses amplify variation in precipitation, especially in arid and semiarid regions where there is a nonlinear relationship between variation in precipitation and variation in runoff. Hence, biological responses (demographic, functional, etc.) to changes in mean climate will be magnified along ephemeral watercourses; (2) drainage networks have a natural, hierarchical organization and scale by both size and dynamical behavior, with the smallest watersheds flowing at high frequency and low magnitude and large watersheds at low frequency and high magnitude (Yair 1983, Yair and Shachak 1982); (3) watershed studies have, as a central focus, movement of water across the landscape (the focal constraint in the region's ecology), and represent especially steep, spatially predictable, gradients in water availability; and (4) watershed-based analyses allow comparative studies with other research environments. The watershed studies are based on a conceptual view of watershed processes developed in the Negev Desert (Noy-Meir 1973, 1981). The focus is on biotic responses to the hydrologic redistribution of water as a consequence of interaction between scale, climate, local geology, and microtopography. These interactions result in spatially predictable patterns of average runoff intensity and frequency. Currently, 8 ephemeral stream sites nested within the Rio Salado drainage are studied with watershed areas spanning several orders of magnitude (4 at about 22 ha, 2 at 240 ha, 1 at 3,000 ha, 1 at 300,000 ha). The hydrologic data of U.S.G.S. for the Rio Puerco (1 million ha) and the Rio Grande (5.5 million ha) provide long-term, broad scale results. Recent studies of El Niño/La Niña effects in the region also identify temporal predictability at certain scales. The watershed studies (1) form a model for studies of other constraints which change across scales in other landscapes, and (2) form an empirical basis in attempts to link ecological studies to regional and global biogeospheric studies.

Plant and Animal Population Studies

For plant population studies, the ideas focus on the interaction between climatic change and evolutionary change. Climate change may both stretch the limits of response and change the process of evolution through climate-induced changes in population structure. For long-lived species, it is crucial to understand the limits of phenotypic response. For shorter lived species, genetic change is possible. The effects of short term climatic change on the evolutionary process is being studied by investigating the effects of La Niña and El Niño conditions on gene flow and reproduction in current populations.

Plant productivity responses to environmental dynamics may change beyond simple responses to climate due to enhanced susceptibility to herbivores. Monitoring specific interactions between a plant species and its herbivores show at what levels plants react initially to climate change. Genetic variation of spatially separated populations and changes in response to changing environment as well as altered herbivore interactions are hypothesized to control landscape patterns of species.

For animal populations, movement of individuals is being quantified, as well as dynamics of populations, abundance and distribution of species, and trophic and taxonomic composition of

assemblages of mammals (rodents, rabbits, coyotes), birds, and surface-active arthropods. Patterns and rates of genetic change (in isozymes and mitochondrial DNA clones) are monitored in rodents. These measurements are made over a sufficient range of spatial and temporal scales: (1) to document the response to heterogeneity across the entire region; and (2) to assess the detailed response of individuals and local populations to both natural environmental change and any experimental manipulations. Specimens are sorted and recorded using the Museum of Southwestern Biology (MSB) computerized information retrieval system.

Fertilization Studies

The abundance of plants from many different biomes suggests intriguing questions of nutrient limitation. Ecosystem nutrient limitation has been noted in many studies while others clearly indicate that each species responds individually to resource availability in relation to its requirements (Chapin and Shaver 1985, Gutierrez and Whitford 1987, Tilman 1982). The ability to predict strong El Niño or La Niña events offers additional capabilities to study nutrient limitation. During wet springs associated with El Niños, cool season plants are expected to be limited by nutrients rather than moisture. The warm season grasses also would be nutrient limited during an El Niño year because of nutrient immobilization by spring growth of cool season grasses. In La Niña years both cool and warm season grasses should be more water limited than nutrient limited (Lauenroth and Sims 1976). Fertilization experiments on Sevilleta grasslands have been initiated to evaluate these hypotheses.

Wildfire Studies

Natural fires have become more common on the grassland areas of the protected research areas (no cattle grazing). The studies of these natural fires shows that the influence of fire is very species specific because perennial grasses with large, belowground root systems (e.g., Blue Grama of the Great Plains flora) survive while Chihuahuan Desert species (e.g., Black Grama, desert shrubs) are depleted. Thus, in the tension zone between Chihuahuan and other biomes, fire may be a primary agent in controlling species movement due to climate dynamics. In areas where the desert species have been established for a longer period (i.e., more like desert habitat than transition habitat), the grass component has been greatly reduced and fires are rare or nonexistent. The natural fires allow studies of species and the effects on subsequent ecosystem processes. Factorial experiments have begun that relate burning and herbivore (large ungulates) activity to plant and animal community composition and ecosystem processes.

Future Research Potential

Based on current research activity in the Sevilleta region, as well as on the research activity projections considered internally and with potential visiting researchers, several major avenues of future research are anticipatedq. First are ecosystem- and community-level studies addressing the effects of climate change on biotic systems. These will include both seasonal, annual,

decadal (and longer time scales) fluctuations and trends in climatic variables, and the eventual responses in ecosystem structure and function among the various biomes represented in the Sevilleta region.

Second, a dramatic increase in population- and organism-level studies can be expected in response to the increasing concern about world-wide patterns of declining biodiversity. Included in this category of research are studies concerning the genetic variability of existing plant and animal species, and the historical implications. As mentioned above, the Sevilleta is an extemely species-rich region, and many species therein occur near the boundaries of their range distributions. As such, they are subjected to environmental conditions that, for them, may be extreme. In some cases, e.g., a species of desert millipede, the region contains only isolated, relict populations that are widespread elsewhere (Crawford et al. 1987). Comparisons of genetic similarity among these and other species populations that, over time, have colonized marginal habitats in the Rio Grande Basin, will be of prime imponance in LTER studies.

Third, an increase in the number of studies concerning the relationship between ecosystem restoration and biodiversity is anticipated. The Rio Grande Basin as a whole has been overexploited in a number of ways, particularly in the past century. Currently, however, much discussion and some research has centered on restoration of the region's semi-arid grasslands and on the marshes and gallery forests associated with the Rio Grande itself. The Sevilleta NWR contains extensive grasslands that have been free of livestock grazing for nearly two decades. Studies of the effects of livestock removal on the diversity of grassland biotas are underway and more are planned. The Rio Grande Valley has lost most of the marshland that made it one of North America's most important migration routes for birds. The introduction of salt cedar and Russian olive trees in this century has greatly compounded that loss in terms of habitat alteration. Significant strides to correct these alterations have been made by the Fish and Wildlife Service at the Bosque del Apache NWR, where federal and UNM biologists have begun collaborative studies on restoration of the original wetlands.

Fourth, a number of current and planned research projects on the Sevilleta concern the research and development of new technologies for use in ecological studies, and the application of current technologies to field research. For example, the development of field FTIR (Fourier-Transform Infra-Red) technology to measure trace atmospheric gas production over km^2 areas of natural ecosystems has been and continues to be an active program on the Sevilleta. In addition, Sevilleta researchers are developing a 3-dimensional, advanced image processing system that will calculate plant biomass from stereoscopic photographs of permanent study plots. An example of integration of existing technologies is the collaborative effort between UNM and NMIMT to correlate lightning activity during thunderstorms with realized precipitation. A 20 km^2 grid of 25 tipping-bucket rain gauges, each gauge instrumented with a data logger, provides rainfall timing and distribution data that are integrated with temporal and spatial lightning data collected simultaneously by Langmuir's Lightning Detection System. As future technology is made available for scientific use, Sevilleta LTER researchers will continue to develop practical applications of technology for ecological research.

Educational Activities: REU and UMEB Programs.

The Sevilleta Site Research Experiences for Undergraduates Program was renewed for 3 years in 1995. The Undergraduate Mentorships in Environmental Biology Program continues to operate in collaboration with the Sevilleta LTER. As in prior years, the goals of these programs are to (1) instruct undergraduates in the principles of scientific research, (2) expose the students to a wide variety of ecological research techniques and career opportunities, (3) facilitate individual student research projects, and (4) encourage students to continue their scientific education in upper-division courses and graduate school. To accomplish these goals, the programs include (1) orientation meetings and a seminar series devoted to the variety of scientific opportunities in ecological research at the Sevilleta, (2) faculty-student one-on-one instruction of hypothesis development and research protocols in ongoing Sevilleta LTER projects, (3) field and laboratory experiences in sampling and data collection, (4) implementation of individual student research projects, carried out under the guidance of student-selected faculty members, (5) a Sevilleta REU Symposium for project presentations by the students, (6) attendance at scientific meetings (12 REU and UMEB students are presenting posters at the ESA meeting in Snowbird, Utah, in August 1995), and (7) preparation and submission of project manuscripts to scientific journals. These activities integrate all theoretical and technical aspects of the LTER and promote a holistic approach to large-scale ecological studies.

Literature Cited

Brown, D. E. 1982. Biotic Communities of the American Southwest-United States and Mexico. *Desert Plants. 4:1-342.*

Chapin, F. S. III., and Shaver, G. R., 1985. Individualistic growth response of tundra plant species to environmental manipulations in the field. *Ecology 66:564-576.*

Crawford, C. S. 1988. Surface-active arthropods in a desert landscape: influences of microclimate, vegetation, and soil texture on assemblage structure. *Pedobiologia, 32:373-385.*

Crawford, C. S., Berkovitz, K., and Warburg, M. R. 1987. Regional environments, life-history patterns, and habitat use of spirostreptid millipedes in arid regions. Zoological Journal of the Linnaean Society, 89:63-88.

Findley, J. S., Harris, A. H., and Jones, C. 1975. Mammals of New Mexico. *University of New Mexico Press, Albuquerque, New Mexico.*

Gosz, J. R. and Sharpe, P. J. H., 1989. Broad-scale concepts for interactions of climate, topography, and biota at biome transitions. *Landscape Ecology*, 3:229-243.

Gutierrez, J. R., and Whitford, W. G. 1987. Chihuahuan desert annuals: importance of water and nitrogen. *Ecology 68:2032-2045.*

Hubbard, J. P. 1970. Check-list of the Birds of New Mexico. *New Mexico Ornithol. Soc. Pub. No. 3.*

Lauenroth, W. K., and Sims, P. L. 1976. Evapotranspiration from a shortgrass prairie subjected to water and nitrogen treatments. *Water Resources Research 12:437-442.*

Noy-Meir, I. 1973. Desert ecosystems: environment and producers. *Ann. Rev. Ecol. Sys. 4:25-51.*

Noy-Meir, I. 1981. Spatial effects in modelling of arid ecosystems. In: D. W. Goodall et al. (eds.). Arid-Land Ecosystems: Structure, Function and Management. Vol. 2. *International Biological Programme No. 17, Cambridge University Press, London.*

Tilman, D. 1982. Resource Competition and Community Structure. *Princeton University Press, Princeton.*

Yair, A. 1983. Hillslope hydrology water harvesting and aerial distribution of some ancient agricultural systems in the northern Negev desert. *Journal of Arid Environments, 6:283-301.*

Yair, A. and Shachak, M. 1982. A case study of energy, water and soil flow chains in an arid ecosystem. *Oecologia, 54:389-397.*

Appendix I. List of Sevilleta LTER Data Sets.

ID No.	Data Set Name	Date Started	Date Ended	Frequency of Collection
SEV001	Meteorological Data	July 1987/1989	ongoing	Daily
SEV002	Precipitation Chemistry	February 1989	ongoing	Varies/monthly
SEV003	Lightning Strike Data	1988	ongoing	Daily
SEV004	Plant Line-Intercept Transects	May 1989	ongoing	Two times/year
SEV005	Fertilizer Plots (ends 1992)	May 1989	1992	Two times/year
SEV006	Pinon Branch Demography	May 1989	ongoing	Two times/year
SEV007	Plant Water Potentials	May 1989	ongoing	Two times/year
SEV008	Rodent Populations	May 1989	ongoing	Two times/year
SEV009	Reptile Populations	1989	1990	Two times/year
SEV010	Sevilleta Arthropod Survey	April 1989	March 1990	Every 4-6 weeks
SEV011	Landset Thenatic Mapping imagery	June 84/Sept 87	ongoing	Three times/year
SEV012	Plant Litter Decomp	February 1990	ongoing	Two times/year
SEV013	Rodent and Reptile Parasites	1989	ongoing	Variable
SEV014	Sevilleta NGL Photo Plots (na)	October 1991	ongoing	Every 3 years
SEV015	Burn x Exclosure Rodent Population	September 1991	September 1994	Two times/year
SEV016	Tahiti-Darwin South. Oscill. Index	January 1982	ongoing	Monthly
SEV017	Bird Populations	May 1991	ongoing	Quarterly
SEV018	ARC/INFO GIS Layers	1988	ongoing	GPS:5-10 times/year Digitized:3-5 times/year
SEV019	Seedling Establishment	May 1989	Sep 1993	Two times/year
SEV020	Plant Phenology Transects	April 1991	1991	Two times/year
SEV021	Tipping Bucket Precipitation Grid	1989	1992	Every two weeks during the summer
SEV022	Litter Fall Collection	1990	ongoing	Every 6-10 weeks
SEV023	Rabbit Survey	January 1992	ongoing	Four times/year
SEV024	Creosote Plant Dimensions	June 1989	ongoing	Every 5 years
SEV025	Pinyon-Juniper Plant Dimensions	May 1989	ongoing	Every 5 years
SEV026	Creosote Branch Demography	May 1989	ongoing	Two times/year
SEV027	Grass Demography	May 1989	ongoing	Two times/year
SEV028	Juniper Branch Demography	May 1989	ongoing	Two times/year
SEV029	Arthropod Population	April 1989	ongoing	Every 6-10 weeks
SEV030	Burn x Exclosure Arthropods	May 1991	ongoing	Every 6-10 weeks
SEV031	AVHRR Imagery	1990	ongoing	Biweekly composited
SEV032	SPOT Imagery	June 1991	September 1991	One time/year
SEV033	MSS Imagery	1974	1977	-
SEV034	GOES-7 Cloud Cover Images	January 1993	ongoing	Hourly
SEV035	LIDET Plant Litter Decomposition	December 1991	ongoing	One time/year
SEV036	Burn-Exclosure NGL Photo Plots	September 1991	ongoing	Two times/year
SEV037	E-W C3-C4 Grass Biomass Soil	September 1989	ongoing	Two times/year
SEV038	TM Ground Truth. NGL Photos	October 1990	October 1990	One time
SEV039	Arroyo Channel Geomorphology	June 1989	August 1993	One time/year

Appendix I (Continued). List of Sevilleta LTER Data Sets.

ID No.	Data Set Name	Date Started	Date Ended	Frequency of Collection
SEV040	Arroyo Channel-Watersheds Geomorphology Videotapes	July 1989	August 1993	Five minutes
SEV041	Arroyo Channel La Cueva Geomorphology Videotapes	July 1989	August 1993	Five minutes
SEV042	SISB Surface Hydrology	June 1989	August 1993	Weekly/summers
SEV043	SISB Precip. Funnel Network	July 1989	August 1993	Weekly/summers
SEV044	SISB Leaf Decomposition	July 1990	April 1992	Variable/terminated
SEV045	SISB Sediment Organic Matter Storage	July 1992	August 1993	1-2 times/summer
SEV046	SISB Organic Tracer Redistribution	July 1990	September 1990	Variable/terminated
SEV047	SISB Sediment Micro Climate	March 1992	ongoing	Monthly
SEV048	1991 Plant Phenology Transects	1991	ongoing	Weekly to monthly
SEV049	Coyote Scat Survey	January 1992	ongoing	Four times/year
SEV050	Spectral Reflectance (SEV037)	June 1993	ongoing	Seven times/year
SEV051	Plant Species Information List	January 1989	ongoing	As needed
SEV052	Creosote/Grassland Transition Soil CN	1991	ongoing	Two times/year
SEV053	Plant Collection Information List	April 1989	ongoing	Continuous
SEV054	Ocotillo Plant Dimensions	1990	ongoing	10 Years
SEV055	East-West C3-C4 Grassland Biomass	October 1989	October 1989	One time
SEV056	East-West C3-C4 Grassland Soil	October 1989	October 1989	One time
SEV057	Fertilizer Plot (SEV002) Photoplots	October 1989	October 1989	One time
SEV058	Vegetation Transects NGL Photos	October 1989	October 1989	One time
SEV059	FTIR Transect NGL Photos	August 1989	August 1989	One time
SEV060	Large Burn NGL Photos	October 1989	October 1989	One time
SEV061	Grazing Study NGL Photos	October 1993	ongoing	One time/year

Appendix II. Brief description of how Sevilleta LTER results to date have been incorporated by agencies, planners etc. into their management plans or processes.

(1) Public Health – Hantavirus: Sevilleta LTER data have been used by Public Health officials and the Federal Centers for Disease Control and Prevention in assessing the causes and circumstances of the 1993 Hantavirus epidemic in the Southwest. In addition, the CDC continues to collaborate with the Sevilleta LTER, via a separate grant to Co-P.I. Terry Yates, to monitor rodent populations and hantavirus prevalence in wild rodents.

(2) Land Management – Fire ecology: LTER studies of ecological responses to fires in Sevilleta's grasslands have yielded data on plant and animal survivorship and recolonization. These data have convinced the Fish and Wildlife Service to discontinue fire suppression in grassland/shrubland areas of the refuge, and allow lightning-caused fires to burn in a natural fashion. FWS will continue to stop fires in woodlands, but they have recognized the value of fires in grasslands in maintaining open grass habitats and curtail shrub invasions and desertification.

(3) River Management – Flooding on the Rio Grande: With additional funding from FWS, UNM Biologists Cliff Crawford and Manuel Molles are investigating the role of artificial flooding in restoration efforts along the Rio Grande. Floods are essential for reseeding cottonwood forests, and influence various ecosystem processes, such as wood and leaf litter decomposition and soil nutrient cycling. Sevilleta LTER data from the LTER site at Bosque del Apache NWR are being used in this project. Results from the study are being incorporated into the river management plan by the various state and Federal agencies responsible for flow regulation of the Rio Grande.

(4) Water Use Policies – El Niño: LTER researchers have provided to the public and the state and local governments a continuous stream of data on the ecological and hydrological effects of the El Niño - Southern Oscillation (ENSO) dynamic in New Mexico. Considerable press and TV news coverage has raised the public awareness of the ENSO phenomenon, and some planning decisions by the State Water Engineer have been based on ENSO predictions (e.g., reduction of irrigation water allowances in 1992 after sufficient water was predicted during the El Niño of that year; extra water was allowed to flow to Texas, to pay off part of New Mexico's water debt).

(5) Rangeland Resource Use – Grazing Issues: LTER studies of livestock grazing on private ranchland adjacent to the Sevilleta NWR have been incorporated into the ongoing debate on use of western Federal lands for grazing. Policies on grazing are currently being considered at Federal and State levels.

APPENDIX G

PROFESSIONAL & TECHNICAL SUPPORT STAFF

BIOLOGY DEPARTMENT PROFESSIONAL & TECHNICAL SUPPORT STAFF
(Excluding Temporary/On-Call Personnel)
FY 1994-1995

EMPLOYEE	TITLE	GRANT P.I.	EMPLOYMENT DATES	NOTE
Adema, Coenraad	Sr. Research Associate I	Loker	05/01/93—11/30/95	
Avritt, Joy	Lab. Technician IV	Marshall	08/01/94—07/31/95	Research Greenhouse Mgr.
Berger, Lyle	Lecturer II		08/13/90—12/31/99	Freshman Lab Coordinator/T.A. Supervisor
Boucher, Ray	Lab Technician III		04/06/92—12/31/99	Media Prep Supervisor
Bradley, Michael	Res. Techologist III	Mehlhop	04/02/95—09/28/96	Staff
Brandt, Carol	Program Specialist III	Werner-Washburne	04/04/94—09/15/95	Minority Recruitment and Retention
Brunt, James	Analyst Programmer II	Gosz	01/02/89—06/30/95	
Chevalier, Philip	Lab Technician IV	Vogel	04/01/95—08/31/95	
Conwell, Kenneth	Lab Technician V		07/01/93—08/05/95	Staff, Electronmicroscopy Lab.
Cornwell, Nima	Custodian Special	Parmenter	08/04/94—06/30/96	
Côté-Schmader, Robin	Administrative Assistant	Vogel	09/09/92—06/30/95	
Cox, John	Asst. Bldg. Maint. Suprv.		04/19/93—12/31/99	Staff
Cox, Nancy	Research Technologist I	Crawford	04/11/94—04/15/96	
Craig, John	Laboratory Technician IV	White	08/10/92—06/30/95	
Curtin, Charles	Sr. Res. Assoc. Staff I	Brown	01/17/95—02/28/96	
Dennis, Beth	Graphics Designer III		08/19/85—12/31/99	Staff (.50 FTE)—Artist/Illustrator
DeWitt, John	Biol. Res. Facility Coord.	Parmenter	07/01/92—06/30/95	
Dunnum, Jon L.	Lab Technician IV	Yates	10/15/94—09/30/95	
Durkin, Paula	Res. Technologist IV	Mehlhop	08/09/94—09/28/96	
Elliott, Keith	Analyst Programmer II	Mehlhop	09/01/94—06/30/95	
Ellis, Erik	Research Engineer II	Milne	09/07/93—09/06/99	(.50 FTE)
Ellis, Lisa	Research Technologist III	Crawford	05/22/91—04/15/96	
Folsom, Michael, Ph.D.	Research Associate II	Stricker	11/23/92—09/15/95	Postdoc
Frey, Jennifer	Post-Doc	Yates	08/01/94—07/31/95	Postdoc
Friggens, Michael	Lab Technician IV	Yates	04/01/95—01/31/96	Staff
Frost, Lisa	Research Technologist III	Werner-Washburne	04/01/94—07/14/95	

EMPLOYEE	TITLE	GRANT P.I.	EMPLOYMENT DATES	NOTE
Fuge, Edwina	Sr. Res. Assoc. Staff I	Werner-Washburne	04/01/93–04/30/96	Post-Doc
Gannon, William, Ph.D.	Research Associate III		04/14/86–12/31/99	Staff–MSB Collections Manager
Geer, Susan	Res. Technologist II	Parmenter	04/17/95–10/15/95	
Gegick, Patricia	Laboratory Technician IV	Marshall	04/16/94–09/30/95	
Guha, Sujata	Res. Assoc. Staff III	Nelson	05/15/95–04/30/96	
Gurule, Frank	Animal Lab Technician II		04/05/93–12/31/99	Staff (.50 FTE)
Hamann, Kevin	Res. Tech. III	Mehlhop	06/21/95–10/30/95	
Hertel, Lynn	Research Associate II	Loker	08/18/86–11/30/95	
Hogg, Joanna	Sr. Res. Assoc. II	Miller, R.	12/01/94–11/30/95	
Kaehele, Bettie	Accountant		00/19/92–12/31/99	Staff
Kassam, Nadia	Clerical Specialist V		05/24/93–12/31/99	Staff
Kent, Vivian	Academic Support Aide II		03/05/90–12/31/99	Staff–A.S.A. & Graduate Program Coordinator
Kubler, Sharon	Department Administrator V		01/11/88–12/31/99	Staff
Kumar, Hemant	Sr. Research Assoc. Staff I	Baca	07/23/93–06/30/95	
Li, Yan-Ping	Research Assoc. Staff I	Baca	04/01/94–03/31/96	
Lightfoot, David	Research Associate III	Parmenter	02/01/92–10/15/95	
Linehan, Sarah	Clerical Specialist V	Brown	09/21/92–09/21/95	
Lopez, Margo	Lab Technician IV	Baca	06/01/95–03/31/96	
Luna (Morris), Sheila	Lab Technician IV	Nelson	05/18/94–08/31/95	
MacKeigan, Gregg	Analyst Programmer II	Parmenter	11/01/93–01/31/96 (0.50), 09/30/96 (0.50)	
Malivuk, Karl	Analyst Programmer I		10/22/90–12/31/99	Staff–Computer Mgr.
McConnell, Dee	Lab Animal Technician III		06/23/86–12/31/99	Staff (.75 FTE)
Milner, Janie S.	Lab Technician IV	Yates	10/14/94–09/30/95	
Mitchell, Randall	Sr. Res. Assoc. Staff I	Marshall	08/01/91–06/30/95	
Moore, Douglas	Research Associate II	Gosz	09/01/80–01/31/96	
Muldavin, Esteban	Sr. Research Scientist I	Mehlhop	01/01/94–06/30/96	
Mygatt, Jane	Horticulture/Curatorial Spec.		09/21/84–12/31/99	Staff–Greenhouse/Herbarium
Parmenter, Cheryl	Lab Technician IV	Yates	10/14/94–09/30/95	
Parmenter, Robert, Ph.D.	Program Director	Gosz	01/01/89–06/30/96	LTER Director

EMPLOYEE	TITLE	GRANT P.I.	EMPLOYMENT DATES	NOTE
Peck, Vicki	Res. Assoc. Staff I	Werner-Washburne	10/01/92—10/31/95	
Radjy, Sanam	Res. Technologist III	Mehlhop	06/21/95—10/30/95	
Ricci, Roy	Lab Animal Technician IV		07/07/81—12/31/99	Staff—Animal Care Supervisor
Rice, Anne	Editorial Assistant III		08/01/90—12/31/99	Staff—Desktop Publishing/Computer Assistance
Richard, Michael, DVM	Veterinarian		11/01/86—12/31/99	Staff (.50 FTE) Veterinarian
Rosenberg, George	Res. Assoc. Staff II	Miller, R.	03/27/95—11/30/96	
Shepherd, Ursula	Post-Doc		05/01/95—10/31/95	
Sherrod, John	Graphics Designer II	Platania	10/12/92—09/30/95	
Shore, Greg	Analyst Programmer II	Parmenter	02/18/91—06/30/95	
Shuster, Janice	Administrative Assistant		03/29/93—08/14/95	Staff
Smith, Felisa	Sr. Res. Assoc. Staff I		08/01/93—06/30/95	
Smith, Heather	Lab Technician IV		10/14/94—09/30/95	
Snyder, Alexandra	Research Technologist V	Platania	12/01/92—09/30/95	
Valett, Maurice	Research Associate II	Dahm	09/01/91—05/11/96	
White, Carl, Ph.D.	Research Associate III	Gosz/White	07/01/74—06/30/95	
Wood, Sarah	Res. Assoc. Staff II		05/30/95—09/28/96	
Yang, Yuelong	Sr. Res. Assoc. Staff II		06/19/95—07/01/96	
TERMINATED FY 1994—1995:				
Frank, Catherine	Clerical Specialist V	Milne	01/01/93—12/09/94	
Johnson, Alan	Visiting Res. Assoc. Prof.	Milne	10/01/94—03/31/95	
Maddux, Troy	Lab Technician V	Gosz	05/23/88—01/31/95	
Musick, Hugh	Sr. Research Associate II	Gosz	05/10/90—10/14/94	
O'Rourke, Anne	Research Technologist IV	Baca	05/01/93—07/31/94	
Parks, David	Laboratory Technician	Nelson	07/26/93—07/31/94	
Platania, Steven	Research Technologist V	Yates	07/01/86—06/30/95	
Valone, Thomas	Research Associate I	Brown	08/01/91—08/15/94	
Welford, Angela	Research Technologist IV		01/12/87—06/30/95	Staff (.50 FTE) EM Dept.

APPENDIX H

ANCILLARY FACULTY, FY 1994-95

ANCILLARY FACULTY, DEPARTMENT OF BIOLOGY
FY 1994-95

Joint Appointments (with other departments or areas):

Robert Kelley, Prof., Anatomy
Tokio Kogoma, Prof., Cell Biology
Miriam Roman, Assistant Prof., Valencia Campus
John Trotter, Prof., Anatomy
Robert Waterman, Prof., Anatomy

Adjuncts (not on UNM payroll):

Richard Aguilar, Asst. Prof., Forest Service
Carlos Blanco-Montero, Colonia Niños Héroes
Celestyn Brozek, Assoc. Prof., Lovelace Foundation
Robyn J. Burnham, Asst. Prof., Univ. of Washington
Brooks Burr, University of Illinois
Richard A. Byles, Asst. Prof., USFWS
Rex Cates, Brigham Young University
David M. Chapin, Asst. Prof., Univ. of Washington
Roger Conant, Prof., UNM
Joseph Cook
John O. Corliss, Prof., UNM
David Cowley, North Carolina State
Harry Crissman, Prof., Los Alamos National Labs
Jack Cully
Murray Dailey, Emeritus, California State-Long Beach
Glenna Dean, Research Assoc.
Lee Fitzgerald, World Wildlife Fund
Jacob Frenkel
Philip R. Fresquez, Asst. Prof., Forest Service
Deborah Goldberg, Res. Assoc. Prof., Univ. of Michigan
David Hafner, Asst. Prof., NMMNH
Bruce Hofkin, Asst. Prof.
David Hsi, Prof., NMSU
John P. Hubbard, Assoc. Prof., NMG&F
Nancy Collins Johnson
Charles Keller, University of California
Steven Kucera
William J. Kuipers, Assoc. Prof.
Juanita Ladyman, JNJ Associates
Ronald D. Ley, Prof., Lovelace Foundation
John E. Lobdell, Assoc. Prof., Univ. of Alaska
Gary M. Malvin, Asst. Prof., U. Washington, Seattle
Mary McNamara, TVI
Patricia Mehlhop, Nature Conservancy
Randall Mitchell
J. Rowland, H.W. Graphics Assoc.
Eugene Rypka, Prof., Lovelace Foundation
Kenneth Schoenly, Asst. Prof., Rockerfeller Institute
Norman Scott, Prof., DWRC
Robert Sivinski
Richard A. Smartt
Felisa Smith
Mohan Sopori, Prof., Lovelace Foundation
Anne Storey, Memorial University, Canada
George C. Stevens, Assoc. Prof.
Eleonora Trotter, Research Asst. Prof., UNM
Sandra Turner, Research Asst. Prof., UNM
John Ubelaker, Southern University, Dallas
Roby Wallace, Nature Conservancy
Paul J. Watson, Res. Asst. Prof.
John Wiens, Disting. Prof., Colorado State Univ.
Stephen Wood, Prof., Lovelace Foundation
Janet Yagoda-Shagam

Research or Visiting Status (usually on UNM payroll):

Daniel Beck, Visiting Scholar, Univeristy of Arizona
Lee Couch
Robert Dickerman
David Dreesen
Lyndall (Meuli) Erb
Michael Folsom, Research Asst. Prof.
Richard Forbes
Herbert Grover, Research Assoc.
Lynn Hertel, Research Assoc.
Richard Holloway, Res. Assoc.
Mahmood Kassam, Ryerson University, Canada
David Lightfoot
Karen Lightfoot, Energy, Minerals & National Resources Department
Gary Miller, Research Asst. Prof.
Hugh B. Musick, Jr., Research Asst. Prof.
Paul Nicoletto, Shippensburg University
Diana Northup, Res. Assoc., UNM Centennial Library
Robert Parmenter, Research Assoc. Prof.
Michael Richard, Asst. Prof., UNM
Maurice Valett
Carleton White, Research Assoc.

Herbarium Affiliates

Margaret Caffey-Moquin, M.S.
Elizabeth Crowder, B.S.
Anne Cully, M.S.
Ellen DeBruin, M.S.
Reggie Fletcher, M.S.
Paul Knight, M.S.
Yavonn Wilson-Ramsey, B.A.

Emeriti

Clifford S. Crawford
William Degenhardt
Howard Dittmer
James S. Findley
William Martin
Loren D. Potter
Marvin L. Riedesel

APPENDIX I

MUSEUM OF SOUTHWESTERN BIOLOGY ASSOCIATES

MUSEUM OF SOUTHWESTERN BIOLOGY
THE UNIVERSITY OF NEW MEXICO
FY 1994-95

CURATORIAL ASSOCIATES

ARTHROPODS

Dr. David Lightfoot
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-0191

Dr. Robert R. Parmenter
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-0191

BIRDS

Dr. Robert W. Dickerman
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-0191

Dr. John P. Hubbard
Department of Game and Fish
State Capitol
Santa Fe, NM 87503

FISHES

Mr. Steven P. Platania
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-0191

Dr. David L. Propst

HERBARIUM

Dr. David L. Bleakley
Department of Biology
The University of New Mexico 87131-1091

Dr. William W. Dunmire

Mr. Robert DeWitt Ivey

Mrs. Karen Lightfoot
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-0191

Dr. Robert C. Sivinski

HERPETOLOGY

Dr. Charles W. Painter
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-0191

Dr. Norman J. Scott, Jr.

Dr. James N. Stuart
National Biological Service
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-1091

MAMMALS

Dr. James H. Brown
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-0191

RESEARCH ASSOCIATES

BIRDS

Dr. William H. Baltosser

FISHES

Dr. Astrid Kodric-Brown
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-1091

HERBARIUM

Dr. Jack L. Carter
PO Box 1244
Silver City, NM 88062

Dr. David C. Deardorff

Dr. William E. Hevron

Dr. Charles Keller

Dr. Paul J. Knight

Dr. Esteban Muldavin
New Mexico Natural Heritage Program
Albuquerque, NM

HERPETOLOGY

Dr. Roger Conant
6900 Las Animas NE
Albuquerque, NM 87110

Dr. Lee Fitzgerald
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-1091

Dr. Thomas H. Fritts

Dr. Randy Jennings

Dr. Donald B. Miles
Department of Zoology & Biomedical Sciences
107 Irvine Hall
Ohio University
Athens, OH 45701

MAMMALS

Dr. J. Scott Altenbach
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-1091

Dr. Sydney Anderson
Department of Mammalogy
American Museum of Natural History
Central Park West & 79th Street
New York, NY 10024

Dr. Robert J. Baker
The Museum
Texas Tech University
Lubbock, TX 79409

Dr. Troy L. Best
Dept. of Zoology & Wildlife Science
331 Funchess Hall, Auburn University
Auburn AL 36849-5414

Dr. Joan C. Callahan
PO Box 3140
Hemet CA 92546

Dr. Fernando Cervantes
Departamento de Zoologia, UNAM
Ap. Postal 70-153
MEXICO, D.F. 04510

Dr. Joseph A. Cook
University of Alaska Museum
907 Yukon Dr.
Fairbanks AK 99701

Dr. Robert B. Finley, Jr.

Dr. Scott L. Gardner
2757 Amapola
Davis, CA 95616-2923

Dr. Sarah B. George
Natural History Museum, LA County
900 Exposition Blvd
Los Angeles, CA 90007

Dr. David J. Hafner
New Mexico Museum of Natural History
PO Box 7010
Albuquerque, NM 87194-7010

Dr. Bruce J. Hayward
Department of Biology
Western New Mexico University
Silver City, NM 88062

Dr. Edward J. Heske

Dr. Clyde Jones
Box 4499
The Museum
Texas Tech University
Lubbock, TX 79409

Dr. Dwight W. Moore
Biology Department
Emporia State University
Emporia, KS 66801

Dr. R. Eduardo Palma
Departamento de Biología Celular y Genética
Facultad de Medicina
Universidad de Chile, Casilla 70061
Santiago 7 Chile

Dr. James L. Patton
Department of Biology
Museum of Vertebrate Zoology
University of California
Berkeley, CA 94720

Dr. Paul J. Polechla
PO Box 2254
Bethel AK 99559

Dr. Brett R. Riddle
Department of Biological Sciences
University of Nevada
Las Vegas NV 89154-4004

Dr. Robert M. Sullivan

APPENDIX J

ALL COURSE OFFERINGS, FY 1994-95

COURSE OFFERINGS & SEMESTER CREDIT HOURS, FY 1994-95

SUMMER 1994

No.	Course Title	No. of Sections	Total No. Students	Cr.	Total SCH
121	Principles of Biology	1	52	4	208
121L	Principles of Biology Lab	3	53	—	—
221	Introductory Genetics	1	49	3	147
239	Microbiology for Health Sci	1	42	4	168
239L	Microbiology for Health Sci Lab	2	41	—	—
400	Senior Honors Thesis	4	4	V	12
402	ST/Ecosystem Res Tech	1	13	3	39
439L	Molec Cell Biol Lab	1	10	3	30
499	Undergraduate Problems	15	21	V	49
551	Graduate Problems	7	8	V	22
599	Masters Thesis	6	8	V	20
699	Dissertation	7	9	V	51
	TOTAL, SUMMER 1994	49	310		746

FALL 1994

No.	Course Title	No. of Sections	Total No. Students	Cr.	Total SCH
110	Biology Non-Majors	2	134	3	402
112L	Biology Lab for Non-Majors	2	40	1	40
121	Principles of Biology	2	691	4	2,764
121L	Principles of Biology Lab	31	697	—	—
122	Principles of Biology	1	168	4	672
122L	Principles of Biology Lab	7	165	—	—
190	Darwin/Human Nature	1	35	3	105
200	Principles of Ecology	1	24	4	96
200L	Principles of Ecology Lab	2	24	—	—
221	Introductory Genetics	2	239	3	717
222	Introductory Genetics Problems	4	80	1	80
223L	Introductory Genetics Lab	2	39	1	39
237	Human Anatomy & Phys I	2	389	3	1,167
238	Human Anatomy & Phys II	1	143	3	429
239	Microbiology for Health Sci	1	105	4	420
239L	Microbiology for Health Sci Lab	5	103	—	—
247L	Anatomy & Phys Lab I	13	314	1	314
248L	Anatomy & Phys Lab II	6	113	1	113
260	Introductory Botany	1	43	4	172
260L	Introductory Botany Lab	2	43	—	—

No.	Course Title	No. of Sections	Total No. Students	Cr.	Total SCH
300	Evolution	1	56	3	168
350	General Microbiology	1	99	4	396
350L	General Microbiology Lab	4	95	—	—
363	Flora of New Mexico	1	31	4	124
363L	Flora of New Mexico Lab	2	30	—	—
371	Invertebrate Biology	1	30	5	150
371L	Invertebrate Biology Lab	2	32	—	—
379	Conservation Biology	1	49	3	147
386	General Vertebrate Zoology	1	63	4	252
386L	General Vertebrate Zoology Lab	3	64	—	—
400	Senior Honors Thesis	3	4	V	11
402	ST/Fungal Biology	1	4	1	4
402	ST/Proteoglycans	1	1	1	1
402	ST/Avian Social Systems	1	4	2	8
402	ST/Parasites & Hosts	1	1	1	1
402	ST/Neurophysiology	1	11	3	33
402	ST/Bosque Herbivory	1	1	V	3
402	ST/Undergraduate Research	1	11	1	11
402	ST/Molecular & Cellular	1	4	1	4
402	T/Hazardous Waste	1	14	1	14
404L	Marine Invertebrate Lab	1	15	2	30
407L	Bosque Biology	1	18	3	54
418	Ecological Genetics	1	30	3	90
423	Introductory Biochemistry	1	32	3	96
428	Human Heredity	1	33	3	99
429	Molecular Cell Biology I	1	138	4	552
430	Vertebrate Physiology	1	41	4	164
435	Animal Physiology	1	33	4	132
435L	Animal Physiology Lab	2	33	—	—
440	The Soil Ecosystem	1	10	4	40
440L	Soil Ecosystem Lab	1	10	—	—
444	Molecular Biology	1	30	3	90
446	Lab Methods in Molecular Biology	1	6	4	24
447	Prosection	1	11	3	33
452	Verte Endocrinology	1	24	3	72
456	Immunology	1	81	3	243
487	Ichthyology	1	20	4	80
487L	Ichthyology Lab	1	18	—	—
489	Mammalogy	1	16	4	64
489L	Mammalogy Lab	1	16	—	—
499	Undergraduate Problems	19	31	V	66
500	New Graduate Student Seminar	1	29	1	29
502	ST/Fungal Biology	1	4	1	4
502	ST/Avian Social Systems	1	7	2	14
502	ST/Ecology Seminar	1	5	1	5
502	ST/Proteoglycans	1	1	1	1
502	ST/Cell Molecular	1	5	1	5

No.	Course Title	No. of Sections	Total No. Students	Cr.	Total SCH
502	ST/Ecology Seminar	1	5	1	5
502	ST/Hazardous Waste	1	1	1	1
502	ST/Parasites & Hosts	1	5	1	5
502	ST/Neurophysiology	1	4	3	12
502	ST/Adv Systematics	1	5	1	5
502	ST/Topicos en Biologia	1	2	V	2
502	ST/Molecular & Cellular	1	6	1	6
507L	Bosque Biology/Lab	1	5	3	15
511	Community Ecology	1	25	3	75
514	Ecosystem Studies	1	14	3	42
521	Advanced Behavioral Ecology	1	5	3	15
546	Lab Methods in Molecular Biology	1	10	4	40
548	Electron Microscopy	1	6	3	18
551	Problems	20	37	V	99
581	Advanced Cell & Molecular Biology	1	1	4	4
599	Masters Thesis	11	15	V	38
651	Advanced Field Biology	4	5	V	28
699	Dissertation	19	33	V	258
	TOTAL, FALL 1994	**231**	**5,074**		**11,512**

SPRING 1995

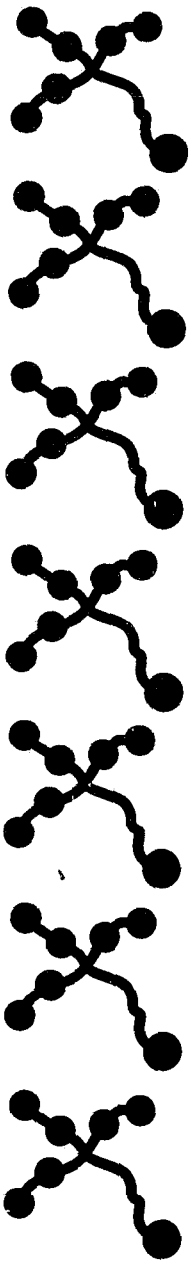
No.	Course Title	No. of Sections	Total No. Students	Cr.	Total SCH
121	Principles of Biology	1	304	4	1,216
121L	Prinicles of Biology Lab	13	303	—	—
122	Principles of Biology	2	399	4	1,596
122L	Principles of Biology Lab	17	405	—	—
123	Biology for Health Rel Sci	1	125	4	500
123L	Biology for Health Rel Sci Lab	6	127	—	—
136	Human Anatomy Physiol Non-Majors	1	81	3	243
219	Principles of Cell Biology	1	92	3	276
221	Introductory Genetics	2	191	3	573
222	Introductory Genetics Problems	4	73	1	73
237	Human Anatomy & Phys I	1	240	3	720
238	Human Anatomy & Phys II	1	257	3	771
239	Microbiology for Health Sci	1	107	4	428
239L	Microbiology for Health Sci Lab	5	107	—	—
247L	Anatomy & Phys Lab I	7	175	1	175
248L	Anatomy & Phys Lab II	11	239	1	239
249L	Human Anatomy Lab	1	19	1	19
260	Intro Botany	1	40	4	160
260L	Intro Botany Lab	2	40	—	—

No.	Course Title	No. of Sections	Total No. Students	Cr.	Total SCH
365	Human Sexuality	1	153	3	459
400	Senior Honor Thesis	12	12	V	30
401L	Biometrics Lab	1	8	4	32
402	ST/Tropical Ecology	1	3	3	9
402	ST/Ecology Seminar	1	3	1	3
402	ST/Molecular Mycology	1	2	3	6
402	ST/Groundwater Ecology	1	14	V	32
402	ST/Fungal Metabolism	1	4	V	4
402	ST/Hazardous Waste	1	7	1	7
402	ST/Parasites & Hosts	1	2	1	2
402	ST/Proteoglycans	1	1	1	1
402	ST/Space Physiology	1	9	1	9
402	ST/Systematics	1	2	1	2
402	ST/Adv Neurophysiology	1	14	3	42
402	ST/Plant Micro Inter	1	2	2	4
402	ST/Intro Comp Th/Eco	1	2	2	4
402	ST/Undergraduate Research	1	7	1	7
412	Developmental Biology	1	85	3	255
416	Histology	1	56	5	280
416L	Histology Lab	2	54	—	—
423	Introductory Biochemistry	1	62	3	186
435	Animal Physiology	1	45	4	180
435L	Animal Physiology Lab	2	45	—	—
439L	Molecular Cell Biology Lab	1	12	3	36
447	Prosection	1	9	3	27
449	Molecular Cell Biology II	1	45	3	135
450	General Virology	1	50	3	150
455	Ethology: Animal Behavior	1	57	3	171
457L	Ethology Lab: Animal Behavior	1	12	1	12
461L	Introduction to Tropical Biology	1	18	3	54
467	Evol Plant Ecology	1	5	3	15
475	Desert Field Biology	1	17	5	85
478	Plant Physiology	1	17	4	68
478L	Plant Physiology Lab	1	17	—	—
486	Ornithology	1	11	4	44
486L	Ornithology Lab	1	10	—	—
488	Herpetology	1	19	4	76
488L	Herpetology Lab	1	16	—	—
495	Limnology	1	25	3	75
497	Principles of Gene Manipul	1	32	3	96
499	Undergraduate Problems	19	42	V	94
502	ST/Cell Molecular	1	3	1	3
502	ST/Molecular Mycology	1	5	3	15
502	ST/Groundwater Ecology	1	8	V	20
502	ST/Ecology Seminar	1	2	1	2
502	ST/Fungal Metabolism	1	4	V	4
502	ST/Hazardous Waste	1	2	1	2

No.	Course Title	No. of Sections	Total No. Students	Cr.	Total SCH
502	ST/Parasites & Hosts	1	4	1	4
502	ST/Molec Res Env Str	1	5	2	10
502	ST/Systematics	1	3	1	3
502	ST/Proteoglycans	1	1	1	1
502	ST/Adv Neurophysiology	1	2	3	6
502	ST/Tropical Ecology	1	3	3	9
502	ST/Space Physiology	1	1	1	1
502	ST/Plant Micro Inter	1	4	2	8
502	ST/Intro Comp Th/Eco	1	9	2	18
502	ST/Plant Ecology	1	1	1	1
515	Research Field Biology	1	10	3	30
520	Energy & Metabolism	1	9	3	27
547	Advanced Techn Light Microscopy	1	10	4	40
549	Molecular Cell Biology II	1	5	3	15
551	Problems	20	39	V	105
563	Adv Plant Taxon	1	6	4	24
563L	Adv Plant Taxon Lab	1	5	—	—
567	Evol Plant Ecology	1	10	3	30
599	Masters Thesis	15	21	V	61
651	Advanced Field Biology	2	2	V	14
699	Dissertation	19	37	V	286
	TOTAL, SPRING 1994	**237**	**4,541**		**10,420**
	TOTALS, FY 1994-95	**517**	**9,925**		**22,678**

APPENDIX K

PROGRAM OF FOURTH ANNUAL RESEARCH DAY



Fourth Annual Research Day

Department of Biology
University of New Mexico

Friday,
April 7, 1995

Guest Speaker:

Dr. Eva Engvall

La Jolla Cancer Research Foundation

Laminin:
The Beauty
&
The Beast

A Presentation of Graduate & Undergraduate Student Research

We wish to thank the **La Jolla Cancer Research Foundation** of La Jolla, California, for their financial support of this Fourth Annual Biology Research Day.

Their willingness to invest in the undergraduate and graduate Biology students at the University of New Mexico, as a way of encouraging biological research by students who will be the next generation of research scientists, is greatly appreciated.

The La Jolla Cancer Research Foundation was founded in 1978 and is currently the home of more than 100 research scientists. Investigators at the Foundation are particularly well recognized for their contributions to defining and understanding the interactions between cell membrane receptors and extracellular molecules of the cellular environment, as related to normal differentiation and to cancer.

We also wish to thank **VWR Scientific**, **Beckman Instruments**, the **Department of Biology**, the **College of Arts & Sciences**, the **Vice Provost for Research**, and the **Graduate Student Association** for their support.

SCHEDULE of EVENTS

THURSDAY, APRIL 6

2 p.m.–5 p.m.	**Student Posters** displayed, judges preview.

FRIDAY, APRIL 7

9 a.m.–5 p.m.	**Student Posters** displayed in the main hallway of the Biology Building
9 a.m.–10:15 a.m.	**Student Oral Presentations**: Session 1, Room 100 Moderators: Margaret Werner-Washburne & Dan Albrecht
10:15 a.m.–12:15 a.m.	**Judging of Student Posters**
11:45 a.m.–1 p.m.	**Lunch**, Room 83 and adjoining central courtyard
1:00 p.m.–2:15 p.m.	**Student Oral Presentations**: Session 2, Room 100. Moderators: Astrid Kodric-Brown & Debbie Potter
2:15 p.m.–3:00 p.m.	**Posters** continued
3 p.m.–4 p.m.	**Guest Lecture**, *Dr. Eva Engvall* "Laminin: The Beauty & the Beast," Room 100
4:00 p.m.–4:30 p.m.	**Awards Ceremony.** Moderator: Diane L. Marshall
5:00 p.m.–6:30 p.m.	**Reception**, Main Hallway, Biology Building

RESEARCH DAY ORGANIZATION

COMMITTEE:

Diane Marshall
Robyn Côte-Schmader
Michelle Baker
Jim Robbins

JUDGES for ORAL PRESENTATIONS:

Jesse Hamilton
Alan Johnson
Mary Anne Nelson
Ursula Shepherd

JUDGES for POSTER PRESENTATIONS:

Sandra Brantley
Charles Buxbaum
Elisheva Crowell
Eva Engvall
Brian Enquist
Ann Evans
Lisa Frost
Laura Gonzáles-Guzmán
Joanna Hogg
Gordon Johnson
Sam Loker
David Mehlman
Gary Miller
Rob Miller
Vickie Peck
Felisa Smith
Steve Stricker
Maury Valett
Kathryn Vogel
Paul Watson

Additional thanks are extended to the many students who helped throughout the day, and to Anne Rice and Beth Dennis for preparation of this booklet.

ABOUT THE SPEAKER

The invited speaker for the Fourth Annual Biology Research Day is **Dr. Eva Engvall**, Professor, Department of Developmental Biology, University of Stockholm, and Senior Staff Scientist, La Jolla Cancer Research Foundation in La Jolla, CA. Eva's talk is entitled, **"Laminin: The Beauty and the Beast."**

Dr. Engvall graduated from the University of Stockholm in Sweden with a B.Sc. in biochemistry; she also received her Ph.D. in immunology from the University of Stockholm in 1975. She has been the recipient of many grants and awards, including the Prize in Biochemical Analysis, awarded by the German Society for Clinical Chemistry, for the development of the Enzyme-Linked Immunosorbent Assay (ELISA).

Dr. Engvall's research has centered on extracellular matrix and its role in affecting cell behavior during development and regeneration. She has focused on basement membranes and the crucial roles these structures play in the formation and proper function of tissues. Basement membranes contain members of three different protein families: laminin, collagen and heparan sulfate proteoglycan. Dr. Engvall's contribution to this field includes the initial characterization of laminin, and the demonstration that mutations in this molecule are the cause of the second most-common form of muscular dystrophy in humans. She is currently studying the molecular events leading to the degeneration of muscle in muscular dystrophies in order to potentially contribute to the diagnosis and treatment of these diseases.

ORAL PRESENTATIONS

9:00 1 SEEDLING DEMOGRAPHY OF COMPETING RIPARIAN TREE SPECIES: A NATIVE COTTONWOOD (*POPULUS FREMONTII*) AND INTRODUCED SALT CEDAR (*TAMARIX CHINENIS*).
Anna Sher

9:15 2 CHARACTERIZATIONS OF THE MOUSE MA16C MAMMARY ADENOCARCINOMA.
Patricia L. Dolan and Paul R. Kerkof

9:30 3 POSSIBLE ROLE OF TGF-β_1 IN MEDIATING ALTERED PROTEOGLYCAN SYNTHESIS FOLLOWING CYCLIC *IN VITRO* COMPRESSION.
James R. Robbins, Stephen Evanko and Kathryn Vogel

9:45 4 PREY SELECTION BY DRILLING SNAILS IN THE GULF OF CALIFORNIA.
Debra S. Tull

10:00 5 MANIPULATIVE FLOODING IN THE MIDDLE RIO GRANDE BASIN: EFFECTS ON RIPARIAN FOREST METABOLISM.
M.A. Baker, H.M. Valett and J.A. Morrice

1:00 6 A STATIONARY PHASE GENE IN *SACCHAROMYCES CEREVISIAE* IS A MEMBER OF A NOVEL, HIGHLY CONSERVED GENE FAMILY.
Edward L. Braun, Edwina K. Fuge, Pamela A. Padilla and Margaret Werner-Washburne

1:15 7 THE ROLE OF ELAIOSOME CHARACTERISTICS IN THE DISPERSAL OF *DATURA DISCOLOR* SEED BY ANTS.
Dan Albrecht and Julie Hagelin

1:30 8 PROTEINS INTERACTING WITH THE YEAST U1 snRNP PROTEIN, SNP1.
R.E. Palmer and S.W. Ruby

1:45 9 NUTRIENT COMPOSITION AND DYNAMICS OF THE RIO GRANDE AND ITS ASSOCIATED GROUNDWATER.
Douglas L. Moyer, Manuel C. Molles and H. Maurice Valett

2:00 10 CONSERVATION OF METABOLIC RATE BETWEEN TWO POPULATIONS OF THE GRASSHOPPER, *Xanthippus corallipes*.
Patricia Ashby

POSTER PRESENTATIONS

1 DIEL FLUCTUATIONS OF GROUNDWATER ELEVATIONS IN TWO FIRST-ORDER MONTANE CATCHMENTS.
M.A. Santistevan, H.M. Valett, C.N. Dahm and M.E. Campana

2 THE EFFECTS OF ENVIRONMENTAL O_2 AND CO_2 ON CUTANEOUS BLOOD FLOW IN THE LUNGLESS SALAMANDER.
Michela N. Baca and Gary Malvin

3 INDIVIDUAL DIFFERENCES IN THERMOREGULATORY BEHAVIOR AS AN EXPRESSION OF GRASSHOPPER PHYSIOLOGY.
Anne Lee

4 CONFOCAL IMAGERY OF SEXUAL DEVELOPMENT MUTANTS OF *NEUROSPORA CRASSA*.
Florence Hendren and Mary Anne Nelson

5 PATTERNS OF ABUNDANCE AND DIVERSITY IN SIMULATED ECOSYSTEMS.
Peter T. Hraber

6 KINETIC PROPERTIES OF RECOMBINANT HUMAN LIVER PHOSPHOFRUCTO-KINASE-1 PURIFIED FROM *E. COLI* AND A POSTULATED ROLE IN DOWN'S SYNDROME.
Edwin J. Weeber, Celina Stumpp and John L. Trujillo

7 ANALYSIS OF A PUTATIVE NATURAL HYBRID POPULATION IN HAWAIIN *TETRAMOLOPIUM* (Compositae: Asteraceae).
Audrey Wells and Timothy K. Lowrey

8 THE CLONING AND EXPRESSION OF RAT LIVER PHOSPHOENOLPYRUVATE CARBOXYKINASE GTP (PEPCK).
Darcy Crenshaw, Carmen Tellez, Lara Hays and John L. Trujillo

9 THE EVOLUTIONARY HISTORY OF WOODRATS IN SOUTHEASTERN UTAH OVER THE PAST 20,000 YEARS: RESULTS FROM A PRELIMINARY STUDY.
Peggy Rodriguez Moran and Felisa A. Smith

10 SHEDDING LIGHT ON THE PHYLOGENETIC POSITION OF *HORSEHAIR* WORMS.
B. Hanelt, J. Hnida, C.M. Adema, L.A. Hertel and E.S. Loker

POSTER PRESENTATIONS

Continued

11 REVERSE GENETIC ANALYSIS OF MATING-SPECIFIC GENES OF *NEUROSPORA CRASSA.*
Marque Broussard and Mary Anne Nelson

12 AQUATIC INSECTS AND ALGAE IN AN ALASKAN MOUNTAIN STREAM.
Molly B. McCormick

13 MOLECULAR STUDIES OF AN INVERTEBRATE HEMOLYMPH PROTEIN CAPABLE OF BINDING RELEVANT PARASITE ANTIGENS.
Nicolette S. Aragon, L.A. Hertel, C.M. Adema and E.S. Loker

14 PROTEOGLYCAN CONTENT OF HUMAN ROTATOR CUFF TENDONS.
Matthew Berenson, Field Blevins and Kathryn Vogel

15 LEAD BINDING BY GRAM-NEGATIVE ENCAPSULATED BACTERIA: CHARACTERIZATION OF EXOPOLYMER CAPSULE MATERIAL.
Belinda Ramirez, Larry L. Barton and Fiona Jordan

16 EFFECTS OF GRAZING ON NUTRIENT DYNAMICS IN HEADWATER STREAMS.
Mark Sewards, H.M. Valett, D. Reid and K. Nydick

17 MANGANESE SUPEROXIDE DISMUTASE ACTIVITY IN *NEUROSPORA CRASSA.*
William H. Dvorachek and Donald O. Natvig

18 HYDROLOGIC INFLUENCES ON NUTRIENT RETENTION IN HEADWATER STREAMS.
John Morrice, H. Maurice Valett, Clifford Dahm and Michael Campana

19 HYPOXIA DECREASES BODY TEMPERATURE BUT NOT METABOLIC RATE IN THE RESTING RAT.
Kathryn Young, Gary Malvin and Catherine Baldwin

20 EFFECTS OF VARIABLE IRON NUTRITION ON NITROGEN-FIXING *BRADYRHIZOBIUM JAPONICUM* NODULES IN *GLYCINE MAX.*
Michael E. Burckley

21 MOLECULAR ANALYSIS OF A SEXUAL DEVELOPMENT GENE OF *NEUROSPORA CRASSA.*
Sandra T. Merino and Mary Anne Nelson

POSTER PRESENTATIONS

Continued

22 ISOZYME ANALYSIS OF GENETIC VARIABILITY IN DIPLOID POPULATIONS OF CREOSOTE BUSH (*LARREA TRIDENTATA*) IN THE CHIHUAHUAN DESERT.
Kristy Duran, Timothy K. Lowrey and Robert Parmenter

23 THE KINETIC PROPERTIES OF PURIFIED PROTOPORPHYRINOGEN OXIDASE FROM AN ANAEROBIC BACTERIA, *DESULFOVIBRO GIGAS*.
Morinne Laughlin and Larry L. Barton

24 SPATIAL VARIATION IN SIZE OF FREMONT COTTONWOOD.
Diane Rowland, C. Faye West and Pam Kelly

25 THE ROLE OF cAMP-DEPENDANT PROTEIN KINASE IN STATIONARY PHASE YEAST *SACCHAROMYCES CEREVISIAE*.
Maria A. Gomez, Vickie M. Peck and Margaret Werner Washburne

26 BATS AS ISLANDS.
Stephen Davenport

27 MODULATION OF SYNAPTOPHYSIN IMMUNOREACTIVITY IN THE AGING RAT INTERMEDIATE PITUITARY.
A. Apodaca, L.C. Saland and D. Ramirez

28 THE *NEUROSPORA* GENOME PROJECT.
Jason Mitchell, Marianita Gorman and Donald O. Natvig

29 THE PROTEIN INTERACTIONs OF *SACCHAROMYCES CEREVISIAE BCY1* PROTEIN.
Matthew E. Crawford and Margaret Werner-Washburne

30 CELL CLUSTERS ARE A PROMINENT FEATURE OF DEGENERATED HUMAN LUMBAR INTERVERTEBRAL DISCS.
Jason Moran, Kathryn Vogel and Fred Orcutt

31 ARE THERE TEMPORAL CHANGES IN DOMINANCE IN THE MALE GUPPY (*POECILIA RETICULATA*)?
Angela Adams

32 THE CLONING AND CHARACTERIZATION OF THE *NEUROSPORA CRASSA* CATALASE GENE, *Cat-1*.
James L. Baldwin and Donald O. Natvig

POSTER PRESENTATIONS

Continued

33 HYPERTHERMIA AS A POSSIBLE CONSTRAINT ON THE DIURNAL ACTIVITY OF BATS.
Michael C. Balistreri

34 ISOLATION OF *SNZ2* AND *SNZ3*: MEMBERS OF A NOVEL GENE FAMILY OF *SACCHAROMYCES CEREVISIAE*.
Pamela A. Padilla, Edwina K. Fuge, Edward L. Braun and Margaret Werner-Washburne

35 *IN VIVO* LONGITUDINAL EXPRESSION OF THREE CLASSES OF PMN CELL SURFACE RECEPTORS AS DETERMINED BY WHOLE BLOOD CYTOMETRY IN UNIVERSITY HOSPITAL TRAUMA PATIENTS.
Ralph Di Libero, Teresa Ainsworth, Donald E. Fry and Larry A. Sklar

36 SALINITY INCREASES BUNDLE SHEATH CELL LEAKINESS IN *ATRIPLEX CANESCENS*, A C_4 HALOPHYTE.
A. Joshua Leffler, Farhana Basha and James R. Ehleringer

37 CHARACTERIZATION OF THE AUTOFLUORESCENCE OF *DESULFOVIBRIO* SPP. AND *ANABAENA VARIABILIS*.
Claire Carpenter and Larry L. Barton

38 PREFERENCE BETWEEN BAGEL VARIETIES (*PANUS JUDAICUS*) WITHIN A POPULATION OF PLANT BIOLOGISTS (*HOMO SAPIENS V. BOTANICA*).
Bob Cabin, Elisheva Crowell, Ann Evans, Chris Frasier, Gordon Johnson, Josh Leffler, Diane Marshall, Randy Mitchell, Diane Rowland and Anna Sher

ABSTRACTS: ORAL PRESENTATIONS

9:00 SEEDING DEMOGRAPHY OF COMPETING RIPARIAN TREE SPECIES: A NATIVE COTTONWOOD (*POPULUS FREMONTII*) AND INTRODUCED SALT *CEDAR (TAMARIX CHINENIS*). Anna Sher

The riparian ecosystems of the American Southwest have been dramatically impacted by anthropogenic disturbance during the last century. One of the most striking examples the the dispacement of Fremont cottonwood (*Populus fremontii*) by exotic salt cedar (*Tamarix chinensis*). Restiction of verbank flooding has limited the creation of suitable stubstrate for which cottonwood must compete with salt cedar. While the demography of mature stands has been well documented, interactions at the seedling stage have been largely overlooked. Using biotic and abiotic measurements of a natural seedling community in the Bosque del Apache along the Rio Grande, conditions under which cottonwood can become estabished in the presence of salt cedar are investigated. Whereas germination requirements are similar for the two species, after 1.5 years nearly every plot is dominated by either cottonwood or salt cedar. Thus natural conditions exist in which cottonwood can achieve dominance, which has important applications for the management of this native species.

9:15

CHARACTERIZATION OF THE MOUSE MA16C MAMMARY ADENOCARCINOMA Patricia L Dolan and Paul R. Kerkof, Ph.D.

Breast cancer is the most common form of cancer in American women. One out of eight women in the U.S. will develop breast cancer in her lifetime. Given these alarming facts, the identification of the molecular events leading to tumorigenesis and metastasis of human mammary carcinoma must be a primary goal in modern cancer research. In an attempt to identify such molecular lesions, the characterization of the mouse MA16C mammary adenocarcinoma has been undertaken as a model system. An *in vitro* cell line of the MA16C tumor has been established, and the cells, epithelial and stromal in nature, appear to be dependent on estrogen for proliferation. A screening procedure to survey for specific proto-oncogene/oncogene and tumor suppressor gene transcripts in this tumor has been performed. When compared with normal female mouse mammary gland tissue, a higher steady-state level of c-*jun* proto-oncogene and *RB1* tumor suppressor gene mRNA was observed in the MA16C tumor.

1:00 A STATIONARY PHASE GENE IN *Saccharomyces cerevisiae* IS A MEMBER OF A NOVEL, HIGHLY CONSERVED GENE FAMILY.

Edward L. Braun, Edwina K. Fuge, Pamela A. Padilla, and Margaret Werner-Washburne

The regulation of cellular growth is critical for the maintenance of viability and the control of development in most organisms. All organisms are known to regulate cellular and proliferation growth in response to environmental cues. In unicellular organisms, such as the yeast *Saccharomyces cerevisiae*, nutrients regulate growth and proliferation of many unicellular organisms. In our analysis of protein synthesis during growth to stationary phase in *S. cerevisiae*, we identified a protein, designated $p35^{SNZ1}$, because it is synthesized when cells are *sn*oozing, that shows extremely late induction during growth to stationary phase. The steady-state accumulation of the *SNZ1* mRNA increases substantially when cells enter stationary phase, several days after other stationary phase genes show increased accumulation. This pattern of mRNA accumulation is qualitatively distinct from that of previously described yeast genes. $p35^{SNZ1}$ shows over 50% identity with predicted proteins in true bacteria, archaea (archaebacteria), and eukaryotes. This degree of conservation indicates that the *SNZ*-gene family is among the most highly conserved gene families known. Low stringency hybridization has directly confirmed the presence of *SNZ*-related sequences in a large number of diverse organisms, as well as at least two additional *SNZ*-related genes in the *S. cerevisiae* genome. Diploid *snz1* mutants exhibit an increase in the overall rate and degree of sporulation. These findings suggest that *SNZ1* is a part of an ancient process that may affect developmental choices during growth arrest.

1:15 THE ROLE OF ELAIOSOME CHARACTERISTICS IN THE DISPERSAL OF Datura discolor SEED BY ANTS. Dan Albrecht & Julie Hagelin.

Elaiosomes are accessory structures on the seeds of some plants that promote dispersal of seeds by ants. Elaiosomes contain lipids which attract ants to the seeds. Furthermore, elaiosomes are generally white, highly-textured structures attached to more darkly colored seeds. We tested the hypothesis that, in addition to chemical cues, the color and texture of elaiosomes are also features important in this ant-plant interaction. We manipulated chemical, visual, and tactile aspects of Datura discolor elaiosomes to determine which characters initially attract ants to the seeds and which characters induce ants to pick up the seeds and disperse them. Seeds with manipulated elaiosomes were presented to two ant species, Pogonomyrmex californicus and Acromyrmex sp.. Our results suggest that visual characters do not contribute t › dispersal of seeds by either ant species. However, the suite of elaiosome characters tha : encourages dispersal does vary between ant species. P. californicus was attracted primari y by elaiosome chemical characters, while both chemical and tactile characters influenced the foraging behavior of A. sp.. Because D. discolor seeds are dispersed by several ant species, its elaiosomes may possess a suite of removal cues, subsets of which attract different dispersers.

1:30 PROTEINS INTERACTING WITH THE YEAST U1 snRNP PROTEIN, SNP1. R. E. Palmer[1,2] and S. W. Ruby[2], Departments of [1]Biology and [2]Cell Biology

The spliceosome, which is composed of the U1, U2, U4, U5, and U6 small nuclear ribonucleoproteins (snRNPs), catalyzes the removal (i.e. splicing) of introns from precursor messenger RNA (pre-mRNA). We are studying the role of the U1 snRNP in splicing in the yeast, *Saccharomyces cerevisiae*. The function of one of the U1 snRNP proteins, Snp1p, is being investigated through the identification of interacting proteins. We used the two hybrid transcription activation assay to screen a library of yeast sequences for Snp1p capturing protein (*SCP*) genes. We constructed the prey, a gene fusion encoding the Gal4p DNA binding domain joined to the entire coding region of Snp1p (Gbd-Snp1p). We transformed yeast cells containing the prey with the predators (i.e. a library of yeast sequences fused to the Gal4p activation domain). Only when prey and predator interact is transcription of both reporter genes, *HIS3* and *LACZ*, activated.

SCP2, one of the 3 *SCP* genes that we have isolated, encodes a fragment of Prp8p of the U5 snRNP. Prp8p is a protein essential for splicing. Recently, data from other labs has suggested that the U1 and U5 snRNPs interact together with the 5' and 3' splice sites during splicing. Thus, the Snp1p-Prp8p interaction may be important in splice site recognition. We are testing this hypothesis by biochemical assays.

0501

9:30 POSSIBLE ROLE OF TGF-β_1 IN MEDIATING ALTERED PROTEOGLYCAN SYNTHESIS FOLLOWING CYCLIC *IN VITRO* COMPRESSION.

James R. Robbins, Stephen Evanko, and Kathryn Vogel

A fibrocartilaginous tissue develops within the bovine deep flexor tendon where it wraps around bone and receives compressive forces. Cells within this tissue express a chondrocyte-like pattern of extracellular matrix gene expression. In order to test the possibility that mechanical loading might regulate martix gene expression by cells in tendon, the effects of 3 days of *in vitro* compression on proteoglycan synthesis of segments of fetal tendon have been measured. This regimen selectively increased synthesis of both aggrecan (300%) and biglycan (150%) while decorin synthesis remained unchanged. To test the possibility that TGF-β_1 mediates these changes, similar segments of fetal tendon were treated with TGF-β_1 (1 ng/ml). Northern blot analysis of TGF-β_1 treated segments and segments subjected to *in vitro* compression showed similar increases in levels of aggrecan and biglycan mRNA while levels of decorin mRNA remained unchanged following both treatments. These results are consistent with the notion that TGF-β_1 mediates changes in matrix gene expression following *in vitro* compression.

9:45 PREY SELECTION BY DRILLING SNAILS IN THE GULF OF CALIFORNIA

Debra S. Tull.

Patterns of drilling predation on co-occurring species of Tower Shells (*Turritella*) by two families of snails (rock snails, Muricidae and moon snails, Naticidae) were compared between two sites on the mainland side of the Gulf of California. Prey shells differed in thickness at average drilling position and internal volume between species and sites. Differences in drilling success rates of each predator group were also found. Shells of *T. gonostoma* were drilled more frequently by both predators at the Puerto Peñasco site, while *T. leucostoma* was drilled more frequently at Bahía Kino, although *T. leucostoma* was more abundant at each site. Both predator groups appeared to be selecting prey species in order to minimize the ratio of drilling time required to potential benefit gain.

10:00 MANIPULATIVE FLOODING IN THE MIDDLE RIO GRANDE BASIN: EFFECTS ON RIPARIAN FOREST METABOLISM.

M.A. Baker, H.M. Valett and J.A. Morrice.

Regulation of the Rio Grande has severely impacted its riparian forest, or bosque, particularly through the loss of flooding. As a consequence of this, large standing stocks of organic matter (850 gOM/m^2) have accumulated on the forest floor. We examined the effect of manipulative flooding as a restoration tool on benthic/forest floor metabolism in the Rio Grande bosque at Bosque del Apache National Wildlife Refuge, NM. Metabolism chambers (n=5) were placed in an experimental (flooded) plot and in a control (dry) plot. The 3.1 hectare experimental plot was flooded to a depth of about 1m for 4 weeks during late spring of 1994. Respiration rates (CO_2 production and O_2 consumption) were determined on several dates before, during, and after flooding. Metabolism on the floor of the flooded plot was anaerobic, as evidenced by lack of dissolved oxygen. Despite anoxic conditions, wet respiration rates (1.4 gOM/m^2/d) were almost 3 orders of magnitude greater than dry respiration rates (5.7x10^{-3} gOM/m^2/d). It is important to note that these rates are specific to respiration on the forest floor. When water column metabolism is included (2.6 gOM/m^2/d), annual manipulative flooding of the bosque reduces detritus residence time to about 7 years. This research emphasizes that restoration of aquatic-terrestrial interaction in floodplains must address anoxia and its implications for biota, as well as changes in the quantity and quality of organic matter.

1:45 NUTRIENT COMPOSITION AND DYNAMICS OF THE RIO GRANDE AND ITS ASSOCIATED GROUNDWATER

Moyer, Douglas L., Manuel C. Molles, and H. Maurice Valett

The Rio Grande, New Mexico, USA, has been regulated since the early 1950's. Only a few studies have determined how groundwater chemistry changes from beneath the managed river to below its associated riparian forest. Three transects consisting of six groundwater monitoring wells each were installed perpendicular to the Rio Grande ranging in distance from 3 m in the river to 50 m from the river. Well networks were surveyed to determine hydraulic gradients between river and riparian subsystems. The groundwater and river water were analyzed for dissolved oxygen (DO), dissolved organic carbon (DOC), ammonium-nitrogen (NH_4-N), nitrate-nitrogen (NO_3-N), and phosphate (PO_4-P). During base flow, highest concentrations of DOC (13.53 mg/L), NH_4-N (2.13 mg/L), and PO_4-P (0.022 mg/L) were observed in the interface between the river and the riparian forest. At the same time, this region was anoxic and had low concentrations of NO_3-N (0.008 mg/L). Nutrient dynamics reflect hydrologic and biological interactions occurring at the interface between riparian and riverine subsystems.

2:00 **CONSERVATION OF METABOLIC RATE BETWEEN TWO POPULATIONS OF THE GRASSHOPPER XANTHIPPUS CORALLIPES.** Patricia Ashby

Grasshoppers are excellent thermoregulators which can maintain body temperatures within a narrow, preferred range. Montane species and populations commonly maintain lower body temperatures than their low elevation counterparts, presumably as an adaptation to the cooler, mountain climates. Grasshoppers are also reported to maintain high metabolic rates at high elevations. The proposed benefit is rapid growth and development during the shorter montane growing season. Metabolic rate and field body temperatures were measured in two populations (1,600m and 3,500m) of the grasshopper Xanthippus corallipes. When calculated at observed body temperatures, field metabolic rates were essentially identical between the populations, suggesting maintenance of metabolic rate independent of habitat and perhaps a species-specific, target metabolic rate.

ABSTRACTS: POSTER PRESENTATIONS

1 DIEL FLUCTUATIONS OF GROUNDWATER ELEVATIONS IN TWO FIRST-ORDER MONTANE CATCHMENTS. M.A. Santistevan[1], H.M. Valett[1], C.N. Dahm[1], and M.E. Campana[2]. Dept. of Biology[1]., Dept. of Earth and Planetary Sciences[2]., Univ. of New Mexico.

Diel ranges in water table elevations of two first-order catchments were quantified for several in-stream and floodplain wells on a nearly-continuous basis using an automated hydrologic monitoring system. Head measurements were taken across the stream in five transects per site during late summer baseflow. At Rio Calaveras (pumaceous tuff/rhyolite lithology), in-stream diel range was lower (1.4 ± 0.1 cm, mean ± SE) than at Aspen Creek (sandstone-siltstone lithology) where water level of in-stream wells ranged 2.7 ± 1.6 cm. Data from both sites also indicate an increase in diel range with distance from stream. At Rio Calaveras floodplain diel range was 3.9 ± 4.6 cm and was lower than at Aspen Creek where floodplain water levels ranged 11.5 ± 4.1 cm. These results show the spatial complexity in the hydrogeology of headwater catchments reflecting differences in parent lithology, and the influence of surface water and riparian vegetation.

2 THE EFFECTS OF ENVIRONMENTAL O_2 AND CO_2 ON CUTANEOUS BLOOD FLOW IN THE LUNGLESS SALAMANDER. Michela N. Baca and Gary Malvin.

The lungless salamander, *Plethodon jordani,* breaths entirely through its skin. We hypothesize that amphibian skin acts like a lung where environmental 0_2 and CO_2 regulate respiratory organ blood flow. To test this hypothesis, we placed an anesthetized lungless salamander (n=9) in a small chamber with a transparent lid under a microscope. Images of capillary blood flow were recorded by video microscopy during 12-minute exposures to different environmental gases. Gas mixtures tested were: 100% O_2, 40% O_2/60% N_2, 21% O_2/89% N_2, 15% O_2/85% N_2, 8.8% O_2/91.2% N_2, 5% CO_2/95% air, and 100% N_2. Red blood cell (RBC) velocities were measured by frame-by-frame analysis of video tapes. 100% N_2 and 100% O_2 decreased RBC velocities. The other gas mixtures had no significant effect on RBC velocities. We conclude that unlike the lung, environmental CO_2 does not regulate respiratory organ blood flow in the skin-breathing salamander. Large changes in environmental [O_2] decrease respiratory organ blood flow. Because smaller changes in environmental [O_2] had no effect on cutaneous blood flow, we conclude that O_2 is not a major regulator of skin blood flow. Currently we do not know why the skin of the lungless salamander responses differently from lungs.

3 INDIVIDUAL DIFFERENCES IN THERMOREGULATORY BEHAVIOR AS AN EXPRESSION OF GRASSHOPPER PHYSIOLOGY

Anne Lee

For ectotherms which inhabit hot desert environments, thermoregulation is crucial to survival. A local species of grasshopper, *Xanthippus corallipes*, prefers a range of body temperatures from 38-46°C. However, individuals differ consistently in the body temperature they maintain in the field. For males collected from the Sevilleta National Wildlife Refuge, a significant negative correlation exists between an individual's metabolic rate and average body temperature. To further explore this relationship, I conducted experiments to determine the effect of age, genotype and enzyme thermal sensitivity on metabolism and thermoregulatory behavior. The results of this work afford us insight into the mechanistic basis for interindividual differences in metabolism and thermoregulatory behavior.

4 CONFOCAL IMAGERY OF SEXUAL DEVELOPMENT MUTANTS OF *NEUROSPORA CRASSA*

Florence Hendren and Dr. Mary Anne Nelson

Many Neurospora crassa mutants with altered sexual development have been isolated. In studies done in the early 1970's, some of these mutants were examined using either the light microscope or the electron microscope. We are extending the analysis of selected mutants with altered ascus and ascospore development. Confocal microscopy coupled with the fluorescent DNA-specific strain mithramycin (to visualize the nuclei) is being used to examine the phenotypes of the mutant strains both to verify the published descriptions of their morphologies and to obtain more precise information about their structures. Specifically, we are analyzing the number of nuclei present per ascus to determine how far through sexual development the mutant strains are proceeding. The localization of the nuclei within the ascus and nuclear morphology are also being studied. The computer-enhanced images obtained using the confocal microscope will allow a detailed look at the structures produced by these sexual development mutants.

5 PATTERNS OF ABUNDANCE AND DIVERSITY IN SIMULATED ECOSYSTEMS

Peter T. Hraber

Echo is an agent–based simulation of species interactions. Unlike individual–based models of ecosystem dynamics, communities in Echo evolve over time. Agents forage for resources to meet costs of metabolism and reproduction. Interactions between agents can take place in the form of combat, mating and trade. Complex networks of resource flows can evolve through these interactions, as in real ecosystems. Before we can accept the notion that Echo demonstrates ecologically plausible dynamics, we must compare its response with expectations from empirical systems.

This poster presents an overview of features and assumptions of Echo, and asks whether patterns of abundance and diversity resemble those found in nature. Examples of population distributions are provided. Results from evaluating the species–area scaling relation are presented. As Echo is tested and refined, we hope it will become useful in answering specific biological questions.

6 **KINETIC PROPERTIES OF RECOMBINANT HUMAN LIVER PHOSPHOFRUCTO-KINASE-1 PURIFIED FROM E. COLI AND A POSTULATED ROLE IN DOWNS SYNDROME.**

Edwin J. Weeber, Celina Stumpp and John L. Trujillo

Human liver phosphofructokinase-1 (HL-PFK-1) was cloned into an expression vector and under proper conditions has been induced, expressed and purified from E. coli. The human liver enzyme undergoes concentration-dependent association and disassociation, which allows purification exclusively by centrifugation techniques. Kinetic analysis has revealed a five-fold increase in ATP sensitivity compared to other mammalian liver enzymes. The gene encoding PFK has been mapped to band 21q22.3 in the region known to be involved in the phenotype of Downs syndrome.

7 ANALYSIS OF A PUTATIVE NATURAL HYBRID POPULATION IN HAWAIIAN TETRAMOLOPIUM (COMPOSITAE; ASTEREAE). Audrey Wells and Tim Lowrey.

Tetramolopium filiforme Hbd. is a rare endemic species now known to occur on a single ridge on the island of Oahu in the Hawaiian archipelago. The species comprises two varieties: T. filiforme var. filiforme and T. filiforme var. polyphyllum. The latter variety has been suggested to be a stabilized interspecific hybrid between T. filiforme var. filiforme and T. lepidotum since it appears to be morphologically intermediate between the two taxa. Analysis of allozyme variation and Random Amplified Polymorphic DNA (RAPD) was performed to test the hypothesis of hybrid origin. Results of the allozyme and RAPD studies showed marker alleles of the putative parental taxa present in var. polyphyllum. This provides strong evidence in support of the hybrid origin of T. filiforme var. polyphyllum.

8 **THE CLONING AND EXPRESSION OF RAT LIVER PHOSPHOENOLPYRUVATE CARBOXYKINASE GTP (PEPCK)** Darcy Crenshaw, Carmen Tellez, Lara Hays, and Dr. John Trujillo

Phosphoenolpyruvate carboxykinase (PEPCK) is the rate limiting enzyme in gluconeogenesis, a pathway important in maintaining proper blood glucose levels within the body at times of dietary stress. PEPCK's role in this pathway has led to its implication in diabetes where proper levels of sugar are not maintained in the blood. Using an E. coli expression system, the goal of these studies is to obtain enough of the PEPCK protein to allow for the mapping of the protein's functional sites and domains via site directed mutagenesis techniques.

The gene coding for PEPCK was obtained in a pBR322 holding vector from a rat liver cDNA library. Using PCR, restriction sites were added to opposite ends of the PEPCK coding region and the gene was cloned into an E. coli expression vector (Studier). The recombinant plasmid was transformed into an E. coli host and was induced with IPTG. The expression was determined by SDS PAGE gels and enzymatic analysis.

9 THE EVOLUTIONARY HISTORY OF WOODRATS IN SOUTHEASTERN UTAH OVER THE PAST 20,000 YEARS: RESULTS FROM A PRELIMINARY STUDY.

Peggy Rodriguez Moran and Felisa A. Smith.

Recent advances in molecular biology have made it possible to amplify and sequence DNA extracted from the hair follicles of museum specimens, allowing the elucidation of evolutionary relationships over historic time periods. Unfortunately, museum collections only span about 100 years. We have been able to extract DNA from fossil woodrat (*Neotoma cinerea*) pellets obtained from several paleomidden sites in southeastern Utah that are in excess of 20,000 ybp. This enables us to examine the evolutionary history of several populations of *Neotoma* in this region over long periods of time; especially over the Pleistocene/Holocene boundary. Initial work has focused on extracting, amplifying, and sequencing the cytochrome b region of the mtDNA. Preliminary results suggest that fossil pellets are an excellent source of relatively well preserved ancient DNA. Each midden site contains literally thousands of pellets, allowing replication of results. Molecular analysis of the fossil pellets is proving to be an innovative approach to studying the evolutionary history of ancient populations.

10 SHEDDING LIGHT ON THE OBSCURE PHYLOGENETIC POSITION OF HORSEHAIR WORMS (*NEMATOMORPHA*)

B. Hanelt, J. Hnida, C. M. Adema, L. A. Hertel & E. S. Loker.

Adult nematomorphs or horsehair worms are free-living, however, the larval stages are obligate parasites of arthropods. This wide-spread phylum has been virtually ignored scientifically. To determine the phylogenetic placement of this group, molecular techniques were implemented, specifically the sequencing and analysis of the 18S rDNA coding region. Adult specimens were collected from a natural stream in the north-central part of New Mexico. Using CTAB, genomic DNA was extracted, yielding approximately 12 µg of high quality DNA per individual. This DNA was digestible using several restriction enz mes. Based upon literature, primers were chosen to amplify the 18S rDNA regior using the Polymerase Chain Reaction. An oligonucleotide fragment of 1.75kb wa: amplified, subsequently cloned into a pCRII (Invitrogen) and sequenced by the cycle sequence reaction incorporating florescent dideoxynucleotides (University of Calgary). A phylogenetic tree including additional pseudocoelomates and other parasitic nematodes will be established employing manual alignment and bootstrap replication.

11 REVERSE GENETIC ANALYSIS OF MATING-SPECIFIC GENES OF *NEUROSPORA CRASSA*.

Marque Broussard and Mary Anne Nelson. Department of Biology, The University of New Mexico

Neurospora crassa is a filamentous fungus that undergoes a complex pattern of sexual development. Subtractive hybridization was used to identify many cosmids containing sexual development (*sdv*) genes (genes expressed specifically during sexual development). Three *sdv* genes (*sdv16*, *sdv17*, and *sdv18*) have recently been subcloned. The pattern of transcription of these genes in response to nitrogen starvation has been determined, as has the effect of the *A* mating type product (a transcriptional regulator) on their expression. The roles played by the products of the *sdv16*, *sdv17* and *sdv18* genes in sexual development are being investigated using a gene disruption technique. *N. crassa* is a haploid organism, so that genes are normally present in one copy per nucleus. When an extra copy of a gene is introduced by transformation, both copies of the gene are disrupted during the sexual cycle by multiple G-C to A-T transition mutations; this process is called RIP, for repeat-induced-point mutation. We are subjecting the three *sdv* genes being studied to disruption by RIP, and analyzing the progeny for dominant or recessive female or male mating-specific defects. The white ascospore phenotype associated with RIP-mediated gene disruption of the Sdv17 gene is shown.

12 AQUATIC INSECTS AND ALGAE IN AN ALASKAN MOUNTAIN STREAM

Molly B. McCormick, Museum of Southwestern Biology

Only a few studies have been published on aquatic insects and freshwater algae populations in Alaska. My study sites were in a mountain stream system in the Chugach Mountains near Chitina, Alaska. The sites included a shallow, rocky creek, a small pool in a creek, and a rocky, non-flowing pool. The streams and ponds in this area are fed by snowmelt, so water levels decreased throughout the study.

With a small handnet, I sampled algae, aquatic insects, and gastropods from three different sites over a four week period during July and August,1994. Water and substrate samples were collected at each site as were water temperature, depth, pH, and flow rate data. At a labortory, the substrate, insect, and plant life were sorted and identified, and the water samples were analyzed for conservative ions. Results indicated that populations of both flora and fauna varied between flowing and non-flowing sites.

13

MOLECULAR STUDIES OF AN INVERTEBRATE HEMOLYMPH PROTEIN CAPABLE OF BINDING RELEVANT PARASITE ANTIGENS

Nicolette S. Aragon, L.A. Hertel, C.M. Adema, & E.S. Loker

Despite having an efficient internal defense system, snails are employed as intermediate hosts by parasitic trematodes (some of which are human pathogens). Parasite survival, therefore, must depend on the ability to escape host defenses. To investigate the mechanisms involved, studies of the immunobiological interactions between the trematode *Echinostoma paraensei* and the snail *Biomphalaria glabrata* were undertaken. When *E. Paraensei* secretory-excretory products and hemolymph from infected snails were mixed, a prominent hemolymph component of 65-70kDa was precipitated. Partial microsequencing revealed this component to have high amino acid sequence homology with human fibrinogen beta-chain. For polymerase chain reaction experiments, oligonucleotides (deduced from fibrinogen-like components) were designed incorporating inosine to minimize redundancy. A 400bp DNA fragment was amplified using genomic DNA from four different *B. glabrata* strains and then used as a probe. Southern hybridization was preformed to confirm snail origin of the 400bp fragment. The fragment resulting from m-line *B. glabrata* genomic DNA was cloned and sent off for sequencing to test for further homologies with fibrinogen. Future studies include identification of the full length gene. Subsequently, functional involvement of the 65-70kDa component in internal defense of *B. glabrata* will be investigated.

14 **PROTEOGLYCAN CONTENT OF HUMAN ROTATOR CUFF TENDONS**

Matthew Berenson, +Field Blevins, and Kathryn Vogel,
Departments of Biology and +Orthopaedics, UNM

This study was designed to ask whether rotator cuff tendons of the human shoulder show altered proteoglycan content, perhaps as a result of impingement by the acromion. Rotator cuff tendons (superspinatus, infraspinatus, subscapularis) and biceps tendons were dissected from eight cadavers (ages 22-72). Glycosaminoglycans (GAGs) were isolated from papain digested tissue and quantitated spectrophotometrically. Proteoglycans (PGs) were isolated after 4M GnHCl extraction and assessed by 4-20% gradient SDS/polyacrylamide gel electrophoresis and Western blotting. The GAG content of all three cuff tendons was 3-5 fold higher than in the biceps tendon. PGs isolated from the cuff tendons included large PG, biglycan and decorin, whereas decorin was the major PG in biceps tendon. GAG amount, PG type and histological examination all indicate that the tendons of the human rotator cuff show development of fibrocartalaginous tissue, as has been noted in other tendons which are subjected to compressive loading. Whether the increase in proteoglycan content has a role in rotator cuff pathology remains to be determined.

15

LEAD BINDING BY GRAM-NEGATIVE ENCAPSULATED BACTERIA: CHARACTERIZATION OF EXOPOLYMER CAPSULE MATERIAL.
Belinda Ramirez, Dr. Larry L. Barton and Fiona Jordan

When cultures of *Moraxella bovis*, a ground water isolate, and *E. coli* HB101were exposed to 2mM lead salts, a blackish precipitate was concomittantly observed upon growth. Examination of cultures grown in lead acetate supplemented media by electron microscopy revealed the presence of electron-dense granules located outside and along the periphery of the cells. Precipitation of lead from solution is attributed to binding by exopolymer capsules produced by the cells. Capsules isolated from both *M. bovis* and *E. coli* have been shown to effectively bind and flocculate lead acetate out of solution. The fraction(s) of capsular material responsible for lead binding is currently under investigation. Negatively charged sugars and uronic acids characteristic of bacterial capsules bind positively charged lead cations removing them from solution.

16 EFFECTS OF GRAZING ON NUTRIENT DYNAMICS IN HEADWATER STREAMS.
Mark Sewards, H. M. Valett, D. Reid, and K. Nydick, Dept. of Biol., UNM
Grazing is the most widespread land use practice in the southwest. In semi-arid environments the effects of grazing are concentrated in riparian zones. Alteration of nutrient cycling in associated streams is poorly understood. The Bureau of Land Management has constructed three 600 meter grazing exclosures separated by 200 meter gaps on the Rio Senorito, a small stream in the Rio Puerco headwaters in New Mexico. We have begun a study of the effect of livestock grazing on nutrient dynamics in the Rio Senorito. Our preliminary data indicate high NH4-N concentrations, undetectable NO3-N concentrations, and low soluble reactive phosphorous concentrations in the ice-covered surface water of the stream and in the groundwater. As anticipated, there were no statistical difference in nutrient concentrations between plots during winter. These data suggests phosphorous limitation of primary production (atomic N:P ratio = 93). We hypothesize that during the growing season we will see higher rates of biological activity (production, respiration) in segments protected from livestock and more efficient cycling of N and P in these communities. Resolving the influence of grazing on nutrient retention in streams has implications for understanding ecosystem functioning and resource management decisions.

17 **Manganese superoxide dismutase activity in *Neurospora crassa*.** William H. Dvorachek and Donald O. Natvig, University of New Mexico, Albuquerque.

As is observed in almost all aerobic eucaryotes, the filamentous fungus *Neurospora crassa* possesses two different forms of superoxide dismutase, one that is mitochondrial and has manganese as a co-factor (MnSOD), and another that is cytosolic and has copper and zinc as co-factors (CuZnSOD). Superoxide dismutase scavenges the superoxide anion, O_2^-, which is both toxic and ubiquitously generated during aerobic metabolism. We recently isolated a gene that appears to encode mitochondrial MnSOD and designated this gene *sod-2*. Sequence analysis of *sod-2* suggests the possibility that an alternate pathway of expression of this gene may result in a cytosolic MnSOD activity, in addition to mitochondrial activity. We are examining *sod-2* transcript levels and MnSOD activity in mutant strains that lack CuZnSOD activity, and in copper-starved wildtype strains, in an attempt to establish if MnSOD activity levels or subcellular locations are altered in response to the reduction or elimination of CuZnSOD activity. We are also attempting to construct a mutant strain of *N. crassa* that lacks MnSOD activity. This strain will be useful in evaluating the contribution of MnSOD activity to the ability of an obligate aerobe to tolerate oxidative stress.

18 HYDROLOGIC INFLUENCES ON NUTRIENT RETENTION IN HEADWATER STREAMS.
John Morrice, H. Maurice Valett, Clifford Dahm, and Michael Campana
Nutrient retention is an important descriptor of ecosystem functioning. In stream ecosystems, nutrients are retained by a suite of hydrologic, biological and chemical processes. Hydrologic retention results from features of the stream that increase hydraulic residence time. Flowpaths routing surface water through the near-stream groundwater system are thought to be a significant source of hydrologic retention. We examined the influence of variation in alluvial sediment characteristics and seasonal changes in discharge on hydrologic retention in small montane streams in New Mexico. To determine hydrologic retention, we injected a conservative tracer (Br^-) into stream surface waters. Hydrologic retention was determined by simulations of tracer responses with a One-dimensional Transport model with Inflow and Storage (OTIS). To examine the influence of alluvial characteristics on hydrologic retention we conducted injection experiments on three streams in catchments with different parent lithologies. Hydrologic retention increased with increasing alluvial grain size and porosity. We conducted experiments on one stream under four discharge regimes to determine seasonal variation in hydrologic retention. Hydrologic retention decreased with increasing discharge. These results suggest that hydrologic retention is a spatially and temporally dynamic component of nutrient retention in stream ecosystems.

19 HYPOXIA DECREASES BODY TEMPERATURE BUT NOT METABOLIC RATE IN THE RESTING RAT
Kathryn Young, Gary Malvin, Catherine Baldwin

Hypoxia decreases body temperature in organisms ranging from protozoans to mammals. Although this response is extremely widespread among taxa, little is known of the mechanisms that mediate it. Two major hypotheses are: 1) Hypoxia decreases metabolic rate, which reduces heat production and leads to a fall in temperature. 2) Hypoxia lowers thermal set-point, eliciting thermoregulatory effector responses causing body temperature to fall. To test these hypotheses, we measured body temperature and O_2 consumption (MO_2) simultaneously in female hooded rats. Body temperature was measured by telemetry, and oxygen consumption by flow-through respirometry. During the experiment, rats (n=6) were exposed to normoxia (20.9% O_2, 2 h), hypoxia (≈10%, 3 h), then normoxia (2 h). Hypoxia decreased body temperature by 1.7 ± 0.1 °C ($p = 0.001$). Unexpectedly, mean MO_2 during normoxia was 3.6 ml O_2 (STPD) min^{-1} kg^{-1} lower than during hypoxia ($p = 0.04$). These data do not support Hypothesis 1, but are consistent with Hypothesis 2. Hypoxia appears to decrease body temperature in rats by reducing thermal set-point. The hypoxia-induced increase in MO_2 may be related to the increased work of breathing during hypoxia. Mechanisms mediating this apparent set-point reduction are unknown.

20 EFFECTS OF VARIABLE IRON NUTRITION ON NITROGEN-FIXING *BRADYRHIZOBIUM JAPONICUM* NODULES IN *GLYCINE MAX*
Michael E. Burckley

In addition to reliance upon carbon input from a host, nitrogen-fixing bacteria like *Bradyrhizobium japonicum* have other nutritional requirements. The question "How does iron nutrition effect the growth and activity of *B. japonicum* nodules?" followed. Soybean plants (*Glycine max*) grown in iron-variable hydroponic media were inoculated with *B. japonicum*, then monitored for nodule formation and growth. Results from counts and weights of harvested nodules indicated a progressive relationship between iron nutrition and nodulation rates, nodule size and overall numbers. Finally, nitrogen-fixation assays (acetylene reduction) suggested a positive role for iron nutrition in the activity of the nitrogen-fixing enzyme nitrogenase.

21 MOLECULAR ANALYSIS OF A SEXUAL DEVELOPMENT GENE OF *NEUROSPORA CRASSA*. Sandra T. Merino and Mary Anne Nelson

The sexual development process in *Neurospora crassa*, a filamentous fungus, requires the concerted effort of many genes. In *Neurospora* genes are normally present in one copy per nucleus and duplicated sequences are disrupted premeiotically in crosses. This process is known as RIP or repeated-induced point mutation. In this study, the RIP process has been used to create mutations in the *asd-3* gene (ascus development). RIP-mediated disruption of the *asd-3* gene resulted in a mutation causing a recessive sexual defect. In crosses, early sexual development is normal and many asci are formed, but ascospores are never delineated. Confocal microscopic analysis has been used to demonstrate that the morphology of *asd-3* asci is grossly aberrant. The lengths of the asci are comparable to those of wild type asci, but the width and shape vary widely. Spore formation in homozygous *asd-3* crosses is defective, with asci containing few or typically no spores. Ascospores appear immature in comparison to wild type, and no spores are shot from the fruiting body. Preliminary sequence analysis indicates that the *asd-3* gene product is a sugar-transporter. Our studies indicate that the *asd-3* gene product is essential for normal sexual development in the fungus *Neurospora crassa*.

22 **ISOZYME ANALYSIS OF GENETIC VARIABILITY IN DIPLOID POPULATIONS OF CREOSOTE BUSH (*LARREA TRIDENTATA*) IN THE CHIHUAHUAN DESERT**
Kristy Duran, Timothy K. Lowrey, and Robert Parmenter

The structure of genetic diversity in the diploid populations of Larrea tridentata in the Chihuahuan Desert was investigated by isozyme analysis. Eighteen populations comprising 542 individuals were sampled along a transect ranging from the northernmost population in New Mexico to populations in Durango, Mexico. Twelve loci were resolved. Extremely high levels of genetic polymorphism were detected. The percentage of polymorphic loci was 95%. The mean number of alleles per locus was 3.8 with two loci possessing 9 alleles. The genetic diversity (H_{es}) was 0.35. The mean Gst was 0.163 indicating that the genetic diversity largely resides within populations rather than among populations. The levels of polymorphism and genetic divers y were not significantly different in the populations at the northern edge of the species' distribution in comparison to those found in more southern New Mexican populations. However, the Mexican populations had the highest levels of genetic diversity as well as the only unique alleles detected. The values for the indices of genetic polymorphism are among the highest reported for seed plants. The factors contributing to the maintainence of this high genetic variation will be discussed.

23 THE KINETIC PROPERTIES OF PURIFIED PROTOPORPHYRINOGEN OXIDASE FROM AN ANAEROBIC BACTERIA, *DESULFOVIBRO GIGAS*.
Morinne Laughlin and Dr. Larry Barton

Protoporphyrinogen Oxidase is the enzyme which catalyzes the step in heme (cytochromes and hemoglobin) and chlorophyll synthesis that converts Proto-porphyrinogen to Protoporphyrin. The natural physiological electron acceptor in anaerobic systems is unknown. Assays were run under anaerobic conditions on Protoporphyrinogen Oxidase purified from *D. gigas* to attempt to determine the physiological electron acceptor. The change in concentration of the electron acceptors and Protoporphyrin were followed spectroscopically to determine the level of activity. The concentration changes were followed on a spectrophotometer by tracing the change in absorbance from the reduced, light-absorbing form to the oxidized from which does not absorb light. Assays were also run to test the possibility of inhibition by precursors in the biosynthetic pathway and structurally similar compounds, as well as other possible inhibitors such as Acifluorfen-methyl (an herbicide) and Vitamin B_{12}.

0511

24 **SPATIAL VARIATION IN SIZE OF FREMONT COTTONWOOD**

Diane Rowland, C. Faye West, Pam Kelley

Since the construction of dams along the Rio Grande approximately 40 years ago, Fremont cottonwood (*Populus fremontii*) has not been appreciably regenerating in New Mexico. Previous workers have shown that the existing forests are composed of trees that are approximately forty years old. However, the size variation associated with this even-aged forest is not well known. To describe in detail tree size variation and its spatial distribution, we set up ten plots, randomly spaced along a half km section of the river near Bernardo in central New Mexico. Each plot ran perpendicular to the river and extended to the end of the forest which coincides with a river diversion channel. We measured size and distance to the river for each of 481 trees. We found considerable variation in tree size, from 0.0223 to 0.7289 cm diameter at breast height. Possible factors contributing to size variation include suckering, sex-specific differences, genetic variation, and environmental variation. We examined spatial environmental variation which explained a significant portion of the size variation at this site. Size was non-linearly related to distance from the river: larger trees were closer to water sources (river and diversion channel). We hypothesize that this spatial pattern of size distribution is influenced by water relations, with the trees furthest from water sources experiencing greater water stress and growth limitation.

25 THE ROLE OF cAMP-DEPENDENT PROTEIN KINASE IN STATIONARY PHASE YEAST *SACCHAROMYCES CEREVISIAE*

Maria A. Gomez, Vickie M. Peck, and Margaret Werner-Washburne. University of New Mexico; Dept. of Biology; Albuquerque, NM 87131

We are examining the role of cAMP-dependent protein kinase (PKA) during the culture cycle, specifically in a starvation-induced, nonproliferating state referred to as stationary phase. Protein kinases are enzymes that phosphorylate proteins. As a result of this phosphorylation, proteins may alter their enzymatic activities and bring about changes in cellular metabolism. PKA is important in the regulation of many cellular processes. It is essential for cell viability and for normal progression through the cell cycle. PKA must be repressed for cells to exit the cell cycle and to enter stationary phase. PKA activity is inhibited in vivo by the regulatory subunit, Bcy1. Bcy1 is known to be required for growth on nonfermentable carbon sources and for entry and survival into stationary phase. In stationary-phase cells, Bcy1p increases 8-fold, is post-translationally modified, and is required for survival. The question we are asking is whether changes in total PKA activity parallel changes in Bcy1 abundance in stationary phase. This work was supported by NSF grants DCB-9000556 and HRD 9253051 and the Howard Hughes Medical Institute.

26 **BATS AS ISLANDS**

Stephen Davenport
Museum of Southwestern Biology

The species area relationship predicts that hosts with larger geographic ranges will support higher parasite species richness. One would predict that the species area relationship for bat body size and geographic range in relation to their ectoparasites would also fit this pattern. To test this ectoparasites were collected from 13 species of common southwestern bats. Areas of the bat species' geographic ranges were measured using planimetry. Body size was represented by mass in grams. Species area curves were created correlating geographic range and body size with parasite richness. Explanations for this deviation from theory are discussed and the idea of bats as islands for parasites is discussed.

27

MODULATION OF SYNAPTOPHYSIN IMMUNOREACTIVITY IN THE AGING RAT INTERMEDIATE PITUITARY

A. Apodaca, L.C. Saland, and D. Ramirez.

The intermediate lobe of the pituitary gland is a relatively avascular, finely innervated tissue containing proopiomelanocortin (POMC) endocrine cells. Synaptophysin (SNTP) is an integral glycoprotein in synaptic vesicle membranes and serves as a histochemical marker for synaptic density. SNTP has been used to demonstrate progessive decrease of synaptic density in the aging rat brain. This study intends to correlate SNTP immunoreactivity with age in the fibers innervating these endocrine cells. Male Sprague Dawley rats from age groups ranging from 8-17 months were sacrificed and their pituitaries fixed and embedded in paraffin for sectioning. Sections were stained with monoclonal antibody to SNTP and visualized using a biotinylated secondary antibody conjugated to peroxidase. We expect to see an age-related decrease in SNTP immunoreactivity correlating to our previous demonstration of loss of GAP-43 (a phosphoprotein associated with plasticity and neural cone outgrowth) in the intermediate lobe.

28

THE NEUROSPORA GENOME PROJECT

Jason Mitchell, Marianita Gorman, and Donald O. Natvig

Although there has been a long history of genetic research with *Neurospora crassa*, there has been no comprehensive effort to establish a fine-structure physical map of the genome or to assemble a library of cDNA clones representing a major portion of the structural genes. The *Neurospora* Genome Project (NGP) at UNM was conceived as both a research program directed toward these goals and an undergraduate training program in molecular genetics. The current goals of the NGP are to sequence and map cDNA clones representing structural genes expressed in vegetative cells and asexual spores. Clones from a cDNA library of *Neurospora crassa* cor :tructed in Lambda ZapI™ are isolated and converted to either single-stranded or double-: tranded Bluescript phagemids using a helper phage. Partial or complete nucleotide sequences ar: then obtained, and an electronic database search for homologous genes is performed. Labeled probes are constructed from cDNA sequences and used to identify corresponding genomic clones in a cosmid library. Labeled DNAs from cosmid clones are employed to determine the chromosome locations of cloned sequences using a technique based on restriction-fragment length polymorphisms.

29

THE PROTEIN INTERACTIONS OF SACCHAROMYCES CEREVISIAE BCY1 PROTEIN

Matthew E. Crawford and Margaret Werner-Washburne

The Bcy1 protein, the regulatory subunit of the cAMP-dependent protein kinase, is a key regulator of yeast metabolism. Bcy1 shares regions of amino acid sequence identity with RII, the regulatory subunit of the cAMP-dependent protein kinase in mammals. RII interacts with a variety of proteins, including a class of proteins known as anchoring proteins. Because the cAMP signaling pathway is central to cellular development and Bcy1 is the sole target of cAMP in yeast, we are looking for the yeast proteins that interact with Bcy1 with two radically different approaches. First, by using native gel electrophoresis, we have determined that Bcy1 associates with different protein complexes during the yeast culture cycle, becoming part of a large soluble complex in stationary phase. Second, by using the two-hybrid system, an *in vivo* cloning method that selects for interacting proteins, we are attempting to clone interacting genes.

30

CELL CLUSTERS ARE A PROMINENT FEATURE OF DEGENERATED HUMAN LUMBAR INTERVERTEBRAL DISCS Jason Moran, Kathryn Vogel and Fred Orcutt

This study was undertaken to quantitatively categorize cells in adult degenerated human intervertebral disc. Adult human lumbar intervertebral discs were removed as surgical specimens through a left anterior retroperitoneal approach and had been judged degenerated by several criteria including pain, MRI and CT scan. Ten discs were dissected into ~4 cm length that included outer annulus through nucleus pulposus, fixed in 4% paraformaldehyde, embedded in paraffin, and sections stained with H&E. Cells were classified as individual cells free in the extracellular matrix (type 1); single cells surrounded by fibrous pericellular lamellae that stained with hematoxylin (type 2); or cells organized in a distinct cluster (type 3). The density of type 1 cells was greatest in the outer annulus and decreased in the disc center. The type 2 cells were rare in the outer annulus and present with increased frequency in the center of the disc. These cells accounted for approximately 30% of the cells found in the central region. Cell clusters (type 3) were rare in the outer annulus. However, clusters were found in 70% of the fields studied in the central region of the disc, about 30% of all cells in the central region of the disc were in clusters, and clusters were present in all degenerated discs studied. Cell clustering may be a response to the altered metabolic or mechanical characteristics of degenerated discs.

31

ARE THERE TEMPORAL CHANGES IN DOMINANCE IN THE MALE GUPPY (POECILIA RETICULATA)?

Adams Angela

Dominance hierarchy, the factors that influence them and a correlation with male attentiveness to females was examined in the laboratory. Specific dominance behaviors were examined and tested with attentiveness to females to see if hierarchies were established and maintained. Results showed that dominance hierarchy's are established and maintained by bright males and that there is a negative correlation between dominance and attentiveness to females. These results suggest that not only is establishing dominance an important factor but attentiveness to females also plays a role in the males' ability to gain copulations.

32

The cloning and characterization of the *Neurospora crassa* catalase gene, *Cat-1*. James L. Baldwin and Donald O. Natvig, University of New Mexico, Albuquerque, 87131.

The filamentous fungus *Neurospora crassa* is believed to possess at least three bio-chemically, genetically, and developmentally distinct catalases (Cat-1, Cat-2, Cat-3). An effort to clone the *Neurospora crassa* genes was undertaken using a labeled fragment from the *Aspergillus niger* catalase-R (*catR*) gene to probe the Orbach-Sachs cosmid library of *Neurospora crassa*. Over-lapping cosmids were identified as having sequences that hybridized to the *catR* gene. A 7.7 kb kpn fragment containing the putative catalase gene was subcloned into pUC-18 and sequenced. Analysis of this sequence revealed a strong similarity with catR and other catalase genes. This fragment was found to contain the entire catalase structural gene as well extensive upstream and downstream regions. Multicent mapping has tentatively identified this new catalase gene as *cat-1* (LG IIIR). We are attempting to confirm this by examining mRNA and enzyme levels in *N. crassa* cells at different developmental stages. Similarities in the structure and amino acid sequences of catalases of *N. crassa*, *A. niger*, and *E. coli* suggest the existence of a separate, and previously unrecognized, catalase sub-family.

33 HYPERTHERMIA AS A POSSIBLE CONSTRAINT ON THE DIURNAL ACTIVITY OF BATS.

Michael C. Balistreri.

Bats are normally nocturnal, despite potential advantages of being active during daylight hours. Possible constraints to diurnal activity include predation, competition, and hyperthermia. Recently, it has been suggested that the hyperthermia theory is the most plausible explanation of the strict nocturnal flight of bats. This hypothesis was evaluated by constructing a biophysical model which considered absorbed solar radiation, endogenous metabolic heat production, work input, and heat losses through radiation, convection, conductance, and evaporation. Using direct measurements and theoretically derived values for the biophysical components of heat flux, a prediction of a critical air temperature above which a bat would be unable to fly without experiencing fatal hyperthermia was made. It is suggested that for sites between 40°S and 40°N hyperthermia may be the principal constraint on diurnal activity.

34 ISOLATION OF *SNZ2* AND *SNZ3*: MEMBERS OF A NOVEL GENE FAMILY OF *SACCHAROMYCES CEREVISIAE*. Pamela A. Padilla, Edwina K. Fuge, Edward L. Braun and Margaret Werner-Washburne

Biological functions such as cellular growth and proliferation are highly regulated processes. To better understand such functions in multicellular organisms the budding yeast *Saccharomyces cerevisiae* has been used as a model. Stationary phase is a non-proliferating state that yeast enter as a response to starvation. In order to understand the molecular mechanisms responsible for survival during stationary phase in *S. cerevisiae,* we are identifying genes expressed during stationary phase. Previously our lab identified a novel gene, *SNZ1*, induced as cells enter stationary phase and that is a member of one of the most highly conserved families known. The experiments presented here are aimed at identifying and characterizing other member of the *SNZ* gene family. To identify genes related to *SNZ1*, yeast genomic libraries were hybridized with *SNZ1*-related sequences. The yeast *SNZ* gene family has at least three members and perhaps up to five members. Two of the members, *SNZ2* and *SNZ3*, are located on the subtelomeric regions of chromosomes XIV and VI. *SNZ3* has been cloned and partially sequenced. DNA sequence analysis indicates that *SNZ2* and *SNZ3* are highly related genes. Disruption of *SNZ2* and *SNZ3* by integration of a linear DNA fragment containing a selectable marker is currently underway. Phenotypes of mutants containing this disruption will be presented.

35

IN VIVO LONGITUDINAL EXPRESSION OF THREE CLASSES OF PMN CELL SURFACE RECEPTORS AS DETERMINED BY WHOLE BLOOD CYTOMETRY IN UNIVERSITY HOSPITAL TRAUMA PATIENTS. Ralph Di Libero, Teresa Ainsworth, MD, Donald E. Fry, MD, and Larry A Sklar, PhD.

Septic Shock is a serious hospital complication; trauma patients are at particular risk for developing related syndromes. Endotoxin (LPS), a Gram negative cell wall component, is a known primary initiator. In disease states PMNs undergo significant physiological changes that may be detected by flow cytometry pior to the observed onset of clinical mainfestations. PMN expression of three cell surface receptors; L-Selectin, Mac-1, and CD14, was measured in previously healthy trauma patients. A decrease in the basal level of L-Selectin expression and the hyporesponsiveness of these cells to further shed L-Selectin upon challenge with LPS may suggest impending clinical derangement.

36 SALINITY INCREASES BUNDLE SHEATH CELL LEAKINESS IN *ATRIPLEX CANESCENS* A C_4 HALOPHYTE

A. Joshua Leffler, Farhana Basha and James R. Ehleringer

The effects of soil salinity and soil water content on gas exchange and carbon isotope discrimination were examined in *Atriplex canescens*, a C_4 halophyte. Thirty individuals were grown in a glasshouse at the University of Utah under varying salinity and drought treatments. Leaf water potential measurements indicated that soil salinity treatments effected water availability. Photosynthetic rate and leaf conductance decreased 84% and 77%, respectively in the high salinity treatment compared to control plants receiving no salt. Carbon isotope discrimination increased from 6.1‰ in the control treatment to 8.4‰ in the high salinity treatment. No such changes in carbon isotope discrimination were observed in droughted plants. These results suggest that changes in carbon isotope discrimination are due to physiological effects of salt as opposed to osmotic difficulties associated with low soil moisture. The dramatic changes in discrimination are attributed to increases in bundle sheath cell leakiness, the loss of CO_2 in parallel with Rubisco fixation, in salt stressed individuals.

37 CHARACTERIZATION OF THE AUTOFLUORESCENCE OF *DESULFOVIBRIO* SPP AND *ANABAENA VARIABILIS*

Claire Carpenter and Larry Barton

Sulfate-reducing bacteria of the genus *Desulfovibrio* and the cyanobacterium *Anabaena variabilis* contain compounds with characteristic fluorescent spectra. The fluorescence of the bisulfite reductase in *Desulfovibrio*, and PSII and phycobiliprotein in *Anabaena variabilis* was characterized using spectrofluorimetry, confocal microscopy, and flow cytometry. In addition, the effects of time, temperature, and other factors on the fluorescence of these organisms was determined. Characterization of autofluorescence can be used to identify these organisms in mixed populations.

38 PREFERENCE BETWEEN BAGEL VARIETIES (*PANUS JUDAICUS*) WITHIN A POPULATION OF PLANT BIOLOGISTS (*HOMO SAPIEN V. BOTANICA*). Bob Cabin, Elisheva Crowell, Ann Evans, Chris Frasier, Gordon Johnson, Josh Leffler, Diane Marshall, Randy Mitchell, Diane Rowland, and Anna Sher

Foraging preference between bagel varieties was investigated in a population of plant biologists at the University of New Mexico, Albuquerque. Three bagel types (plain, egg, and pumpernickel) from three origins (Fred's, New York, and Wolf's) were presented to biologists in a double-blind experiment and the responses recorded. Experimental design controlled for foraging distance and cost, and toppings were excluded. Properties of each bagel variety were noted, including overall preference. Statistical analysis were used to determine rank of bagel varieties, by type and origin. Considerations of energy expenditure are also discussed in the development of a optimal foraging model. The results of this research have important implications for the future of recently established, local bagel populations.

There are currently 102 graduate students in the Department of Biology, and more than 1,000 undergraduate students listing biology as their major or minor area of concentration. B.S., B.A., M.S. and Ph.D. degrees are offered in the areas of Botany, Evolution/Ecology, Microbiology, Molecular/ Cellular Biology and Physiology.

With 31 full-time faculty members and nearly 90 adjunct professors, the Department of Biology includes a diverse range of experience and knowledge.

Undergraduate research opportunities in the department have expanded greatly. Thanks to funding from the Howard Hughes Medical Institute, the department has been able to initiate a 5-year program which has significantly upgraded laboratory teaching in cell and molecular biology, and also provides summer and year-round opportunity for undergraduate students to do research in faculty laboratories. A 13-week program in Field Ecology is being offered for the fourth time this summer. Supported by the National Science Foundation, this program allows undergraduate students to carry out individual research projects while living at the Sevilleta National Wildlife Refuge. An additional grant from NSF supports both field and laboratory work by minority students in ecology. Applications for these programs are due in February for the following summer.

Additional new facilities for research and teaching in the Department of Biology include the AT&T computer laboratory (Room 118) and the NSF-funded Molecular Biology Laboratory (Rooms 230 and 231) and Confocal Microscopy Facility (Room 239).

Students considering study toward an advanced degree should obtain information about required preparation and tests as soon as possible. Graduate school applications are due February 1 for admission the following Fall.

Further information about all Biology programs can be obtained from the departmental office:

DEPARTMENT OF BIOLOGY
THE UNIVERSITY OF NEW MEXICO
ALBUQUERQUE, NM 87131-1091
505/277-3411

APPENDIX L

DEPARTMENTAL SEMINAR SERIES, FY 1994-95

1994-95 DEPARTMENTAL SEMINAR SERIES

Dr. Bruce Baldwin, University of California-Berkeley, "Phylogenetic Perspectives on Adaptive Radiation in the Hawaiian Silversword Complex (Compositae)."

Dr. Bruce Beehler, Conservation International/Smithsonian Institution, "Behavior and Ecology of Birds of Paradise."

Dr. Marc Bekoff, Department of Environmental, Population and Organismic Biology, University of Colorado-Boulder, "Cognitive Ethology, Social Play and Vigilance: What Might Animals Believe and Know and Who Cares?"

Dr. Craig W. Benkman, Professor, Department of Biology, New Mexico State University, Las Cruces, "Specialization and the Evolution of Crossbill Diversity."

Dr. David A. Berrigan, Department of Zoology, University of Washington, "The Evolution of Body Size and Metabolic Rate in Response to Temperature."

Dr. James Brown, Professor, Department of Biology, The University of New Mexico, "Ecological Complexity."

Dr. Mary Sue Coleman, Provost, The University of New Mexico, "Terminal Deoxynucleotidyl Transferase: From Unknown Function to Architectural Partner in Immune Diversification."

Dr. Vincent Eckhart, Department of Integrative Biology, University of California-Berkeley, "Growth Costs of Male Function in a Desert Annual Plant."

Dr. Scott A. Elias, Institute of Arctic and Alpine Research, University of Colorado-Boulder, "Insect Faunal History of the Chihuahuan Desert Since the Last Glacial Maximum: Evidence from Packrat Middens in Central New Mexico and the Southwest."

Dr. Vicki Funk, Curator of Botany, Smithsonian Institution, US Museum of Natural History, Washington DC, "Evolution of the Hawaiian Biota."

Dr. Steven Gangestad, Associate Professor, Department of Psychology, The University of New Mexico, "Sexual Selection and the Dynamics of Human Mating: The Implications for Trade-offs."

Dr. Peter Grant, Department of Ecology and Evolutionary Biology, Princeton University, "Natural Selection and Darwin's Finches."

Wally Haussamen, Assistant Chief for Research and Modeling, Division of Wildlife, NM Department of Game and Fish, "The Research Role in Managing New Mexico's Wildlife."

Dr. Chuck Hawkins, Professor, Department of Fisheries and Wildlife, Utah State University, "Influence of an Herbivore on the Long-term Dynamics of Stream Communities."

Dr. Stephen Heard, Department of Zoology, University of British Columbia, "Processing Chain Ecology: Pitcher-plant Insects and Beyond."

Dr. Gail Herman, Institute for Molecular Genetics, Baylor College of Medicine, "Tales of the Mouse X Chromosome: Mouse Models of Human X-linked Dominant Disorders."

Dr. Linden E. Higgins, Department of Zoology, University of Texas-Austin, "Ecological Consequences of Post-embryonic Developmental Pathways in Arthropods."

Dr. Judith Jaehning, Professor, Department of Biochemistry, Biophysics and Genetics, University of Colorado Health Sciences Center, "Nuclear and Mitochondrial Transcription in Yeast."

Dr. Patricia Kennedy, Department of Fishery and Wildlife Biology, Colorado State University, "Optimal Hunting Group Sizes in Lions: A Synthesis of Empirical Evidence and Theory."

Dr. Matty Knight, Biomedical Research Institute, Rockville, "Molecular Genetics of Resistance to *Schistosoma mansoni* Infection in the Snail Host *Biomphalaria glabrata*."

Dr. Andrew H. Knoll, Department of Earth and Planetary Sciences, Harvard University, "Early Evolution of Life."

Dr. Louise Lewis, Department of Botany, Duke University, "The Contribution of Nucleotide Sequence Data to the Systematics of Coccoid Green Algae."

Dr. Paul Lewis, Department of Statistics, North Carolina State University, "Maximum Likelihood Phylogeny Inference: How Well Does It Work When Model Assumptions are Violated?"

Dr. Sam Loker, Department of Biology, The University of New Mexico, "Immunology and Ecology: Are Trematode Parasites Caught in the Middle?"

Dr. Gary Malvin, Director, Cardiopulmonary Physiology, The Lovelace Institutes, Albuquerque, "Interactions between Cellular Respiration and Thermal Regulation."

Dr. Brian A. Maurer, Department of Zoology, Brigham Young University, "Conservation of Geographic Population."

Dr. John Mittler, Department of Biology, Emory University, "Ongoing Controversy over Directed/Adaptive Mutation."

Dr. Ulrich G. Mueller, Section of Neurobiology and Behavior, Cornell University, "Ecology of the Symbiosis between Fungus-growing Ants and their Fungi."

Dr. Stewart Rood, Luthridge University, Alberta, Canada, "Effects of River Damming on Riparian Communities."

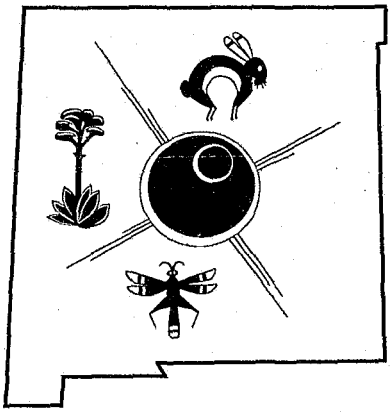
Dr. Sonia Santa Anna, Biochemistry Department, University of Wisconsin, "Analysis of Genes Involved in Gonadogenesis in *C. elegans*."

Dr. David H. Wright, Sacramento CA, "Survival and Extinction in Isolated Communities of Soil Invertebrates."

Dr. Roman I. Zlotin, Institute of Geography, Russian Academy of Sciences, Moscow, Russia, "The State of the Environment in the former Soviet Union and the Threat to the Rest of the World."

APPENDIX M

BIOLOGICAL SOCIETY OF NEW MEXICO ANNUAL NEWSLETTER CY 1994



THE BIOLOGICAL SOCIETY OF NEW MEXICO

VOLUME 10,

DECEMBER 1994

Page

DEPARTMENT NEWS 2-10
Third Annual Research Day ... 2
Rio Grande Basin Joint Effort . 2
RIMI Program Update 3
Hughes Program Update 4
Where Edges Meet 5
Tropical Biology Course 6
Behind the Scenes 7
Museum of Southwestern Biology 8
FACULTY HIGHLIGHTS 9-11
Diane Marshall, Potter Chair . 9
Bud Riedesel, Prof. Emeritus . 9
Cliff Crawford, Prof. Emeritus 10-11
ALUMNI NEWS 12-13
OTHER ALUMNI, FRIENDS & SUPPORTERS 13
BSNM 14-15

Greetings!

by J. David Ligon
Professor and Chair

As we all know, or eventually learn, time has a way of marching on. This greeting is my fourth and last as Chair of Biology. Next year our new Chair-elect, Professor Terry Yates, will be communicating with you from this forum. Serving as Chair over the past three and a half years has been a highly rewarding experience for me. What has made it so is the continuation of the successes of our departmental initiatives and programs, which are generated by our faculty.

One of our major problems in recent years has been a real space crunch, which our very success has helped to bring about; along with a research-oriented faculty comes the need for high-quality research space. This, together with the fact that we now have almost 800 undergraduate biology majors, means that space may well be our primary limiting resource. By this time next year we hope to be able to report to you that this problem is being alleviated. The voters of New Mexico recently approved a bond issue that will fund a new multi-department classroom building, which should free up some space in Castetter Hall. Other exciting space-related issues are also in the wind.

The passage of time is a double-edged sword. On the one hand, as a result of the efforts of our productive faculty, the Department continues to flourish, while on the other, the names of the players change. Drs. Cliff Crawford and Bud Riedesel have been colleagues of mine since I arrived at UNM in 1968 as a new Assistant Professor. Dr. Crawford retired last May and Dr. Riedesel is retiring this month (see articles on them within). As most of you know, both have made major contributions to this Department over a period of many, many years.

In summary, as a result of the Department's continued winning ways, we can more fully meet our responsibilities to our customers, the students. I want to re-emphasize that the accomplishments of 1994 are the result of a lot of hard work by individual faculty members, staff and others.

I want to close by wishing each of you a Happy New Year and by thanking you for your continued interest in and support of our Department.

DEPARTMENT NEWS

Third Annual Research Day

THE DEPARTMENT'S THIRD PRESENTATION of undergraduate and graduate student research, organized this year by DR. DIANE L. MARSHALL, was held in April. The guest speaker was DR. JEFF MITTON of the University of Colorado at Boulder; his topic was "Evolutionary Responses to Environmental Heterogeneity."

This year's event featured 33 posters and 10 talks.

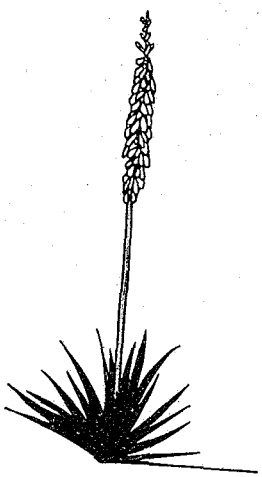
For oral presentations:

- First-place winners: graduate students EDWARD BRAUN & EDWINA FUGE, who collaborated;
- Second-place: graduate student JORGE A. SALAZAR-BRAVO;
- Third-place: graduate student PATRICA G. WILBER.

For posters, there were categories of undergraduate and graduate.

- First-place undergraduate winners: D.F. ARGÜELLO II & C.M. ADEMA, who collaborated, and JOY AVRITT;
- Second place: MARÍA A. GOMEZ & VICKIE M. PECK, who collaborated.
- First-place graduate winners: BRIAN J. ENQUIST & MARK A. JORDAN, who collaborated;
- Second place: ROBERT CABIN;
- Third place: TIMOTHY H. KEITT.

For the third consecutive year, the La Jolla Cancer Research Foundation provided financial support for the event.



Rio Grande Basin Interagency Cooperation

OVER THE LAST YEAR, UNM biologists have teamed up with the USDA Forest Service to initiate cooperative research efforts in the Rio Grande Basin. In two meetings with more than 12 federal, state, municipal, pueblo and academic agencies, the group stated its mission to "... identify and synthesize existing information and coordinate future research of participating groups for the sustainability of the Rio Grande Basin and its people." Participating groups were represented by the National Biological Service, the US Geological Survey, the Soil Conservation Service, the USDA Forest Service, the Heritage Program, the US Fish & Wildlife Service, Los Alamos National Laboratory, the Agricultural Research Service, The University of New Mexico, and other public and private research groups.

A proposal to the New Mexico Legislature will seek funding to create a "Rio Grande Center for Environmental Biology." If funded, its director will coordinate the identification of existing information and the creation of data bases of past, ongoing and future projects. The center would identify technological developments that could offset the impact of a doubling of the human population in the Middle Rio Grande Basin and thereby aid policy makers and researchers alike.

The Biological Society of New Mexico is published annually by the Department of Biology, The University of New Mexico, Albuquerque, NM 87131-1091; 505/277-3411; FAX 505/277-0304. Editor: Dr. Donald W. Duszynski; Editorial Assistant: Anne E. Rice.

RIMI Transforms the Second Floor of Castetter Hall

TWO YEARS AGO the Biology Department received more than $800,000 from UNM's Office of Research and the National Science Foundation–Research Improvements for Minority Institution (RIMI) Program for a grant conceived and written by DRS. MARGARET WERNER-WASHBURNE and STEPHEN STRICKER.

The awarded funds resulted in the remodeling of Rooms 230, 231 and 239, outfitting them with state-of-the-art facilities in confocal microscopy and molecular/cellular biology. Room 231 was transformed into a "hot lab" where cellular and molecular research using radioactivity is conducted, and Room 239 now contains six new computer stations and an adjacent room housing the Confocal Microscope.

DR. MIKE FOLSOM, a botanist, administers the Confocal Microscopy facility under the direction of Dr. Stricker. This new technology produces highly informative 3-D images of living specimens using high-resolution laser optics, adding a new dimension to biological imaging. The lab has been productive with two publications by Dr. Stricker, JIM ROBBINS (a doctoral candidate) and DR. KATHRYN VOGEL. Dr. Stricker's series of images depicting a calcium ion wave during cell fertilization appeared on the November cover of *Developmental Biology*. JOACHIM CHINO, an undergraduate student from the Howard Hughes Program who worked for Dr. Stricker, received the Vigil Award for outstanding undergraduate poster at the 1994 Society for the Advancement of Chicanos and Native Americans in Science meeting in Chicago.

CAROL BRANDT, in Room 239, coordinates the department's minority recruitment/retention program. She recruits graduate students, especially minorities, and creates ties between their postsecondary institutions and the UNM Biology Department. Carol's grant-writing and placement of students into laboratory research positions is an important part of our Department's goals.

The RIMI Program allows minority students access to research experiences in a modern setting.

The molecular/cellular labs in Rooms 230 and 231 are managed by LISA FROST, who maintains equipment, instructs students and faculty through one-on-one training and workshops, and manages the purchasing and accounting for the laboratory. Most importantly, she directs people with questions to those who can answer them.

Several undergraduate students are currently working on research projects in the molecular cellular laboratories. For the last year DONALD BENN, a senior in Chemistry who is minoring in Biology, has been studying with DR. ERIC TOOLSON to characterize the enzyme kinetics of LDH (lactate dehydrogenase) in a cicada (*Tilcen dealbatus*). PEGGY RODRIGUEZ-MORAN, a senior in Biology, is being mentored by DR. FELISA SMITH, a postdoctoral student in ecology; Peggy and Felisa are isolating ancient DNA from *Neotoma* (woodrat) middens using polymerase chain reactions from hairs found in the preserved middens. They hope to correlate rodent body size to climate constraints using the ancient DNA to verify the species creating the middens. Working with DR. PAUL WATSON, a Research Assistant Professor, is VINCENT MONTES, a junior in Biology; Paul and Vincent are determining paternity in *Lyniphia litigosia*, a spider that uses a selective multiple male mating scheme. FLORENCE HENDREN, a senior, works in the laboratory of DR. MARY ANNE NELSON, where she is working with the sexual development of mutants of *Neurospora crassa*; the confocal microscope is used to analyze these mutants. Working with DR. DON NATVIG is MARIANITA GORMAN, a senior, who is working on the pilot aspect of the Neurospora Genome Project, which is sequencing *Neurospora* cDNA.

The molecular and confocal facilities are always bustling with people and activities. The Howard Hughes-funded class in Laboratory Methods in Molecular Biology utilizes the computers, waterbaths, thermocylers and spectrophotometer. The Hughes and RIMI equipment are heavily utilized by the cell/molecular division of the department and evolutionary biologists who are beginning to investigate the molecular determination of phylogeny. Both the confocal and the molecular facilities are instrumental in advancing our Department in its ability to compete in fields that are exponentially growing and diversifying. The RIMI staff and the many who benefit from these facilities are grateful to UNM, NSF and Drs. Werner-Washburne and Stricker, who made this crucial addition to the Department possible.

The Hughes Undergraduate Research Program

THE DEPARTMENT OF BIOLOGY'S Hughes Program is now in its third year of a five-year grant funded by the Howard Hughes Medical Institute through their Undergraduate Biological Sciences Education Program. The purpose of the Hughes Program is to increase the number of undergraduate students who pursue post-graduate research education and to encourage careers in the biomedical sciences by providing hands-on laboratory experience in cellular and molecular biology.

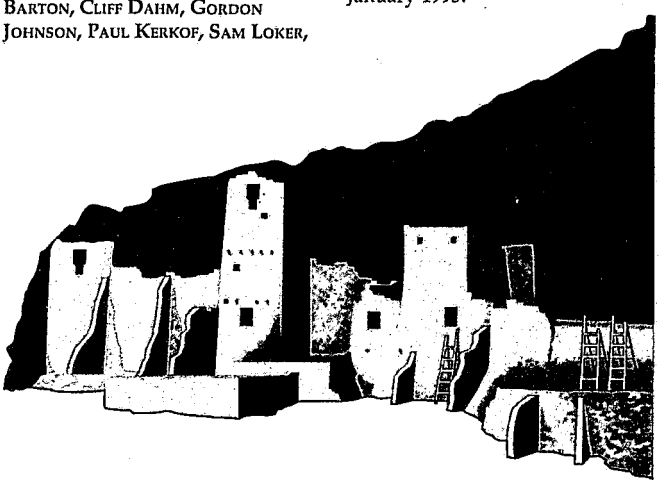
Seven students were awarded stipends during the 1993-94 academic year. In addition to attending weekly meetings, they organized a seminar to inform students of research possibilities within the department and at the medical school. They presented their research at the Biology Department's Third Annual Research Day and attended the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) Conference in Chicago. JOACHIM CHINO won first place for his SACNAS poster, and FERMÍN ARGÜELLO and MARÍA GOMEZ won first place and second place, respectively, in the undergraduate category for their Research Day posters.

Fifteen students participated in the 1994 Summer Program. Eight of these students were from UNM, with others representing Johns Hopkins, William & Mary, Virginia Tech, Trinity University, College of Santa Fe, Nebraska Wesleyan, and Luther College. The students worked full time for ten weeks on individual research projects, where they developed valuable research skills as well as important interpersonal relationships. They visited the Los Alamos National Laboratories, Bandelier National Monument, and the Long-Term Ecological Research (LTER) Sevilleta Field Station; met

The Hughes Program provides hands-on laboratory experience in cellular & molecular biology.

with several guest speakers, including ASSOCIATE PROVOST AND DEAN OF GRADUATE STUDIES ELLEN GOLDBERG; and presented their research at an all-day Mini-Symposium held jointly with the Research Experiences for Undergraduate Program students from the LTER Program. Each student also submitted a short scientific paper detailing the procedures and results of their research projects. Many thanks to the Hughes mentors: DRS. LARRY BARTON, CLIFF DAHM, GORDON JOHNSON, PAUL KERKOF, SAM LOKER, TIM LOWREY, DON NATVIG, MARY ANNE NELSON, BUD RIEDESEL, STEVE STRICKER, ERIC TOOLSON, JOHN TRUJILLO, and KATHRYN VOGEL. Dr. Vogel continues to serve as Program Director, and ROBYN CÔTÉ-SCHMADER provides administrative support.

There are currently eight Hughes students in the 1994-95 academic-year program, one of whom will be graduating this December. In addition to their research, the students have been active in the development of a Biology Majors Club. They also organized a seminar with guest speakers DRS. ELLEN GOLDBERG and ROBERT GLEW to tell undergraduates how to apply to graduate school and medical school. Another seminar, with speakers DRS. MAGGIE WERNER-WASHBURNE, JAMES BROWN, ERIC TOOLSON, ROBERT GLEW and graduate students MATT CRAWFORD and DOUG KELT, was held to discuss the benefits of attending graduate school and to let students know about research opportunities at UNM and elsewhere. The students will be attending the SACNAS conference in El Paso in early January 1995.



Where Edges Meet

SEATED ON A ROCK OUTCROPPING overlooking Sepultura Canyon in the Sevilleta National Wildlife Refuge, DR. TERRY YATES explained, "Most of the Long Term Ecological Research sites across America are situated in one type of habitat or another. They're in the middle of tall grass prairies, or in the tundra. The Sevilleta site is fairly unique in that it is situated in an ecotonal area where major biomes collide and where edges meet."

Airing on KNME-TV Channel 5 on Tuesday, February 7, 1995, at 8:00 p.m. (and again on Saturday, Feb. 11th at 4 p.m.), *Where Edges Meet* explores the ongoing research at the Sevilleta Long Term Ecological Research (LTER) site. The research shown in this one-hour special deals with many of today's most critical ecological issues: global climate changes, biodiversity, human impact on the environment, and zoonotic disease, such as the Hantavirus Sin Nombre.

"Why are we concerned where these edges meet?" added DR. BOB PARMENTER, whose jaunty leather hat and enthusiasm for his subject are reminiscent of Indiana Jones. "Well, the main reason is that if climate changes occur, if human land use patterns occur, if disturbances occur, we would expect species to respond to those changes most dramatically on the edges of their distribution, because that is literally life on the edge."

Funded by the National Science Foundation, the Sevilleta LTER is one of 18 sites in the United States and Antarctica. As DR. BRUCE MILNE, Principal Investigator of the Sevilleta LTER, stated, "The main goal of the LTER program is to establish a network of coordinated research sites that are all focused on five basic questions related to the growth of plants and organisms and the role of the environment in controlling those growth patterns."

Where Edges Meet gives the general public a rare glimpse into the science of ecology in action, as well as exploring some of the critical issues that will have an impact on our lives. For example, the program follows ROSEMARY VIGIL, an undergraduate researcher, as she collects data for her study on pronghorn antelope and control burn plots, as well as looking at the work of DR. DIANE MARSHALL on *Lesgorela fermeri.*

One of the key elements of the LTER is its multidisciplinary approach, reflecting the trend away from the individual researcher and toward team efforts. Perhaps the most fundamental example of this collaborative approach is the partnership between UNM and the US Fish & Wildlife Service, which manages the Sevilleta National Wildlife Refuge. "The Fish & Wildlife Service, the Sevilleta Wildlife Refuge specifically," noted TED STANS, the Sevilleta Refuge Manager, "is trying to work with the research community to provide an area that they can use to conduct quality, large-scale, long-term ecological studies. The multidisciplinary approach that UNM and the LTER have taken dovetails very, very nicely with the research that the Fish & Wildlife Service conducts in other areas."

Where Edges Meet is the first of a four-part series on UNM research projects, entitled *Field Notes*, supported by DR. ELLEN H. GOLDBERG, Associate Provost for Research and Dean of Graduate Students. "The idea behind the series," explained DR. DENISE WALLEN, Executive Producer and Assistant Director of the Office of Research Administration, "was to highlight some of the exciting research being done at The University of New Mexico. These research projects have a direct impact on the lives of New Mexicans, yet the general public often knows little or nothing about them. Even on campus, few people know about projects outside of their own departments."

Field Notes is being produced by KNME-TV for The University of New Mexico. "It is really an exciting opportunity for us," stated LARRY WALSH, the series' producer and writer, "in that the series allows us to present vital issues while at the same time fulfilling our educational mandate." "I am particularly pleased with *Where Edges Meet*," Walsh continued, "in that it combines great science with the stunning beauty of the Sevilleta National Wildlife Refuge. The Sevilleta LTER team was wonderful in the time they allocated to the program, the quality of their explanations and the critical importance of their research. I feel that the program is a 'must see' for every one who is concerned with the future of New Mexico and the ecology of the planet."

Wallen and Walsh have worked on a number of other television projects over the years. These include *Critical Mass: Women in Science*, which won a Rocky Mountain Emmy last year, *Terminal Degrees*, a program on how to survive graduate school, and *In Search of Funding*, which explores the process of developing good grant projects. Walsh was also the creator, coordinating producer and writer of the Peabody Award-winning *Surviving Columbus: The Story of the Pueblo People.*

Real-Life Lessons from Tropical Biology

EACH SPRING SEMESTER, DR. DONALD DUSZYNSKI teaches Introduction to Tropical Biology. This 400-level, three-hour course is unique in that one of its requirements is a week-long field trip to a tropical country to experience firsthand the land and the people who live there. The field trip complements and highlights the knowledge acquired in class about the world's tropical regions. In past years the trip has been to Jamaica; in 1995, it will be to Belize.

As quoted in a recent *Mirage* article† on this year's trip, Dr. Duszynski believes that "You can't study tropical biology without having students understand something about the people who live in the tropics." While expensive (the cost to Jamaica was $1,250, including airfare), the trip is a major eye-opener for many of the students who have not had the opportunity to travel outside of New Mexico. Not only do they live and work at a tropical marine laboratory, but they learn about the country's history, geography, politics, religion and economy. They gain direct cultural experience as well because they are required to spend a day among the people of the area and to interview and get to know a resident. Upon their return to UNM, the students write a short essay on what they learned from their interaction with the person they met and how the world is viewed through that person's eyes. According to their essays, the students who went to Jamaica were most forcibly struck by the juxaposition of the beautiful, diverse landscape and its biodiversity with the people's economic struggle against poverty and overpopulation and its dire consequences for that environment.

In this manner, Tropical Biology is an excellent start on the goal of "training future citizens of planet Earth." It vividly illustrates the multifaceted nature of such issues as rain forest destruction, overfishing, overpopulation, even tourism, that face people in another part of the world. These real-life lessons gained in far-off lands create a new perspective, understanding and appreciation of the complex interdependence between an environment and its people, which can then be applied to each person's own life and spheres of influence. As student RICHARD MARQUEZ aptly summed it up, "It's the study of life. You can apply these principles anywhere. Studying people along with plants and animals, you can actually see how it all works."

Due to the high cost of these trips, a Tropical Biology Course Fund is being started. The fund monies will be used to help needy students defray the cost of the week-long trip to the tropics. This new fund is listed as a donation choice at the end of this newsletter.

DISCOVERING TROPICAL BIOLOGY

by Andree Brisson,
1994 Biol. 461L student

Last semester I had the good fortune to take Tropical Biology & its supplementary week-long scientific excursion to the tropics. Our field trip led us to Jamaica, where a very different lifestyle & landscape met us.

We were immediately struck by the duality of the island—its ugliness & its beauty. We saw poverty & environmental degradation, & a people struggling to survive by whatever means available. We also experienced the beauty of mangroves, coral reefs, mist forests & unique tropical flora & fauna. Coming from the New Mexican desert, we had entered a completely different world than our own.

Since leaving Jamaica, I believe that we are all still working to arrive at answers that might harmoniously preserve both the people of Jamaica & its unique biodiversity. We isolate some of the major problems—overpopulation & poverty—and try to come up with solutions—perhaps a more "ecotourist" approach to tourism, education & alternative energy sources.

We find that Jamaica is seared on our memories. Rather than solely a textbook education, we have experienced an emotional tie & will never forget. Perhaps if we cannot always contribute directly, we have learned to tread a bit more lightly in our own native lands.

† *Tropics Topics: Paradise Lost*, by Sherry Robinson, *Mirage*, Fall 1994, pp. 4-6. *Mirage* is a publication of the UNM Alumni Association, published by UNM's Public Affairs Department.

Behind the Scenes (& in the Basement)

ROY RICCI GREW UP in a rough and tumble Bronx neighborhood and earned a college football scholarship by taking a pounding in high school. If there is a touch of the tough guy to him, it rapidly evaporates as he describes his work.

Lifting the lid from a mouse cage, he offers a large finger to a small golden mouse. The mouse's whiskers flutter in recognition as it climbs aboard. Roy's face lights up as he describes the selective breeding that has produced the blond-haired, brown-eyed beauty. The tough guy is gone completely as Roy gently rubs the mouse behind the ears.

Roy is the Animal Care Specialist for the Department of Biology, a position he has held for 14 years. When he first applied for this line of work at the UNM Medical School, he was told it was "like a janitor, but for animals." In reality, the job in Biology is much more a blend of animal rights activist, natural historian, dietician, educator, and research scientist than janitor. Roy's primary motivation for the work is to ensure the proper care of animals being studied by Biology graduate students and faculty. He has been known to write harsh letters to zoos that do not meet his standards, suggest ways of minimizing the use of animals in research (in essence, to question his own financial well-being), and to take his message of respect for animals to local public schools.

Roy points out that "People use nature, even vegetarians alter the landscape." Like his tough guy image, the contrast between his job title and his sensitivity to the ethics of animal research is initially disorienting. What gives him pleasure is to see the difference that he makes in how animals are used. Mice under his care are used in research on human breast cancer. Caged bird feeding trials (that he supervises) apply to the formulation of conservation strategies. Lizard growth rate studies enable researchers to make population growth rate predictions that limit harvest rates in the lizard leather trade. While it is true that some animals die in these studies, the vast majority of species studied by members of the Biology Department are only temporarily retained and then released. Roy treats them all with respect. After all, they are doing us a service.

The value of that service was made quite tangible to Roy when he was working at the Medical School. Forty to fifty dogs gave their lives to perfecting the use of a portable kidney machine. Roy oversaw that work and also saw the benefits. A car accident victim in Taos was the first human to use the machine Roy had helped to test on the dogs. That accident victim later turned up as the Spanish teacher of Roy's son.

"How many dogs are worth a human life? How many mice?" That kidney machine has gone on to save more than 100 human lives. During educational outreach programs Roy asks grade school children, "Did those dogs die in vain?" New Mexico state law requires that dogs used in research be those from Animal Control facilities and only those destined to die after adoption periods have expired. "Who is responsible for the production of those dogs anyway?"

Biologists work closely with animals under a wide variety of conditions and with widely varying goals. Roy Ricci oversees all types of manipulative animal studies that have been approved by the Animal Use Committee Board (of which he has been a member in the past). He fields calls from outraged citizens worried (falsely) that UNM is harvesting neighborhood cats. He creates imaginative ways of improving the environment of caged animals by adding complexity, altering diets, and modifying the ambient light and temperature. Most importantly, however, he is the Ombudsman of Animal Affairs, the Designated Spokesman for those who can't speak.

The image of the caring man with the very small mouse remains. It is clear Roy has established a good rapport with this particular mouse before. "Some labs use metal tongs to handle mice," Roy says, pauses, smiles, and without speaking tells why this particular animal facility manager prefers the "bare-hand" method.

The Museum of Southwestern Biology

An integral part of our department, the MSB was established in 1928 by Dr. Edward F. Castetter and began a formal system of management and maintenance in 1936 with the arrival of Dr. William J. Koster. The original "UNM Herbarium" and the "UNM Collection of Vertebrates" have now grown to an internationally recognized facility with holdings of approximately 87,000 plants, 25,000 arthropods, 20,000 lots of fishes, 57,000 reptiles and amphibians, 20,000 birds, 105,000 mammals, and 70,000 frozen samples of various kinds from all divisions. Museum personnel and/or material are involved, on average, in 35 of the department's approximately 90 formal courses, and almost one-third of the department's graduate students have research connections to the MSB. The current director is Dr. Terry Yates.

The UNM Herbarium is the largest collection of preserved plants in NM, most of which are from NM. It also includes significant research materials from surrounding states and Hawaii, Mexico, Taiwan, New Guinea, and the Cook Islands, as well as historical collections from the turn of the century that were part of the US-Mexico boundary survey. The current curator is Dr. Timothy Lowrey, Dr. William Martin is Curator Emeritus, and Jane Mygatt is the Collection Manager.

The Division of Arthropods, containing primarily regional, historically important material, serves as the repository for all Sevilleta LTER and other research voucher material. Dr. Cliff Crawford is Curator Emeritus and Dr. Bob Parmenter is a Curatorial Associate.

The Division of Fishes was established in 1938 by Dr. Koster. About 4,000 lots of fishes were added by 1966, many of which are now rare or extirpated in the wild. A survey for the Rio Grande bluntnosed and phantom shiners in 1986 led to subsequent work on Rio Grande Basin fishes, including comprehensive surveys in the Pecos and Rio Grande rivers in Texas and New Mexico. The division serves as the primary repository for the Bureau of Reclamation's San Juan River native fish research program. Permanent staff are Dr. Manuel Molles, Curator, Steve Platania, Curatorial Associate, and Alexandra Snyder, Collections Manager.

The Division of Birds is among the most extensive in the Southwest. While predominantly southwestern in orientation, this collection contains a growing number of birds from around the world and examples of most of the extinct and many of the threatened birds of North America. Permanent staff includes Dr. Yates, Acting Curator, and Dr. Robert Dickerman, Curatorial Associate.

The Division of Herpetology maintains one of the largest research collections of reptiles and amphibians in the western US. Founded in 1961, it grew rapidly due largely to the efforts of Dr. William Degenhart and his students. The major holdings are from throughout the US, Mexico, the Caribbean region, the Galápagos Islands and Vietnam. The division publishes the major research journal for the Charles Darwin Research Station in the Galápagos Islands. Permanent staff include Dr. Howard Snell, Curator, and Dr. Degenhart, Curator Emeritus.

The Division of Mammals' collections are among the most extensive in the US and constitute the third or fourth largest university collection of mammals in the world. Research materials date from the late 1800s and are distributed geographically across all regions of the globe. The collections from Southwestern North America are unequalled, and the division maintains the world's best collections of postcranial material and frozen tissues for mammals. In 1994, the collections of the National Biological Service in Ft. Collins, CO, were moved to the MSB and the two collections are currently being merged. Permanent staff include Dr. Yates, Curator, William Gannon, Collections Manager, Dr. James Findley, Curator Emeritus, Dr. Michael Bogan, NBS Curator, and Cindy Ramotnik, NBS Collections Manager.

The Division of Biological Materials is the newest division and one of the most active. Established in 1978 by Dr. Yates, it houses material from all MSB divisions that needs to be maintained under freezer conditions. Currently, more than 70,000 specimens are catalogued in this collection, making it one of the largest of its kind in the world. Permanent staff include Dr. Yates, Curator, and Bill Gannon, Collections Manager.

The vast potential of these resources cannot be overestimated. This enormous bank of genetic diversity promises to play an increasingly critical role in education and research in biodiversity, genetics, human health, global change, and many other areas of comparative biology. In addition, few facilities have the potential of crossing so many disciplinary lines of research. For example, MSB researchers are currently using historical samples from the collections to investigate questions concerning the divergence of Hantavirus species. This single research effort involves ecologists, systematics, medical researchers, geneticists, data managers, public health workers and molecular biologists.

FACULTY HIGHLIGHTS

Diane Marshall, Potter Chair

When Dr. Diane Marshall was named the first holder of the Potter Chair in Plant Ecology in 1991 (see the 1991 BSNM Newsletter), she promised to use the position's funds to broadly support work in this field at UNM. Diane has done just that in four ways.

First, each year Diane has invited a prominent plant ecologist to our department to give a seminar and meet with students and faculty. In this way, our students learn from a greater variety of plant ecologists and make important contacts that will help them later find career opportunities. Dr. Johanna M. (Annie) Schmidt (Brown University) lectured on the evolution of phenotypic plasticity in plants, and Dr. Candy Galen (University of Missouri) gave a seminar on the ecology of alpine plant-pollinator systems. If you noticed that both speakers were women, it is not because of any policy of inviting only women, but rather that, in plant ecology, many of the top scientists are women. Thus a side benefit to hosting visiting plant ecologists is that it serves to provide more role models for our many female graduate students.

Second, Diane has sponsored graduate student research. Most notably, she used the Potter Chair funds to provide summer support for graduate student Robert Cabin, who is studying the ecological and evolutionary importance of seed banks in a wild mustard, *Lesquerella fendleri*. Bob has already submitted manuscripts to *Ecology* and *Evolution* and will finish his dissertation in 1995.

Third, Dr. Marshall helped send graduate student Diane Rowland to a summer course in Canada on the physiological ecology of trees. The course taught Diane techniques for studying trees and introduced her to some top plant physiological ecologists. Diane is applying her new knowledge in a study of adaptation of cottonwoods to microhabitats in the bosque.

Finally, Dr. Marshall uses the funds to support her own research on the reproductive ecology of wild radish. She studies seed production through production of both pollen and ovules, and the characteristics of plants that make them successful pollen donors. Her work contributes to our understanding of variation in plant fitness and the possibility that sexual selection may be important in plants.

Last year, in a further effort to increase the prominence of plant ecology at UNM and to improve the status of the field nationally, Diane organized a new section in plant population biology in the Ecological Society of America.

These efforts by Diane have all been made possible so far with the current level of funding for the Potter Chair, which provides about $6,000 a year in research funds. If the endowment, and therefore the earnings, were increased, Diane would be able to use the additional funds to support a graduate student stipend in plant ecology or to hire a post-doctoral fellow in plant ecology. The Potter Chair in Plant Ecology is a donation choice listed at the end of this newsletter.

Bud Riedesel, Professor Emeritus

Professor Marvin "Bud" L. Riedesel is retiring from our department this month after 35 years of service. After serving in the US Army, Bud received his BA in Biology from Cornell College in 1949, and his MS in 1953 and PhD in 1955 in Physiology from the University of Iowa. His UNM career included Assistant Professor in 1959, Associate Professor in 1965, and full Professor in 1971.

Bud taught 13 different courses in the department and offered numerous seminar courses. He was the major professor for 15 PhD dissertations and 39 MS theses. This research was respected in many areas of environmental physiology as evidenced by more than 30 years of research support from such sources as NSF, NIH, Atomic Energy Commission, US Air Force, US Olympic Committee, US Army Research Office, US Navy Office of Research, National Academy of Science, and NASA. He was invited to five international symposia, and organized and co-edited two international ones. He has published in a variety of professional journals, including *Nature*, *Science*, and co-authored a chapter in the American Physiological Society's *Handbook of Physiology* (in press).

In addition to serving on numerous department and college committees, Bud served on UNM-wide committees, including Academic Freedom and Tenure, Research Policy, Radiation Safety, and Animal Care and Use. He was awarded UNM's Presidential Recognition Award in 1980 & 1981.

With Bud's continued interest in physiology and teaching, the Riedesel Physiology Fund has been established within the UNM Foundation to support physiological research and teaching equipment in the Biology Department.

Cliff Crawford, Professor Emeritus

AFTER 30 YEARS OF SERVICE to our Department, DR. CLIFFORD S. CRAWFORD has retired officially from his departmental position, but he has hardly retired from his work.

Cliff earned his BA in Biology from Whitman College (Walla Walla, WA) in 1954, and then spent two years in the US Army Medical Service Corps. After his military discharge, he obtained his MS (1958) and PhD (1961) in Entomology from Washington State University (Pullman, WA). He was an Instructor in Biology at Portland State College (OR) for three years before coming to UNM as an Assistant Professor in 1964. In 1969 he was promoted to Associate Professor, and in 1973 he was promoted to full Professor. Dr. Crawford served as the Acting Chairman of the Biology Department for 1973-74, was its elected Chairman from 1974-78, and, using these experiences, continued to serve the department as DON DUSZYNSKI's Assistant Chair from 1985-88 and as one of DAVID LIGON's Associate Chairs from 1991-94.

Dr. Crawford's research interests have progressed with a certain logic over the years. At UNM he first expanded on his previous studies of insect reproductive biology. He soon became intrigued, however, with common groups of Southwestern arthropods and realized how little was known about their lives. A productive decade of research followed, in which Cliff and his students explored how species of millipedes, centipedes, scorpions and beetles adapt to extreme conditions of temperature and moisture. Their main focus was on large desert millipedes that emerge after early summer rains and scavenge dead plant material (detritus).

After "seeing the world through the eyes of a millipede," often in what is now Albuquerque's Petroglyph National Monument, Cliff began to understand how closely connected the eco-logical roles of these and other desert detritivores were to the availability of water, that critical regulator of life in arid regions. He has since pursued this connection in Mexico and the Middle East, and especially in the Namib Desert of southern Africa. There, while learning how scavenging beetles cope with the constraints of space, time and food along a dry river bed, Cliff was impressed with how concentrated biological activity can be in a desert riparian (stream side) forest.

On returning to New Mexico, this impression was reinforced by the experience and insights of his colleague DR. MANUEL MOLLES. Now, working closely with Manuel, Cliff plans to continue studying the organization and functioning of riparian ecosystems in dry environments. One fruitful outcome of their joint work has been a "hands-on" ecology course called "Bosque Biology," which they have taught nearly every semester since 1987.

Cliff has published his research steadily and widely throughout this career. In addition to his many papers, he has contributed book chapters and reviews on the ecology of desert detritivores, the animal ecology of desert dunefields, and the functioning of desert ecosystems. In 1981 his book, *Biology of Desert Invertebrates*, was published and became the seminal publication on this topic. He is a member of the American Arachnological Society, the Ecological Society of America, the Entomological Society of America, the Xerces Society, and the Society for Conservation Biology, and he is a fellow of the Linnaean Society of London.

In 1980, Cliff received a Lady Davis Fellowship and spent a semester at Technion–Israel Institute of Technology in Haifa. In 1981, he was a visiting scientist at the Desert Ecological Research Unit in Namibia, and in 1985 and 1989, he was a research fellow there. In 1985, he spent a month as a visiting scholar and external reviewer in the University of Kuwait's Zoology Department. Recently, in addition to his on-going studies of detritivores in the Namib Desert, he co-authored a comparison of these organisms and their counterparts in the climatically similar Chilean Arid Zone.

Over the years at UNM, Cliff has taught a variety of regular courses, including General Biology, General Entomology, Insect Ecology, Insect Physiology, Biological Adaptations (with DRS. JIM FINDLEY, JIM GOSZ, DAVID LIGON and BUD RIEDESEL), Desert

Biology, Desert Field Biology (with DR. BOB PARMENTER), Invertebrate Biology, Marine and Desert Invertebrate Lab (with DR. DON DUSZYNSKI), Desert Invertebrate Biology, and Bosque Biology (with Dr. Molles). He was named an Outstanding Educator of America for 1974-75 by Outstanding Educators of America in Washington, DC.

As is the case with other Biology professors, Cliff also has taught a variety of graduate seminars, covering both topics he knew little about initially (Animal Behavior—way back in the '60s) and others with which he was more familiar (The Middle Rio Grande Ecosystem). He remembers some of these (e.g., Arachnid Biology) with particular fondness and credits the participation of many stimulating graduate and undergraduate students for broadening his own grasp of biology. Cliff is pleased to acknowledge the contributions (to science and to himself) of his many graduate students over the past three decades. He remains the major advisor to six and is on the graduate committees of several others.

Cliff has been instrumental in helping UNM's Biology Department gain wide recognition for its expertise in arid land biology & ecology.

Cliff was one of a dozen co-principal investigators of the initial Long Term Ecological Research (LTER) program on climate and ecological gradients at the Sevilleta National Wildlife Refuge at Socorro, NM. He was also active in developing the Sevilleta Field Station into a regional research center in New Mexico.

In 1990, Drs. Crawford and Molles received a five-year contract from the US Fish and Wildlife Service to study the effects of long-term, large-scale experimental flooding on the long-unflooded riparian forest at Bosque del Apache National Wildlife Refuge (see the 1991 BSNM Newsletter). This year, with DRS. M.E. CAMPANA and H.M. VALETT, they received additional support for that study from the National Science Foundation.

In 1993, Cliff was the leader of the Interagency Biological Management Planning Team for the Middle Rio Grande Bosque. As reported in last year's BSNM newsletter, the team studied the bosque's ecosystem and made recommendations for managing its resources and reversing its decline.

Dr. Crawford has been the only Curator of the Museum of Southwestern Biology's Arthropod Division, which was begun in the early 1980s. Under his direction, the Arthropod Division has grown from an informal collection of a few teaching specimens to one of the six divisions of the MSB with at least 25,000 specimens representing about 1,200 species. Cliff is quick to point out that a series of dedicated graduate curatorial assistants was responsible for most of the actual work that went into building the collection to its present state. Unfortunately, the University has been unable to find the funds for a greatly needed collection manager for this valuable resource. Of potentially great importance in a region of unusually high biodiversity, the collection deserves UNM's strong support.

Since his retirement, Cliff has focused his energies on hiking in the mountains, singing with UNM's Tudor Singers, and doing bosque research. He has also given public talks on Middle Rio Grande ecology and, together with Manuel Molles and LISA ELLIS, recently presented a poster at an international symposium on the ecological integrity of large floodplain rivers. Currently, Cliff is a member of a Technical Advisory Committee that will advise the State Engineer on basic hydrological conditions and needs in the Middle Rio Grande Basin.

The Crawford Rio Grande Scholarship

Dr. Crawford's strong interest in the fate of New Mexico's central waterway and its riparian forest has led him, on his retirement, to establish a means of funding UNM graduate students whose research addresses this important topic. Called the Crawford Rio Grande Scholarship Fund, it is administered through the UNM Foundation. Contributions, which are tax-deductible, may be made to the Foundation; it is also a donation choice listed at the end of this newsletter. Cliff greatly appreciates contributions already made by his colleagues and friends, and hopes the scholarship will eventually be large enough to support graduate students on a continual basis.

ALUMNI NEWS

SUSAN BANDONI (PhD 1991) is an Assistant Professor of Biology at SUNY–Geneseo.

ANN J.K. BONNELL (BS 1959) is a part-time Visitor Center Supervisor at Roxborough State Park in Colorado. She is a community environmental activist, a volunteer naturalist at a number of local parks, and is involved in a number of bird population census activities.

DANIEL K. BRANNAN (BS 1975, PhD 1981) is currently an Associate Professor and Chair of Biology at Abilene Christian University. He reports that ACU is the #1 Category II undergraduate liberal arts university in Texas for students who go on to receive a PhD in Life Sciences, and that they rank 64th out of 914 Category II universities nationwide.

DAVID E. CLOUTHIER (BS 1988) received his PhD in 1994 from the University of Texas Southwestern Medical Center in Dallas. His dissertation was "The Regulation of Liver Growth during Regeneration and the Formation of Hepatocellular Carcinoma." He currently lives in Philadelphia with his wife, Mary (BBA, 1989, UNM), where he is a postdoctoral fellow at the University of Pennsylvania working on aspects of hepatic regeneration.

GARY N. DODSON (PhD 1985) has been an Assistant Professor of Biology at Ball State University since 1990, where he specializes in ecology and evolutionary biology. This year Gary was awarded the first C. Warren Vander Hill Award for Distinguished Teaching in Honors Education from Ball State University. The award recognizes outstanding teaching in its Honors College, and is named for Ball State's Provost and Vice President of Academic Affairs, who has been the Honors College Director for the past 15 years.

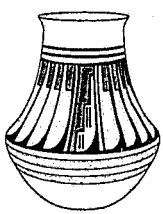
TERRY DUNBAR (BS 1976, MS 1983) is an environmental educator for the Albuquerque Public School system.

PAUL H. DURAY (BS 1964) is a pathologist and researcher in the Department of Pathology at Brigham & Women's Hospital in Boston, where, he reports, he "continues to be plagued by the pathophysiology and mysteries of spirochetal bacteria."

THEODORE B. (TED) FLECK (BS 1940) is a retired professor of biology from Upsala College, East Orange, NJ, and is living in Tucson, AZ. He has been a docent for the Arizona-Sonora Desert Museum for the past five years. He is an avid reader and traveler, a fan of all college athletics, and is still an active bowler. Ted greatly enjoyed the 50th class reunion of the Class of '40.

LARRY GORDON (B.S. 1949, MS 1951) received a MPH degree in 1954 from the University of Michigan. Larry is a Visiting Professor at UNM's School of Public Administration. Throughout his career, he has been concerned with environmental/public health issues, and has worked to develop agencies and legislation with that focus. In 1993, he received the UNM Alumni Association's Zimmerman Award, given to a UNM alumnus who has made a significant contribution that has brought fame and honor to UNM or the State of New Mexico. In 1987, he received the American Public Health Association's most prestigious award, the Sedgewick Award, and in 1988, Larry received the New Mexico Distinguished Public Service Award. He and his wife, Nedra, have three children and four grandchildren.

HEIDI JEAN HAMLEN (BS 1982), after receiving her MS and DVM, recently accepted an Associate Professor position with California Polytechnic State University in San Luis Obispo, CA, where she lives with her 5-year-old son, Issac.



JOANNE MAURO HARDESTY (BS 1982) received an MS in Plant Ecology from NMSU in 1985. She lives in Salton City, CA, with her husband, Charles, and her two children. She teaches second- and third-grade children and gifted children in grades 3-8, and is a science fair coordinator. Joanne is a volunteer for the Rainforest Action Network of San Francisco, and reports that Dr. Jim Findley's geographical ecology course has been "extremely useful over the years." She enjoys hiking in the desert near her home, traveling, and visiting NM each summer.

RODNEY T. HOULIHAN (MS 1957) received his PhD from the University of California at Davis in 1960. In 1988, he retired as President of Oklahoma State University College of Medicine. He currently raises beef cattle, and his hobbies include fishing and experimental aircraft. He reports fond memories of "Prof. Jim Findley's kanga-

roo rat hunts, security clearance parties, Sands, Fleharty, and the Eversol group."

DANIEL T. JENNINGS (MS 1967, PhD 1972) is retired from the USDA Forest Service. He is presently a Faculty Associate in the Department of Entomology at the University of Maine. As a Principle Research Entomologist, he is currently working on two projects involving biodiversity of spiders in forest ecosystems.

KEITH KINANE (BS 1970) received his MBA from the University of California–Irvine in 1991, and is currently an account executive living in Ramona, CA, with his wife, Tina. He is a member of Mensa and the Naval Reserve.

ELLEN LOUDERBOUGH (PhD 1984), who received her law degree from UNM in 1992, recently joined the Albuquerque law firm Hinkle, Cox, Eaton, Coffield & Hensley to practice environmental law. She has an extensive background in regulatory compliance and permitting, and is the author of numerous publications on environmental issues.

HARRIET M. OYLER (MS 1970) stays quite busy in her retirement—in addition to being a volunteer at the Rio Grande Nature Center, she takes UNM Continuing Education classes, participates in the Albuquerque Environmental Awareness Caucus, and attends Elderhostels. She also enjoys doing wildlife photography and numerous crafts.

DELORES L. PIERCE (BS 1966) is a Medical Technologist, ASCP. She enjoys traveling the US, but mostly visits the South as she lives in Alabama with her husband, Harvey. She is a member of the German Club, and reports being concerned with civil rights, children's welfare (Parents Anonymous), and with living a balanced life both physically and spiritually at home and at work.

GEORGE W. PROTHRO (BS 1945) has an MPH degree from the University of North Carolina (1967) and an MD degree from Washington University–St. Louis. He is the director of Community Medicine at the University of Oklahoma College of Medicine in Tulsa. He particularly enjoys traveling, and is a member of the Travelers Century Club as he has visited all 50 states and more than 120 countries! Naturally, photography is of great interest to him.

RICK REDAK (BS 1979, MS 1982) received his PhD at Colorado State. He is an Assistant Professor at the University of California–Riverside, where he studies insect ecology. Dr. Kimberly Hammond is his wife. Rick enjoys sailing, fishing and hiking in his leisure.

CAROL SABOURIN (PhD 1991) is living in Worthington, OH, with her husband, Patrick, where she is a postdoctoral fellow.

JAMES L. SANDS (BS 1953, MS 1956) is a past president of the Carrolltown, PA, Municipal Authority. Now retired, he enjoys hunting, fishing and playing golf.

BRUCE A. SHAFFER (BS 1980, MD 1985) is a co-director of St. Vincents Hospital Intensive Care Unit, where he practices internal medicine, pulmonary medicine and critical care medicine. In his spare time, he enjoys traveling, skiing and sailing.

CYDNEY C. STEWART (BS 1977, MS 1981, MD 1985) is a physican in cardiology in Canoga Park, CA, where she lives with her husband, Dr. David A. Hovda.

CARLA (STOUT) THOMPSON (BS 1980) received her DVM degree in 1987 from Colorado State University. She is a veterinarian with her own mobile, small-animal practice. Her husband, Dr. David C. Thompson, is an entomologist in the Department of EPPWS at New Mexico State University in Las Cruces. They have a five-year-old son, Kevin.

DANIEL J. WARREN (BS 1980) is an Air Quality Planner in the Environmental Health Department of the City of Albuquerque. His interests include NM history, riparian rights/property issues, and habitat restoration. He enjoys exploring NM, fishing, collecting license plates and bottles, and silversmithing.

RUTHERFORD C. WOOTEN (PhD 1973) is a Senior Associate of Environmental Studies with Engineering-Science, Inc., in Austin, TX. He enjoys cattle ranching and RVs.

OTHER ALUMNI, FRIENDS & SUPPORTERS

DR. ROBERT ALDRIDGE
MS. DIANE E. BACA
DR. TERESA BENTON
DR. RICHARD BRADLEY
MR. TEDDY BROWN
MRS. MARGIE BUECHMANN
DR. JACK L. CARTER
DR. ROGER CONANT
MS. CANDICE R. DEMAR
DR. & MRS. JAY DRUECKER
DR. JENNIE O. DUFFY
DR. & MRS. J.K. FRENKEL
MR. & MRS. RICHARD HALLEY, JR.
MR. GEORGE F. HOWLETT, JR.
MR. VIRGIL HOWE
MS. WENDY N. KELLER
DR. O. FOSTER KLINE
MS. HEIDI MALOY
MRS. KAREN MCKENZIE
DR. JAMES W. MEARES
DR. & MRS. JOHN MEXAL
MS. DIANA NORTHUP
PHARMACIA
DR. JOHN B. ROBERTS
MISS LAUREL SOUTHARD
DR. LEMAN B. SPALDING
DR. HARRY W. SPRINGFIELD
DR. WILLIAM R. WARNER
DR. THEODORE YAGER

THE BIOLOGICAL SOCIETY of New Mexico is a tax-exempt organization under the New Mexico Nonprofit Corporation Act and the United States Internal Revenue Code. The object of the Society is to establish and maintain endowments, trusts, foundations, and other funds, all for the purposes of encouraging, fostering, and pursuing excellence in education in the Department of Biology at The University of New Mexico.

Tax-exempt gifts may be given with designation to be used for specific purposes, such as those identified below, as long as the purpose fits the objectives of pursuing excellence in biological education and research at UNM.

Donations and annual membership fees, unless otherwise specified, are placed in our *Unrestricted Gift Account.* These funds are used primarily to support both undergraduate and graduate student recruitment, research, travel to meetings to present papers, spring graduation, and awards for teaching excellence. In addition, we have many other accounts that may be of special interest to you.

L.D. Potter Endowed Chair in Plant Ecology

This chair, named in the honor of Loren D. Potter, who retired in 1985, recognizes and highlights the importance of plant ecological studies as they pertain to our natural resources. The L.D. Potter fund has about $152,729. The current holder of the Potter Chair is Dr. Diane L. Marshall.

Melinda Bealmear Scholarship

Melinda Bealmear was a dedicated and beloved staff member in our main office, who died in a tragic car accident in October 1986. Our graduate students, faculty and staff, along with help from her parents Dorothy and Dale, established a scholarship fund in her memory. The fund has about $3,530. We would like to accrue enough principal, say $50,000, so that the annual interest could be used to support the program of a needy graduate student in Biology.

Crawford Rio Grande Scholarship

Dr. Clifford Crawford's strong interest in the fate of New Mexico's central waterway and its riparian forest has led him, on his retirement, to establish a means of funding UNM graduate students whose research addresses this important topic.

Riedesel Physiology Fund

Dr. Marvin "Bud" Riedesel established this fund upon his retirement for plant or animal physiology research and teaching equipment.

Rosalie F. Doolittle Scholarship in Botany

This scholarship was established in July by Mrs. Rosalie Doolittle, a well-known gardening expert on the arid southwest. Mrs. Doolittle is the author of *Southwest Gardening,* which has been on the UNM Press best-selling list since it was first published in 1953. This scholarship will be awarded annually to an outstanding New Mexico resident majoring in biology with an emphasis in botany, and may be awarded to the same undergraduate student in successive semesters until graduation.

Tropical Biology Course Fund

The purpose of this fund is to help needy students defray the high cost of the week-long trip to the tropics required for Biol. 461L.

Museum of Southwestern Biology—Mammals

The purpose of this account is to support all aspects of mammalogical research conducted by UNM Biology faculty and graduate students. This fund was developed by Drs. Jim Findley and Terry Yates to supplement state-appropriations and enhance research and teaching in mammalogy programs.

Museum of Southwestern Biology—Ornithology

Established by Dr. Robert Dickerman, the purpose of this account is to support all aspects of ornithological research by UNM Biology faculty and graduate students.

Arrangements for donations to other MSB divisions can be made with the MSB Director, Dr. Terry Yates.

Presidential Young Investigator Matching Funds

In the next year, we will be working to help two of our PYIs (Drs. B. Milne and M. Werner-Washburne) generate the private funds they need to qualify for matching funds from NSF. Remember that donations can be in kind (i.e., building materials, vehicles, laboratory equipment, etc.). Each dollar you give generates a dollar from NSF.

Faculty Excellence Fund

We started this fund to support faculty travel to professional meetings where they present the results of their work. We have only $1,290 in this fund—obviously a long way from a meaningful endowment.

Membership

Any person contributing $20 or more annually becomes a member of the Society and will receive the annual *BSNM* newsletter.

ALL MEMBERSHIPS & CONTRIBUTIONS ARE **TAX EXEMPT.**

THE BIOLOGICAL SOCIETY OF NEW MEXICO

Please respond even if you can't contribute. If you haven't responded before, we'd really like to hear from you and learn about what you're doing. If you can help us financially, or with donations in kind, please let us know how you want your contribution used:

Unrestricted Gift Account	_____	TOTAL AMOUNT ENCLOSED:
Potter Endowed Chair	_____	
Bealmear Scholarship	_____	
Crawford Rio Grande Scholarship	_____	
Riedesel Physiology Fund	_____	$_____
Doolittle Scholarship in Botany	_____	
Tropical Biology Course	_____	
MSB—Mammals	_____	
MSB—Ornithology	_____	
PYI Account	_____	
Faculty Excellence Fund	_____	
Other	_____	

Name _____ UNM Degree(s) _____ Year(s) _____

Other Degrees _____ Spouse _____

Complete Current Mailing Address _____

Phone No. _____ Current Occupation _____

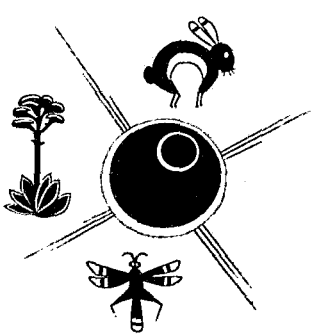
Activities and interests: _____

_____

_____

_____

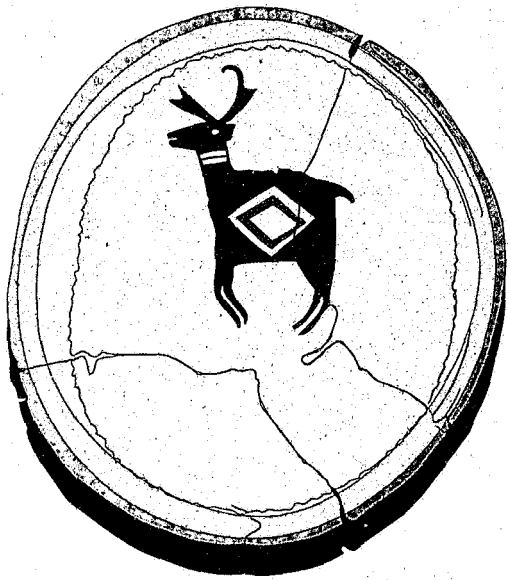
THANKS FOR YOUR CONTINUED INTEREST AND SUPPORT!!



Please mail memberships and contributions to:
(by check, payable to
"The Biological Society of New Mexico")

Secretary-Treasurer
The Biological Society of New Mexico
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-1091

0536



THE UNIVERSITY OF NEW MEXICO
THE BIOLOGICAL SOCIETY OF NEW MEXICO
DEPARTMENT OF BIOLOGY
ALBUQUERQUE, NM 87131-1091

Non-Profit Organization
U.S. Postage PAID
Albuquerque, NM
Permit 39

Address Correction Requested

APPENDIX N

ANNUAL REPORT: NATIONAL BIOLOGICAL SERVICE

ANNUAL REPORT 1994-1995

Albuquerque Field Station
Midcontinent Ecological Science Center
National Biological Service
The University of New Mexico

Current Projects:

"Habitat use of bats in and near Jewel Cave National Monument, Black Hills, South Dakota, as revealed by radiotracking," Funding from National Biological Service

"Habitat use of bats in the Cloudcroft District, Lincoln National Forest, as revealed by radiotracking," Funding from Lincoln National Forest, U.S. Forest Service, Alamogordo, NM

"Status and distribution of bats at Los Alamos National Laboratory," Funding from Los Alamos National Laboratory, DOE, Los Alamos, NM

"Survey for bats at Bandelier National Monument," Funding from National Biological Service

"Survey for bats on Kofa National Wildlife Refuge," Funding from Region 2, Fish and Wildlife Service, Albuquerque, NM

"Status and trends of bats in the United States and territories," Funding from National Biological Service

"Baseline inventories for mammals in National Parks on the Colorado Plateau," Funding from Rocky Mountain Region, National Park Service, Denver, CO

"Biological survey of herptiles and mammals at San Andres National Wildlife Refuge," Funding from Region 2, Fish and Wildlife Service, Albuquerque, NM

"Patch size, biodiversity, and wildlife values in fragmented Rio Grande Bosque: The example of non-contiguous habitats," Funding from Region 2, Fish and Wildlife Service, Albuquerque, NM

"Status of the White Sands Woodrat," Funding from National Biological Service

"Baseline surveys for small mammals in the Henry Mountains BLM Resource Area, UT," Funding from National Biological Service and Texas Tech University

"Studies of the effects of forest management practices on the Sacramento Mountain salamander, *Aneides hardii*," Funding from Lincoln National Forest, U.S. Forest Service, Alamogordo, NM

"Status report on the Sacramento Mountain salamander, *Aneides hardii*," Funding from Lincoln National Forest, U.S. Forest Service, Alamogordo, NM

"Response of southwestern montane mammal communities to global change," University of New Mexico research project funded by National Biological Service

"Effects of global climate change on Chihuahuan Desert vegetation," New Mexico State University research project funded by National Biological Service

Publications:

Bermudez, F.C., J.N. Stuart, J.K. Frey, and R. Valdez. In press. Distribution and status of the Virginia opossum (*Didelphis virginiana*) in New Mexico. Southwestern Naturalist.

Bogan, M. A. In press. On the status of *Neotoma varia* from Turners' Island, Sonora. In T.L. Yates, D.E. Wilson, and W. Gannon. Special Publication, Museum of Southwestern Biology, The University of New Mexico, Albuquerque.

Bogan, M.A. In press. *Myotis californicus*. In D.E. Wilson (ed.). North American mammals. Smithsonian Institution Press, Washington DC.

Bogan, M.A. In press. *Myotis leibii*. In D. E. Wilson (ed.) North American mammals. Smithsonian Institution Press, Washington, DC.

Bogan, M.A. In press. *Myotis ciliolabrum*. In D. E. Wilson (ed.) North American mammals. Smithsonian Institution Press, Washington, DC.

Bogan, M.A. In press. *Myotis evotis*. In D. E. Wilson (ed.) North American mammals. Smithsonian Institution Press, Washington, DC.

Bogan, M.A. In press. *Myotis griscesens*. In D. E. Wilson (ed.) North American mammals. Smithsonian Institution Press, Washington, DC.

Bogan, M.A. In press. The Southwest. In P. Opler and M. Mac. Status and trends of natural resources in the United States. Special Publication, National Biological Service, Washington, DC.

Farley, G.H., L.M. Ellis, J.N. Stuart, and N.J. Scott, Jr. 1994. Avian species richness in different-aged stands of riparian forest along the Middle Rio Grande, New Mexico. Conservation Biology, 8: 1098-1108.

Finley, R.B., Jr., and M. A. Bogan. In press. New records of terrestrial mammals in northwestern Colorado. Proceedings, Denver Museum Natural History, Denver, CO.

McAllister, C.T., J.N. Stuart, and S.J. Upton. In press. Coccidia (Apicomplexa: Eimeriidae) from the Big Bend slider, *Trachemys gaigeae* (Testudines: Emydidae), in New Mexico. Journal of Parasitology.

Stuart, J.N. 1994. Book review: *Snakes, Lizards, Turtles, Frogs, Toads, and Salamanders of New Mexico* by M.A. Williamson et al. Bulletin Chicago Herpetological Society 29: 275-276.

Stuart, J.N. 1995. Natural history note: *Rana catesbeiana* (Bullfrog); Diet. Herpetological Review 26: 33.

Stuart, J.N. 1995. Geographic distribution: *Trachemys scripta scripta* (Yellowbelly Slider). Herpetological Review 26: 107.

Stuart, J.N. In press. Notes on aquatic turtles of the Rio Grande drainage, New Mexico. Bulletin Maryland Herpetological Society.

Stuart, J.N. In press. Observations on formalin-induced darkening of herpetological specimens. Collection Forum.

Stuart, J.N., and C.W. Painter. 1994. A review of the distribution and status of the boreal toad, *Bufo boreas boreas*, in New Mexico. Bulletin Chicago Herpetological Society 29: 113-116.

Stuart, J.N., and D.T. Scott. 1995. Geographic distribution: *Bufo punctatus* (Red-spotted Toad). Herpetological Review 26: 41-42.

Other Products:

Bogan, M.A. 1994. Research on status and distribution of bats on the Colorado Plateau. Colorado Plateau Newsletter 4: 1, 6-7.

Bogan, M. A. (Ed.) 1995. A biological survey of Fort Niobrara and Valentine National Wildlife Refuges. Final report to Region 6, Fish and Wildlife Service, Denver, CO. 193pp.

Bogan, M.A. and C. A. Ramotnik. 1995. Baseline surveys for mammals in four riparian areas in Glen Canyon National Recreation Area. Final report to Glen Canyon National Recreation Area, National Park Service, Page, AZ.

Mattson, T.A. et al. 1995. Roosting ecology of silver-haired bats (*Lasionycteris noctivagans*) in the Black Hills, South Dakota. Final report to National Park Service, Denver, CO.

Mollhagen, T.R. and M.A. Bogan. 1995. Baseline surveys for mammals in the Henry Mountains, Utah. 1994 Annual report to Bureau of Land Management, Hanksville, UT.

Ramotnik, C. A. and M. A. Bogan. 1995. Baseline surveys for mammals at San Andres National Wildlife Refuge, New Mexico. 1994 Annual report to San Andres National Wildlife Refuge, Fish & Wildlife Service, Las Cruces, NM.

Ramotnik, C. A. and M. A. Bogan. 1995. Baseline surveys for mammals at Mesa Verde National

Park, Colorado. Annual report to National Park Service, Rocky Mountain Region, Denver, CO.

Ramotnik, C. A. and M. A. Bogan. 1995. Baseline surveys for mammals at Natural Bridges National Monument, Utah. Annual report to National Park Service, Rocky Mountain Region, Denver, CO.

Ramotnik, C. A. and N. J. Scott, Jr. 1994. Studies of the effects of forest management practices on the Sacramento Mountain salamander, *Aneides hardii*. Annual report to Lincoln National Forest, U. S. Forest Service, Alamogordo, NM.

Stuart, J.N., G.H. Farley, E.W. Valdez, and M.A. Bogan. 1995. Studies of vertebrates in selected riparian and aquatic habitats on Bosque del Apache National Wildlife Refuge, New Mexico. Final report to U.S. Fish and Wildlife Service, Region 2, Albuquerque, NM. 55 pp.

Scientific Meetings, Symposia, and Workshops:

Bogan, M.A. Inventory and monitoring of mammals. Seminar presented at the U.S. Fish and Wildlife Service (Region 2) Biologists' Workshop: Inventory and Monitoring on Refuges. South Padre Island and Laguna Atascosa National Wildlife Refuge, Texas, April 1995.

Bogan, M.A. The bats of southern Utah. Presentation to training session for National Park Service and U.S. Forest Service personnel, Henry Mts., Utah, May 1995

Bogan, M.A. The bats of Zion National Park. Presentation to National Park Staff, Zion, UT, July 1995.

O'Shea, T.J., M.A. Bogan, and L. Ellison. "Status and trends of bat populations in the United States and territories." Poster at the International Bat Meetings in Boston, MA, August 1995.

Ramotnik, C. A. "Collections on the move: a case history of the peregrinations of a Federal collection of vertebrates." Presentation at the 10th Annual Meeting of the Society for the Preservation of Natural History Collections in Toronto, Ontario, June 1995.

Stuart, J.N. Inventory and monitoring of amphibians and reptiles. Seminar presented at the U.S. Fish and Wildlife Service (Region 2) Biologists' Workshop: Inventory and Monitoring on Refuges. South Padre Island and Laguna Atascosa National Wildlife Refuge, Texas, April 1995.

Committees, Awards, and Other Significant Activities:

Dr. Bogan worked with the Director, Museum of Southwestern Biology, UNM, and other staff, to develop a new five-year Cooperative Agreement between the University and National Biological Survey that details the nature of cooperation and interactions on museum collections, research projects, and other topics of mutual interest.

Dr. Bogan served as NBS Project Officer on the University of New Mexico's research project on "The response of southwestern montane mammal communities to global change."

Dr. Bogan served as NBS Project Officer on New Mexico State University's research project on "Impacts of global climate change on Chihuahuan Desert vegetation."

Dr. Bogan served as Program Chair for the February 1995 Annual Meeting of the Arizona-New Mexico Chapters of The Wildlife Society in Gallup, NM..

Dr. Bogan is serving as Program Chair and co-organizer of the Colorado Bat Society's Four Corners Regional Bat Conference, Durango, CO, January 1996.

Dr. Bogan served as a reviewer of manuscripts for the Journal of Mammalogy, Southwestern Naturalist, and Great Basin Naturalist.

Dr. Farley performed breeding bird surveys for the U.S. Fish and Wildlife Service Migratory Bird Management Office.

Dr. Farley performed year-round bird surveys at the Sevilleta National Wildlife Refuge for the Long Term Ecological Research Program, Department of Biology, UNM.

Dr. Farley served as an outside reviewer for manuscripts submitted to the New Mexico Ornithological Society Bulletin.

Ms. Ramotnik attended the 10th Annual Meeting of the Society for the Preservation of Natural History Collections in Toronto, Ontario, Canada in May 1995.

Ms. Ramotnik served as Safety Officer for the Albuquerque Field Station and drafted sections on "Health and Safety" and "Hazardous Waste" for the Policy Manual of the Museum of Southwestern Biology.

Mr. Stuart served as an outside reviewer for herpetological manuscripts submitted to The Southwestern Naturalist.

APPENDIX O

RESEARCH PROPOSALS SUBMITTED, FY 1994-95

BIOLOGY DEPARTMENT
1994–95 FISCAL YEAR

PROPOSALS

Principal Investigator	Agency/Proposal No.	Period of Performance	Proposed Funding	Title
			July 1994	
Brown, J.	NSF	01/01/95—12/31/99	10,005,817	Center for Ecological Analysis and Synthesis (CEAS).
Crawford, C.S.	USFS (913)	09/15/94—05/31/97	12,000	Comparsion of Avian Foraging on Introduced vs. Native Vegetation in the Middle Rio Grande Bosque.
Dahm, C.N.	NSF (917)	08/22/94—08/21/95	73,253	Intergovernmental Personnel Act Agreement.
Johnson, N.C.	NSF (912)	06/01/94—11/30/97	4,800	The Role of Limiting Resources in Controlling Mutualistic & Parasitic Effects of Mycorrhizae/Postdoctoral Fellowship.
Mehlhop & Ladyman	NBS (918)	09/01/94—02/28/95	7,889	Status Assessment of *Trifolium meurophyllum*.
Milne, Parmenter & Brunt	NSF (529U)	09/01/94—12/31/94	3,570	Development of a Collaborative Research Program Between the Sevilleta & Jornada LTER Sites & the Mapimi MAB Research Station, Mexico.
Molles, M.C.	USFS (923)	08/31/94—08/31/96	17,000	Interaction of Ecosystem Processes in the Rio Grande Basin.
Nelson, M.A.	HFSP (744)	09/01/92—08/31/95	135,000	Sexual Development in the Filamentous Fungi: Mating-Specific Genes of *Neurospora* & *Podospora*.
Nuttall, Lutze, Thomson & Barton	DOE (272-1)	06/01/94—09/01/99	3,149,500	Groundwater Remediation Work for the UMTRA Sites Tuba City, AZ, & Shiprock, NM.
Parmenter, R.R.	NPS (919)	10/01/94—09/30/95	10,234	Natural Resources Management Assistance with the SWRO Natural Resources Division.
Runyan & Mehlhop	ETC (914)	07/23/94—08/05/94	1,638	Woodrat Survey.
Valett, H.M.	USFS (916)	08/15/94—08/15/95	46,872	Nutrient Retention in the Rio Grande Continuum.
Valett & Campana	NSF (915)	01/01/95—12/31/97	667,348	Stream/Ground Water Ecotones: Hydrology, Biogeochemistry & Ecology.
Total:			**$14,134,921**	

0543

Principal Investigator	Agency/Proposal No.	Period of Performance	Proposed Funding	Title
August 1994				
Duszynski, D.W.	NSF	02/01/95—02/01/96	16,220	Molecular Systematics & Population Genetics of Parasitic Protozoans: A Model for the Use of the Random Amplified Polymorphic DNA Assay.
Parmenter, Lightfoot & Crawford	NPS (905)	08/01/94—12/31/95	33,908	The Petroglyph National Monument: A Survey of the Biological Resources—Subagreement #11.
Snyder, A.M.	USBR (779)	10/01/94—09/30/97	43,750	San Juan River Drift Studies.
Total:			**$93,878**	
September 1994				
Ligon, J.D.	TLI (880A)	10/01/94—09/30/95	11,102	Research Assistantship for Yue-Mei Geng.
Mehlhop & Elliott	USFS (924)	08/24/94—09/30/94	5,000	Forest Service Biological Database.
Miller, R.D.	NIH (921)	12/01/94—11/30/96	346,211	Isolating the Mouse SCID DNA Repair Gene.
Snyder, A.M.	USBR (779F)	09/15/94—09/30/97	10,000	San Juan River Drift Studies.
Valett, Molles, Crawford & Campana	NSF	03/01/95—02/28/99	196,892	Riparian Ecosystem Restoration at Bosque del Apache National Wildlife Refuge.
Total:			**$569,205**	

Principal Investigator	Agency/Proposal No.	Period of Performance	Proposed Funding	Title
			October 1994	
Mehlhop & Runyan	DOD & USA (927)	09/30/94—01/31/95	5,000	White Sand Woodrat Survey.
White, C.	NMWRRI (929)	07/01/95—09/01/96	20,253	Changes in Runoff Quantity & Quality after Prescribed Fire in Semi-Arid Grasslands.
Yates, T.L.	NMDH (877)	10/01/94—09/30/95	155,000	Monitoring & Surveillance of Hantavirus in Natural Populations of Wild Rodents-Admendment/Supplement.
Yates, T.L.	USPHS (928)	11/01/94—02/01/95	4,968	Surveillance of Hantavirsus in N.M. Rodents.
Total:			**$185,221**	
			November 1994	
Barton, L.L.	Clark Atl. U. (869A)	10/01/94—12/31/94	5,500	Assess Emerging Technologies on Barrier Reactors for Hazardous Waste Management & Documentation for the Army Environmental Policy Institute.
Muldavin & Parmenter	Nature Conserv. (933)	12/01/94—09/30/96	177,410	Development of a Geographical Information System for the Melrose Bombing Range, Cannon Air Force Base, NM.
Natvig, Nelson, Werner-Washburne & Miller	NSF-RIMI (931)	05/01/95—04/30/98	499,961	The Neurospora Genome Project at UNM: A Genome Characterization Training Program.
Stricker, S.A.	NSF (932)	09/01/95—08/31/98	246,772	Calcium Dynamics During Marine Invertebrate Early Development.
Total:			**$929,643**	
			December 1994	
Brown, J.H.	NSF (496K)	01/06/93—02/28/96	73,000	Long-term Monitoring & Manipulation of the Desert Granivore System.
Miller, R.D.	NIH (921)	12/01/94—11/30/95	169,712	Isolating the SCID Mouse Repair Gene.

0545

Principal Investigator	Agency/Proposal No.	Period of Performance	Proposed Funding	Title
Nelson, M.A.	HFSP (744C)	09/01/94—08/31/95	44,000	Sexual Development in the Filamentous Fungi: Mating-Specific Genes of *Neurospora* & *Podospora*.
Parmenter, Lightfoot, & Crawford	NPS (905)	08/02/94—12/31/95	0	Modification: Survey of Biological Resources at Petroglyph National Monument.
Total:			**$286,712**	

January 1995

Crawford & Molles	USFWS (727B)	04/15/95—04/15/96	69,998	The Effects of Annual Flooding on the Rio Grande Basin: Bosque del Apache National Wildlife Refuge, San Antonio, NM.
Gannon, W.L.	US Army (954)	05/01/95—12/01/95	7,520	Camp Roberts Bat Survey.
Lowrey, T.K.	NMEMNR (943)	02/01/95—06/30/95	3,000	Genetic Comparison of *Townsendia gypsophila* & *T. fendleri*.
Marshall, D.L.	NSF (557)	11/15/89—03/31/96	0	Non-Random Mating in Plants—PYI Award.
Muldavin & Inglis	Nature Cons. (945)	01/01/95—09/01/96	380,608	Development of a Vegetation Classification and Map for Ft. Bliss.
Natvig, D.O.	PHS	09/01/95—08/31/00	845,380	Reproductive Genetics of *Neurospora tetrasperma*.
Parmenter, Muldavin & Inglis	Nature Cons. (933)	12/01/94—09/30/96	15,000	Development of a Geographical Information System for the Melrose Bombing Range, Cannon AFB.
Snyder, A.M.	BR (779G)	03/18/92—09/30/97	44,737	Modification.: ???
Valett, H.M.	NSF	06/01/95—06/01/97	9,350	Permeability & Biogeochemical Structure of the Groundwater-Stream Water Ecotone.
Valett & Baker	NSF	06/01/95—06/01/97	9,711	Carbon Retention & Ecosystem Metabolism in Near-Stream Groundwater.
Valett & Campana	NSF (915B	05/15/95—08/15/95	16,000	REU & RAMHSS Supplement to Stream/Groundwater Ecotones: Hydrology, Biogeochemistry & Ecology.
Valett, Molles, Crawford & Campana	NSF (891)	05/15/95—08/15/95	10,000	REU Supplement to SGER: Experimental Flooding of Bosque del Apache NWR, Rio Grande, NM.
Vogel, K.G.	NIH (401I)	01/01/95—12/31/95	187,871	Proteoglycan Structure, Metabolism & Role in Tendon.
Total:			**$1,599,175**	

Principal Investigator	Agency/Proposal No.	Period of Performance	Proposed Funding	Title
			February 1995	
Duszynski, D.W.	NSF (955)	09/01/95–08/31/00	758,928	The Coccidia of the World.
Gosz, J.R.	UW (936A)	01/01/95–12/31/95	94,991	Revised: Stimulating & Facilitating Collaborative Long-Term Ecological Research: A Proposal for Continued Support of the LTER & ILTER Networking Program & Office.
Gosz, J.R.	UW (936B)	01/01/95–02/28/97	189,433	Stimulating & Facilitating Collaborative Long-Term Ecological Research: A Proposal for Continued Support of the LTER & ILTER Networking Program & Office.
Muldavin & Inglis	NC (945)	01/20/95–09/28/96	325,246	Development of a Vegetation Classification & Map at Ft. Bliss.
Miller, R.	Envir. Trust (957)	03/01/95–12/31/95	2,625	MHC Variation in *Eschrichtius robustus*.
Nelson, M.A.	NIH (732)	05/01/95–04/30/96	74,396	Molecular Analysis of Sexual Development in *Neurospora*.
Parmenter & Brunt	NSF (956)	07/01/95–06/30/97	123,120	The Sevilleta Field Station: Enhancements to Station Computation, Information & Transportation Capabilities.
Parmenter & Lightfoot	NPS (805A)	09/18/92–05/31/95	0	Pecos National Historic Park: Survey of Animal Resources.
Vogel, K.G.	NIH (401J)	06/01/95–08/31/96	18,598	Undergraduate Minority Supplement—Proteoglycan Structure, Metabolism & Role in Tendon.
Watson, P.J.	NSF (860A)	06/15/94–06/30/96	10,158	REU Supplement: Behavioral Energetics & Metabolic Competence.
Yates, T.L.	NMDH (877B)	12/21/94–09/29/96	155,000	Monitoring Four-Corners Hantavirus in Mammals.
Total:			**$1,752,495**	
			March 1995	
DeBruin & Mehlhop	NMEMNR (893)	03/01/95–06/30/95	2,000	Rare Plant Database Development.
Mehlhop, P.	NMGF (866)	03/01/95–12/01/95	3,500	Rivers Assessment Database Development.
Milne, Parmenter & Brunt	NSF (881)	05/15/95–05/14/96	39,792	Supplement to the Sevilleta Long-Term Ecological Research Project for Research Experiences for Undergraduates.
Total:			**$45,292**	

0547

Principal Investigator	Agency/Proposal No.	Period of Performance	Proposed Funding	Title
April 1995				
Johnson, A.R.	KSU	09/01/95—08/31/98	35,898	Impact of Anthropogenic Activity on Surface Albedo in the U.S. High Plains.
Morain, S.A.	NSF (169-3655)	10/01/95—09/30/98	497,100	Exploring New Tools for Detecting Regional Climate Change Using Plant Species Migration.
Natvig, Nelson, Werner-Washburne & Miller	NSF (931)	05/01/95—04/30/98	322,142	The *Neurospora* Genome Project at UNM: A Genome Characterization Training Program.
Riedesel, M.L.	NASA (3668)	10/01/95—09/30/96	129,085	Vascular Response to Variability in Orthostatic Testing.
Valett, H.M.	NSF/EPA (3716)	01/01/96—12/31/98	706,368	The Influence of Flooding on Organic Matter Dynamics & Biogeochemical Processes in a Southwestern Riparian Ecosystem.
White, C.	USDA (3703)	05/01/95—04/01/96	9,408	Ecology of Fire in Semi-Arid Grasslands.
Total:			$1,700,001	
May 1995				
Duszynski, D.W. & Dailey, M.D.	NSF (930)	07/15/95—07/15/98	360,000	Historical Biodiversity of the Parasites of Small Mammals on the Sevilleta National Wildlife Refuge, Soccoro, NM: 1989-2000.
Gannon, W.L.	NMG&F (896)	07/01/96—06/30/97	6,345	Acoustic and Netting Survey of the Bats of New Mexico.
Johnson, N.C	NSF (3821)	10/01/95—09/30/96	98,519	Mycorrhizal Responses to Nitrogen Eutrophication at Five Mesic & Semi-Arid Sites..
Lightfoot, D.C.	NSF (878)	10/01/95—09/30/98	194,665	The Effects of Indigenous Small Mammals on the Species Composition & Structure of Chihuahuan Desert Communities: A LTER Cross-Site Research Project.
Miller, G.D.	NSF (3838)	08/01/96—08/01/98	141,105	Winter Movements & Distribution of Adelie Penguins in the Ross Sea.
Werner-Washburne, M.	NSF (566N)	07/01/95—06/30/96	37,500	Gene Expression During Starvation-Induced Arrest in *Saccharomyes ceveirsiae*.
White, C.S.	USDA	06/01/95—06/30/96	15,000	Assessment of Current Water Quality Status and Potential for Nitrate Loss from Forest Ecosystems within the Santa Fe Municipal Watershed.
Yates, T.L. & Frey, J.K.	NSF (3741)	09/01/95—08/31/96	27,180	International Workshop: Collaborative Long-Term Research Across the Biomes of North America.

Principal Investigator	Agency/Proposal No.	Period of Performance	Proposed Funding	Title
Yates, T.L. & Gosz, J.R.	NSF (3787)	01/01/96—12/31/97	111,721	Planning Grant for an All-Taxa Biological Inventory for the Sevilleta National Wildlife Refuge.
Total:			**$992,035**	

June 1995

Altenbach, J.S.	NMEM&NR (692E/2142)	07/01/95—06/31/96	6,250	Evaluation of Bat Population & Bat Habitat Research (Professional Services Agreement).
Barton & Thomson	WERC/DOE (110-375)	02/20/95—02/19/96	59,963	Control of Uranium Migration by Microbial Action.
Brown, J.H.	NSF (3883)	01/01/96—12/31/98	321,423	Geographic Variation in Species Diversity.
Dahm, C.N.	NSF (917A/3925)	08/22/95—08/21/96	74,774	Intergovernmental Personnel Act Agreement.
Evans, A.S.	NSF (3878)	01/01/96—12/31/99	125,045	Evolutionary Responses of *Brassica compestris* to elevated CO_2 and nitrogen.
Gannon, W.L.	BLM	08/07/95—09/30/96	8,690	Bat Survey of Area Near Chama, NM.
Johnson & Turner	NSF (3890)	04/01/96—03/31/99	322,424	Mast Seeding in Piñon Pine, *Pinus edulis* (Engelm.) Serg.
Lowrey & Brunt	NSF (4000)	01/01/96—12/31/98	1,051,679	CHAZNM: Development of a Computerized Network-Accessible, Inter-Institutional Herbarium Specimen Database.
Marshall & Evans	NSF (938/0830)	10/01/95-09/30/98	140,000	Does Non-random Mating Produce Evolutionary Change: A Selection Experiment Using Wild Radish as a Model System.
Marshall & Evans	NSF (938/0830)	10/01/95-09/30/98	180,000	Does Non-random Mating Produce Evolutionary Change: A Selection Experiment Using Wild Radish as a Model System.
Mehlhop, P. & Elliott, K.	NMG&F (3903)	07/01/95—05/31/96	15,000	Mollusk Surveys of the Canadian River.
Milne, B.T. et. al.	NSF (881/3256))	10/15/95—10/14/96	560,000	Sevilleta LTER II: Biome-Level Constraints on Population, Community & Ecosystem Responses to Climate Fluctuations.
Snell, H.L.	NMG&F (4143)	05/01/95—12/31/95	60,357	Dunes Sagebrush Lizard, *Sceloporus arenicolus*, in Southeastern New Mexico: Effects of Shinnery Oak Removal, Distribution Study, and Oil and Gas Impacts.
Toolson, E.C.	NSF (3889)	06/01/96—05/31/99	258,998	Cicada Physiological Ecology & Enzymology.
White & Gosz	NSF	01/01/96—01/01/00	290,609	The Role of Bouteloua Species in Structuring Grassland Ecosystem: Consequences of Species-Level variation.

0549

Principal Investigator	Agency/Proposal No.	Period of Performance	Proposed Funding	Title
Yates, Gannon, Bogan & Ramotnik	NSF (3888)	03/01/96—02/28/01	653,879	Renovation, Integration & Data Verification of the Mammal Collection of the MSB & NBS-Albuquerque.
Total:			**$4,129,091**	

APPENDIX P

BIOLOGY GRADUATION PROGRAM, MAY 1995

SPRING 1995

Rebecca T. Kimball (Dr. J.D. Ligon)
Sexual Selection in House Sparrows, *Passer domesticus.*

SUMMER 1995

Robert J. Cabin (Dr. D.L. Marshall)
An Examination of the Genetic & Demographic Relationship Between a Desert Mustard & its Soil Seed Bank.

Jean-Luc E. Cartron (Dr. J.H. Brown)
Phylogeny & Ecology in the Evolution of Clutch Size in Birds.

Greg H. Farley (Dr. J.D. Ligon)
Thermal, Social & Distributional Consequences of Nighttime Cavity Roosting in *Campylorhynchus* Wrens.

William L. Gannon (Dr. J.S. Findley)
Ecomorphological Evaluation of Character Displacement in the Southwestern Myotis (*Myotis auriculus)* & the Long-Eared Myotis *(Myotis evotis).*

Robert L. Harrison (Dr. C.S. Crawford)
The Effect of Rural Residential Development on The Ecology & Behavior of Gray Foxes (*Urocyon Cinereoargenteus*).

Colleen A. Hatfield (Dr. B.T. Milne)
Influence of Spatial Confirguartion and Feedbacks in Species Co-existence: High Mountain Streams & Riparian Plants as a Model System

Timothy H. Keitt (Dr. B.T. Milne)
Critical Phenomena & Spatial Complexity in Ecological Systems.

Douglas A. Kelt (Dr. J.H. Brown)
Assembly of Communities Over Time & Space: A Modeling Approach to Macroecological Dynamics.

Yorgos Marinakis (Dr. B.T. Milne)
A Phase Transition in a Prehistoric Human Population.

David W. Mehlman (Dr. J.H. Brown)
The Spatial Distribution of Abundance: Analysis of the Geographic Range.

Shahroukh R. Mistry (Dr. J.H. Brown)
Patterns of Seed Dispersal along Disturbance, Moisture & Latitude Gradients.

Shawn E. Nordell (Dr. A. Kodric-Brown)
Mechanisms of Selection: Mate Choice & Predation Assessment in Guppies (*Poecilia reticulata*).

James R. Robbins (Dr. K.G. Vogel)
A Possible Role for TGF-β1 in mediating altered proteoglycan synthesis following cyclic *in vitro* compression of tendon.

Paul A. Stone (Dr. H.L. Snell)
Sexual Selection in Lava Lizards.

The Biology Department gratefully acknowledges the cheerful contributions of the following whose help made this ceremony possible: Vivian Kent for organizing the whole event, & all of the faculty, staff & students who contributed their time & effort.

Department of Biology

The University of New Mexico

Graduation Program

May 13, 1995

WELCOME: Dr. J. David Ligon, Professor & Chair

PRESENTATION OF THE BIOLOGICAL SOCIETY OF NEW MEXICO AWARD TO OUTSTANDING UNDERGRADUATES: Dr. Mary Anne Nelson, Assistant Professor

PRESENTATION OF GRADUATES: Dr. J. David Ligon, Professor & Chair; Dr. Astrid Kodric-Brown, Professor; Dr. Timothy K. Lowrey, Associate Professor.

CLOSING ANNOUNCEMENTS

BACHELOR OF ARTS DEGREES

Jan A. Bergstrom
Carol A. Breslin
Jennifer L. Brooke
Michael Burckley
Gregory D. Duran
Scott A. Jullian
Farshid Kamali
William B. Laurie, Jr.
Teri L. McDonald
Timothy Mitchell
Kapila R. Morgan
Martin A. Otero
Robert L. Rael
Marshall L. Saiz
James B. Stock
Amy L. Sturtz
Victor A. Ulibarri

BACHELOR OF SCIENCE DEGREES

Liza M.S. Abaoag
Daniel Abraham
Steven D. Aeschliman
Heather L. Ames
Lawrence Andrade
Aaron A. Apodaca
Adrian A. Aragon
David F. Argüello, II
Jeffrey L. Armijo
Michael S. Ashcraft
Maysoun Assed
James A. Bakhtiar
Peter D. Ballance
Kimberly K. Barlow
Sara L. Beers
Cherese Bellino
Melissa C. Bertram
Kelly M. Billings
Larissa Bornikova
Lillian Brady
Marque D. Broussard
Lisa S.N. Burnett
Edward S. Caldwell
Christopher Cappon
Heather L. Capps
Stacey E. Carr
Ryan P. Carson
Colby L. Carter
Stoney J. Case
Duane M. Chase
Margie Chapman
Brenda L. Clani
Darcy C. Crenshaw
Michelle R. Cronk
Matthew S. Custer
Sherri Dabovich
John E. Dencoff
Lisa Denton
Lauri Dickinson
Danielle D. Diehl
Brian D. Dorotik
Kristy L. Duran
Lois A. Elliott
Tryone Finch
Colleen A. Fordyce
Christopher A. Freiwald
Wendy S. Fronterhouse
Laverne A. Gallegos
Lisa L. Garcia
Jeannine Garduno
Theresa M. Garduno
Kristina R. Garnand
Teresa A. Gast
Leslie D. Goggans
María A. Gómez
Alexander Gonzalez
Dawn M. Griffin
Carrie A. Gurule
Benjamin Hanelt
Manuela Harvey
Joel D. Hauswirth
Justin L. Hazen
Florence V. Hendren
Allison C. Henry
Alfredo Hernandez
Sarah H. Higgs
Rafael A. Hildebrand
Sheila A. Hill
Holly R. Hlava
James Hobson
Margaret M. Hoemeke
Valerie F. Holiday
Bruce K. Holmes
Wayne R. Honnila
Christy L. Hronich
Carrie L. Jacobi
Cathleen Jasperson
Daniel E. Johnson
Jay B. Johnson
Randal S. Johnson
Millard J. Jordan
Amy L. Kettleson
Angeline M. Kim
Tae-Hee R. Kim
Teresa A. Kimble
Julie A. Knight
Theresa A. Laguna
Shannon E. Langham
Morinne J. Laughlin
Jeffrey M. Lee
Lee W. Lewis
Jeanette Lopez
Phillip J. Lujan, Jr.
Tinalyn M. Malecki
Gary A. Martin
Geraldo R. Martinez
Damon Matlock
Dominic Martsch
Tobias J. McBride
Strider McCash
Mary B. McCormick
Laurel McCulley
Michele A. McKinney
Jeffrey A. Merritt
Kirsten A. Meyer
Jason W. Mitchell
Michael L. Monske
Peggy R. Moran
David W. Morrison
Douglas L. Moyer
Timothy B. Muller
Karel J. Ortiz
Jeff C. Pace
Steven J. Pacheco
Rachel E. Palmer
Elizabeth Pascetti
Sandip V. Patel
Dawn Petersen
Nhung T. Pham
Ana M. Polcao
Jeffrey S. Quinn
Lori K. Rabinowitz
Roman Rede
Pamela C. Ridley
Jason F. Roback
Eric C. Robinson
John P. Roumpf
Rhonda L. Saiers
Collin K. Sanchez
Cristine A. Sappington
Christopher A. Spencer
Virginia Stewart
Bret A. Streeter
Lorraine Swanick
Eric A. Thomas †
Pauletta Thomas
Vincent Tom
Angela M. Urrutia
Lisa Vandiver
Rebecca D. Vasilion
Angela Y. Vaught
Jonathan P. Vigil
Jason Waddoups
Kristen M. Webster
Christine Weidmann-Wilson
Shayna J. Whitaker
Rose M. Whitten
Wade D. Wilson
Irby D. Wood
Janice Yazzie
Alicia E. Yip
Kathryn A. Young
James L. Zamora

† Board of Regents Representative

UNDERGRADUATE HONOR STUDENTS

Summa cum laude: María A. Gómez & Rachel E. Palmer
Magna cum laude: David F. Argüello II, Ben Hanelt, Morinne J. Laughlin & Douglas L. Moyer
Cum laude: Aaron A. Apodaca & Mary B. McCormick

MASTER OF SCIENCE DEGREES

FALL 1994

Raymund K.-G. Chan (Drs. T.K. Lowrey & D.O. Natvig)
Molecular Phylogenetic Relationship of Hawaiian *Tetramolopium* Species (Compositae) Using DNA Sequence Data from the Internal Transcribed Spacer (ITS) Regions.

Rayna J. Gonzales (Dr. E.C. Toolson)
The Effect of Gender & Body Temperature on Survival, Metabolic Rate & Ventilation in Hypoxic Rats.

SPRING 1995

Brian J. Enquist (Dr. J.H. Brown)
Nest & Habitat Selection in Two Sympatric Species of Neotropical Forest-Falcons.

Mark A. Jordan (Dr. H.L. Snell)
The Relationship of Metabolic Rate to Body Mass in the Galápagos Land Iguana (*Conolophus subcristatus*).

Keith B. Gido (Dr. M.C. Molles)
Spatial & Temporal Variation of Fish Communities in Secondary Channels of the San Juan River, New Mexico & Utah.

SUMMER 1995

Kenneth L. Conwell II (Dr. S.A. Stricker)
Nucleolar Dynamics during Starfish Oocyte Maturation.

Lara G. Hays (Dr. J.L. Trujillo)
Cloning Strategies for Rat Liver Cytosolic Phosphoenolpyruvate Carboxykinase (GTP) in *E. coli*.

Fiona L. Jordan (Dr. L.L. Barton)
Molecular Characterization of Lead Resistance in Gram-negative bacteria.

Sharon R. Tarbox (Dr. B.T. Milne)
Stem Response of *Pinus edulis* to 1882 Precipitation & Soil Moisture Dynamics: A Multi-temporal Approach.

Todd A. Thompson (Dr. E.C. Toolson)
Metabolic Responses to Thermal Acclimation in Two Populations of the Scorpion *Centuroides exilicauda*.

DOCTOR OF PHILOSOPHY DEGREES

FALL 1994

Samuel R. Loftin (Dr. J.R. Gosz)
Sewage Sludge Application to Semi-arid Grassland: Effects on Soil, Vegetation & Surface Hydrology.

Michael J. Patrick (Dr. D.W. Duszynski)
Parasites of *Dipodomys merriami*: Patterns & Processes.

COLLEGE OF ARTS AND SCIENCES

THE REPORT OF THE DEPARTMENT OF CHEMISTRY

July 1, 1994 to June 30, 1995

Cary J. Morrow, Chairman

A. Significant Events During Academic Year 1994-95

The past academic year has been a very busy one for the Department of Chemistry. Continued effort has been directed toward the stabilization of the fragile situation with regard to the faculty which had been identified by the graduate program review team in 1993. This fragility has resulted from the ongoing and impending loss of many of the more senior faculty and the potential loss of some of the faculty hired in the course of building the program which has been underway for the past dozen years. Continued efforts have also been underway to provide the additional high-quality space which the review team strongly emphasized that the Department needed if the growth pattern of the preceding dozen years is to continue and the gains made to be consolidated. Unfortunately, however, our efforts to recruit an Assistant Professor in the area was unsuccessful despite offers made in succession to four different applicants.

2. Faculty

Several faculty personnel changes occurred during the course of this past academic year:

Professor Christie G.Enke, who is nationally and internationally known for his research in analytical chemistry, especially mass spectrometry, and for his contribution to the

development of a widely-used curriculum for undergraduate courses in instrumental analysis moved from Michigan State University to join our faculty in August 1994. Because an inexpensive method was found for starting up Professor Enke at UNM, using the indirect cost funds generated by his own grants, and because of the Department's severe need for an additional analytical chemist, Dean Gordon permitted an offer to be made to him using a search waiver. He has made excellent progress in reestablishing his research program at UNM and has become a major contributor to all aspects of the department's mission.

As a temporary solution to the problem of covering our classes, a search for a Lecturer was conducted during 1994-95. Although the number of applicants was very small, two people, Dr. Jack Houser and Dr. Dana Brabson, were hired from the pool to begin assisting with our lower division instruction in Fall 1995.

Professor William Litchman retired at the end of June 1994, after 25 years of service to the University. However, he continued to teach on a part time basis through the 1994-95 academic year.

Professor Tom Niemczyk took an academic year sabbatical to conduct research with the Rio Grande Research Corporation on the North Campus. By all reports, this was an exciting experience and has made significant contributions to the commercialization of some of the analytical techniques Dr. Niemczyk's research group has been studying during the past several years.

Professor Mark Hampden-Smith completed a one semester sabbatical leave during the Fall semester of 1994 concentrating on his research here at UNM, but spending a fraction of the time as a visiting faculty member in his native Britain.

Our search for a senior faculty member led by Professor Chris Enke during the 1994-95 academic year led to an offer to Professor David Whitten, who is currently at the University of Rochester, but, in the face of a strong counteroffer, our offer was not accepted. We are continuing to pursue two faculty who were also applicants to this pool, Professors Patrick Mariano and Debra Dunaway-Mariano, both from the Chemistry Department at the University of Maryland.

The most exciting event in the department during the past year was the selection of Dr. Robert Paine to present the university's 40th Annual Research Lecture during the Spring semester. Bob is only the second chemist selected to receive this honor. Following a suitable fete for Bob, his family, and invited guests, given by the department faculty at Scalo Northern Italian Restaurant, Bob presented a fine lecture that was carefully tuned to the broad range of backgrounds among the large audience. The lecture was followed by a reception hosted by the Associate Provost for Research.

3. Curriculum

The demand for chemistry courses continued to grow this past year. Response to this new demand has required the continuing addition of new laboratory sections in General Chemistry, Quantitative Analysis, and Organic Chemistry. A number of the new sections are offered in the evening, and on Saturday morning to make them available to the growing number of non-traditional students who cannot attend the usual weekday/ daytime sections. The Saturday sections in Organic Chemistry Laboratory have been especially popular.

Chemistry 307 and 308, the organic chemistry courses designed specifically for chemistry majors, could not be offered due to Professor Ogilby's being on sabbatical in 1993-94,

Professor Hollsteins's retirement and the heavy administrative loads carried by Professors Morrow and Holder. However, while establishing the 1995-96 during the spring, it was agreed that these courses would again be offered following the return of Chemistry 131-132 in 1994-95. The latter two courses were very successful under Dr. Ondrias guidance during the year, suggesting that a separate, more quantitative track for our majors may again be a viable option for the department, an one that is warranted despite the difficulty in covering our teaching loads with the available faculty.

The place of computer instruction in the general chemistry curriculum became an issue during 1994-95. One faculty member felt that extensive experience in developing computer skills should be included in the lecture and laboratory portions of general chemistry. Others felt that this was excessive. A compromise was reached where there will be some instruction in the general use of computers in the laboratory, but it is not expected to be included in the general chemistry lectures any longer.

The MEMS PROGRAM continues to be a successful approach to improving retention of undergraduate students in the freshman chemistry program. The Teaching Assistants who participate as leaders of the study groups that are a central aspect of the program have been excellent, and the students who have participated have benefited from the experience.

All classes offered by the chemistry department are listed in Appendix B.

4. Facilities

Professor Fritz Allen was appointed to be the Associate Chairman for Facilities during the past three fiscal years. He will continue in the position during the Fall semester of the upcoming year as well, but will take over as Chairman at the beginning of the Spring semester.

This appointment provided a single person to oversee and coordinate the efforts to obtain new facilities, to oversee the current facilities, and to allocate the available space to those who are able to justify needing it. His exceptional contribution to the Department through his handling of these matters is gratefully acknowledged

Fritz Allen, under the auspices of his position as Associate Chairman for Facilities, submitted a proposal to the National Science Foundation for funds to renovate the Riebsomer wing of the building as well. Funding in the amount of $1.3 million was awarded late in the fiscal year. The matching funds request of $1.7 million required to claim the NSF funds plus an additional amount to improve handicapped accessibility in the building was considered by the Legislature in January 1994. The Legislature approved some funding from a budget surplus, but the majority is to come from G.O. bonds approved by the electorate in November 1994. This renovation will begin in December 1995, and will improve the quality and safety of the instructional and research laboratories in that wing. It will also represent a component of the work called for in phase II of the programming document for Chemistry space that was completed two years ago. However, it will not provide the additional space required by the Department.

An alternative approach to resolving that problem was sought through continued consideration of the long-discussed Science and Technology Research Center. An agreement was reached among the chemistry faculty that, since the Research Center was the building the University seemed to be willing to build, we should seek the space we need in that building. Biology and Earth and Planetary Sciences were contacted and invited to participate in a joint use building providing needed space to those three departments. With this support, a proposal for

planning funds for such a building was sought from the 1994 legislative session and $250,000 was provided. Planning carried out during FY 1994-95 and the first half of FY 1995-96 has led to an agreement with the Provost that these three departments and Computer Science will share the space created. However, how the space is to be divided amongst these users has been a source of considerable contention. The plan should be ready for presentation to the 1996 legislative session, but division of the space remains to be resolved until after it is determined what, if any, space will actually be constructed.

5. Graduate Program

The Graduate Recruitment and Selection Committee was again very active under the leadership of Professor Bob Paine, the Associate Chairman for Graduate Recruitment, and succeeded in attracting average size group of new graduate students to the department for the coming year. The return to a larger class reflects the Committee's efforts to increase significantly the quality of students available to the graduate program. Other methods are being sought to alleviate the on-going problem of needing to use graduate students who are less than fluent in English to teach undergraduate laboratories. Appendix A summarizes the recruiting activities.

A further increases in the sum available for stipend support that was granted by the Dean has made it possible for us to offer $12,650 teaching assistantships for the class to enter in August 1995. Dr. Nancy Boldt, the Laboratory Supervisor has continued her efforts to reduce the average number of laboratories each Teaching Assistant must teach from six per year to five per year. We have continued to guarantee the incoming graduate students a position for the summer and the best students are given added inducements in the form of Daub fellowships in the first year.

Unfortunately, the Graduate Assistantships in Areas of National Needs, GAANN, program funding from the Department of Education was allowed to elapse in 1994 without a renewal proposal being submitted, and these recruiting inducements were not be available for the class entering in Fall 1994. Our attempt to obtain new funding from the program for Fall 1995 was unsuccessful. Although our basic offer is still not as competitive as we would like it to be, the change in stipend represents major progress toward building a competitive graduate program. We are grateful to the Dean for his continuing support for our achieving this goal.

6. Undergraduate Program

We had our sixth annual departmental commencement following the general commencement ceremonies at the football stadium, followed by an elegant catered buffet luncheon served on our patio. We were again joined this year by the Department of Biochemistry. Over 100 graduates and guests attended, with Dr. Morrow and Dr. Glew, Chairman of Biochemistry, presenting certificates to those receiving the B.S., B.A., M.S. and Ph.D. degrees, and to award winners.

Our own undergraduate program produced a small but well prepared group of graduating majors this year. Several will attend graduate or professional schools this fall. Four students earned a B.S. degree: three men and two women including one Hispanic and one Asian. Nine students, five men and four women, including one Hispanic also earned the B.A. degree. In addition to these students who completed chemistry degrees, twenty-one men and twenty-three women earned a minor in chemistry. At the graduate level, eight student earned the M.S. degree (three men and five women, four of them Asian), and six men, including four Asians and one

woman, an Asian, finished the Ph.D. degree. Individuals receiving degrees in Chemistry during the 1994-95 academic year are listed below.

STUDENTS RECEIVING THE B.A. DEGREE IN CHEMISTRY 1994-95

Joseph Banar	Donald Benn
David Gillett	James Hamilton
Linda Kear	Morinne Laughlin
Maria J. Martinez	Sarita L. Rollins
Matthew Spellman	

STUDENTS RECEIVING THE B.S. DEGREE IN CHEMISTRY 1994-95

Christopher Cheatum	Manish Gupta
Julie Ann Knight	Joseph Ortiz

STUDENTS COMPLETING THE M.S. DEGREE IN CHEMISTRY 1994-95

Kelly Anderson	Patrick Fleig
Lin Lin	Robert Loomis
Hamida Majumder	Seema Singh
John Throne	Weidong Tong

STUDENTS COMPLETING THE DOCTOR OF PHILOSOPHY DEGREE IN CHEMISTRY 1994-95

Orawon Chailapakul	December 1994	Prof. R.M. Crooks
Maomian Fan	July 1994	Prof. R.T. Paine
Bryan Johnson	December 1994	Prof. S-M Park
Ke Luo	December 1994	Prof. D.J. Keller
Ross Thomas	December 1994	Prof. R.M. Crooks
Haiyan Zhang	July 1994	Prof. S-M Park
Lizhong Zhang	July 1994	Prof. T.M. Niemczyk

The Department, with Assistant Professor Lorraine Deck serving as Principal Investigator, was awarded a continuing renewal of the grant from the National Science Foundation under its Research Experiences for Undergraduates program to host promising undergraduate students for summer research. As in the past, we conducted a national search in

the Spring and selected ten students to work intensively with a faculty member for nine weeks during summer. We will track these students in the future so that we will know how our program ultimately affects their future careers.

7. Seminar Program

Once again, the Department was provided with a strong seminar schedule (Appendix C) under the guidance of Vince Ortiz.

8. Research Equipment

The department continued its aggressive efforts to add to its experimental research equipment base. Major pieces of equipment (more than $10,000 in cost) acquired during the reporting year were:

732965	Nitrogen Laser	$ 19,855.00
750048	Risc System/6000 Model 37T	$ 12,624.00
749394	Continuum	$ 14,100.00
740624	7 Tesla Superconducting Magnet	$ 59,895.00
735391	Theta/Theta X-Ray Powder Defactometer	$158,000.00
747309	TSQ-7000 Mass Spectrometer	$130,000.00
751346	.5M Spectrograph 1 Detector	$ 34,995.00

9. Budget

The buying power of the department's budget continues to wane. Fortunately, during FY 1994-95, some flexibility could be created in the staff budget due to the resignations which occurred. Through careful rebudgeting of those funds, the Department was again able to stay almost within its budget this past year. (The overrun was about $1,000.) The funds returned to the Department to compensate for the added cost of supplies purchased through ChemStores when its budget was separated from that for Chemistry have helped a little bit to improve

flexibility, but as prices continue to rise, that flexibility will be lost. Among the costs that must now be met which were not even considered when the S&E budget was established is the cost of disposing of certain chemicals and the cost of shipping. For some chemicals, the cost of shipping can now be several times the cost of the chemical itself. Another demand which now represents a huge fraction of the budget is the purchase of liquid nitrogen to be turned into high purity gas for operating instruments and provide a non-oxidizing atmosphere for chemical reactions. The department is trying to get this demand under control, but the need for the gas is quite legitimate in many cases.

10.ChemStores

The ChemStores operation continues to run smoothly under the guidance of Mr. Carl Hilton. Despite the continued increase in the cost of supplies for scientific research and teaching, the entire campus community continues to benefit from Carl's skill at negotiating outstanding prices each year. He is continually adding new lines of wares such as certain administrative supplies.

11. Personnel and Governance

The department's personnel, including faculty, visiting faculty, postdoctoral and research fellows, adjunct professors, staff, and graduate students are listed in Appendix D. Also included there are brief summaries of staff assignments at the end of June 1995.

The Director of Undergraduate Studies and Chair of the Undergraduate Curriculum Committee and the Awards Committee during FY 93-94 was the Associate Chair for Undergraduate Programs, Professor Mark R. Ondrias. The Director of Graduate Studies and Chair of the Graduate Studies Committee was Professor Su-Moon Park. Other faculty standing

committees that were active this year include Executive, Graduate Recruitment and Selection, Facilities, Safety, Computer, Library, and Seminar.

Staff appointments, changes in status, and separations are listed below in sections C and D. Section E is a compilation of current faculty grant activity, and of proposals for research support submitted.

B. Significant Plans and Recommendations for the Future

We will continue to use our annual faculty retreat in August, before classes begin, to refine our goals and aspirations for the future. At this time, several major issues are apparent. The two most important are faculty recruiting and retention and continued work on the acquisition of new space. We also need to continue to address the issue of how to cover our large lower division and organic chemistry courses as retirements among those carrying heavy teaching loads continue to be common over the next few years. In addition to continuing to hire untenured Assistant Professors, we plan to continue to explore other options, such as senior faculty like Chris Enke, whose situation was detailed in last year's report. Although some faculty oppose the use of Lecturers, this seems to be a temporary method for providing a person who will carry a heavy undergraduate teaching load over a multi-year commitment, especially in light of Mr. Ken Falkenberg's announced intention to retire at the end of the 1995-96 academic year.

We will continue to press the central administration for approval of, and a high priority for, our plans for additional research space. Frustration is high at our inability to have our needs for space met through construction of the already programmed new wing for Clark Hall, but it is possible that our needs can be met via the Science and Technology Research Center discussed above.

Our inability to attract sufficient students into the sciences and to retain the ones who begin a major in a scientific field has become a national crisis. During the coming year we will continue to try to expand the MEMS programs goals to provide opportunities for success in chemistry courses for more advanced students. A major reexamination of the curriculum is being undertaken by the Undergraduate Committee. Out of this, a more attractive, but still scientifically rigorous curriculum is expected to arise. It seems critical to us that any major in a modern program in Psychology should be required to complete General and Organic Chemistry.

C. Appointments to Staff

Mr. Ron Adams, Computer Network Technician

Mr. Daniel Cano, Laboratory Technician III

Cl. Changes to Staff Personnel

Ms. Nena Davis was upgraded to a Program Coordinator

D. Separations

Mr. Mike Campbell, Junior Glassblower, resigned, March 1995

Ms. Kate Green, Accountant, resigned, December 1994.

Ms. Christy McKeon, Editorial Assistant II, March 1995.

Mr. Todd Alam, Research Scientist,

E. Sponsored Research

Our faculty continued to seek and obtain outside research funding at a very high level. Of the seventeen faculty, 13 (76%) held one or more active grants or contracts during the 1994-95 academic year.

This past year saw 32 active grants having a combined value of $3,544,049 in the department, exclusive of grants that are administered through research centers. In addition, 17 new proposals having a combined value of $3.57M were submitted by 10 investigators from the department. The compilation below lists the active grants of each faculty member this past year. It is followed by data recording the proposals submitted.

SPONSORED RESEARCH FOR THE 1994-95 FISCAL YEAR

Investigator	Begin Date	Source	Amount
Alam	12/21/94	Arizona State University	$ 734.00
Deck	09/22/94	Sandia National Laboratories	$ 14,581.00
Deck	03/21/95	National Science Foundation	$ 40,000.00
Enke	10/14/94	American Society for Mass Spec	$ 7,000.00
Enke	08/11/94	PHS/NIH/GMS	$ 110,000.00
Enke	09/15/94	PHS/NIH/GMS	$ 36,581.00
Enke	09/20/94	Martin-Marietta	$ 75,100.00
Enke	08/25/94	PHS/NIH/GMS	$ 87,893.00
Enke	11/21/94	PHS/NIH/GMS	$ 459.00
Enke	01/06/95	NIH	$ 93,715.00
Enke	09/12/94	PHS/NIH/GMS	$ 126,320.00
Hampden-Smith	02/06/95	Naval Research Laboratory	$ 300,000.00
Hampton	08/31/94	Sandia National Laboratories	$ 15,000.00
Hampton	04/10/95	InhalationToxicology Research Institute	$ 209,077.00
Kirk	02/09/95	National Science Foundation	$ 32,000.00
Kirk	09/30/94	Sandia National Laboratories	$ 35,000.00
Niemczyk	03/01/95	Sandia National Laboratories	$ 43,555.00
Niemczyk	10/17/94	SRC Sematech	$ 206,000.00
Ogilby	02/17/95	National Science Foundation	$ 89,500.00
Ogilby	05/12/95	Sandia National Laboratories	$ 30,000.00
Allen	12/01/94	National Science Foundation	$ 1,293,993.00
Ondrias	06/26/95	NIH	$ 143,041.00

Ortiz	05/05/95	National Science Foundation	$ 70,000.00
Ortiz	03/24/95	Gaussian	$ 30,000.00
Paine	06/12/95	National Science Foundation	$ 300,000.00
Paine	09/23/94	Department of Energy	$ 97,000.00
Paine	06/14/95	Department of Energy	$ 123,000.00
Park	04/13/95	Korea Electrotechnology Research Institute	$ 25,000.00
Park	03/14/95	Sandia National Laboratories	$ 9,500.00
Park	03/08/95	Sandia National Laboratories	$ 20,000.00
Walters	03/16/95	Sandia National Laboratories	$ 10,000.00
Walters	08/26/94	Boeing	$ 40,000.00

PROPOSALS SUBMITTED 1994-95

Investigator	Source	Amount
Alam, T.	Sandia National Laboratories	$ 3,000
Deck, L.	Sandia National Laboratories	$ 14,581
Deck, L.	National Science Foundation	$ 58,457
Deck, L.	National Science Foundation	$ 59,519
Deck, L.	Executive Office of the President	$ 25,000
Deck, L.	Executive Office of the President	$ 75,000
Deck, L.	Eastern New Mexico University	$ 2,513
Deck, L.	Coalition to Increase Minority Degree	$ 1,741
Enke, C.	American Society for Mass Spectrome	$ 7,000
Enke, C.	National Institute of General Medical Science	$ 227,633
Enke, C.	Martin-Marietta	$ 75,100
Enke, C.	National Institute o General Medical Science	$ 87,893
Hampden-Smith, M.	Office of Naval Research	$ 247,000
Hampton, P.	Hewlett-Packard Company	$ 79,583
Hampton, P.	National Science Foundation	$ 547,057
Hampton, P.	Proctor and Gamble	$ 150,000
Hampton, P.	Coalition to Increase Minority Degrees	$ 1,760
Hampton, P.	Coalition to Increase Minority Degrees	$ 2,760
Kirk, M.	Chicago Community Trust - Searle Society	$ 162,000
Kirk, M.	Beckman (A&M)	$ 200,000
Kirk, M.	National Science Foundation	$ 473,746
Morrow, C.	Dept. of Education	$1,632,980
Morrow, C.	Sandia National Laboratories	$ 18,341
Niemczyk, T.	Sandia National Laboratories	$ 43,555
Niemczyk, T.	SRC/Sematech	$ 406,352

Ogilby, P.	Sandia National Laboratories	$ 30,000
Ondrias, M.	National Science Foundation	$ 224,000
Ortiz, J.V.	American Chemical Society	$ 25,000
Paine, R.	National Science Foundation	$ 105,375
Park, S-M.	Department of Energy	$ 196,296
Park, S-M.	Korea Electrotechhnology Research	$ 25,000

PROPOSALS SUBMITTED 1994-95

Investigator	Source	Amount
Park, S-M.	Sandia National Laboratories	$ 9,500
Walters, E.	Sandia National Laboratories	$ 10,000

APPENDIX A

APPLICATIONS RECEIVED FOR GRADUATE STUDY IN CHEMISTRY
U.S. CITIZENS
1994-95

APP - APPLICATIONS RECEIVED
APR - APPLICATIONS APPROVED
DIS - APPLICATIONS DISAPPROVED
INC - APPLICATIONS INCOMPLETE
DEC - APPLICATIONS APPROVED BUT DECLINED OFFER

STATE	APP	APR	DIS	INC	DEC
ALABAMA	1		0	0	0
ARIZONA	2	1	1	0	1
ARKANSAS	3	3	0	0	3
CALIFORNIA	5	5	0	0	4
COLORADO	1	0	1	0	0
ILLINOIS	1	0	1	0	0
KENTUCKY	1	1	0	0	0
MASSACHUSETTS	1	1	0	0	1
MISSISSIPPI	1	1	0	0	1
NEVADA	1	0	1	0	0

NEW JERSEY	1	1	0	0	0
NEW MEXICO	5	2	3	0	2
NEW YORK	2	1	1	0	0
NORTH CAROLINA	2	1	1	0	1
OKLAHOMA	1	1	0	0	1
OREGON	2	2	0	0	2
PENNSYLVANIA	1	1	0	0	1
PUERTO RICO	1	1	0	0	1
TENNESSEE	1	0	1	0	0
TEXAS	2	0	2	0	0
VERMONT	1	1	0	0	0
TOTALS:	**36**	**24**	**12**	**0**	**18**

ETHNICITY:	**Male**		**18**
		Female	**18**
		American Indian	**0**
		Asian	**1**
		Black	**2**
		Hispanic	**7**
		Other	**1**
		White	**25**

APPLICATIONS FOR GRADUATE STUDY IN CHEMISTRY
FOREIGN CITIZENS
1994-95

COUNTRY	APP	APR	DIS	INC	DEC
BANGLADESH	2	0	2	0	0
CHINA	152	16	132	4	7
GERMANY	1	0	1	0	0
HONG KONG	1	0	1	0	0
INDIA	3	0	3	0	0
INDONESIA	1	0	0	1	0
KENYA	1	0	1	0	0
KOREA	1	0	1	0	0
OMAN	1	0	1	0	0
ROMANIA	1	0	1	0	0

SRI LANKA	1	0	1	0	0
YUGOSLAVIA	1	0	1	0	0
TOTALS:	**166**	**16**	**145**	**5**	**7**

ETHNICITY:	**Male**	**129**
	Female	**36**
	American Indian	**0**
	Asian	**162**
	Black	**1**
	Hispanic	**0**
	Other	**0**
	White	**3**

GRAND TOTALS

APP	APR	DIS	INC	DEC
202	40	157	5	25

PERCENTAGE OF APPLICATIONS

ETHNICITY	NUMBER	%OF APPS.
MALE	147	73%
FEMALE	54	27%
AMERICAN INDIAN	0	0%
ASIAN	163	81%
BLACK	3	1%
HISPANIC	7	3%
OTHER	1	<1%
WHITE	28	14%

APPENDIX B

CHEMISTRY COURSE OFFERINGS

COURSE #	AND NAME	SEMESTER	SECTIONS	STUDENTS	CR HRS
105	Chem Nontech Major	F 94	1	16	48
107L	Chem Nontech Maj Lab	F 94	1	10	10
111	Elem of Gen Chem	F 94	3	163	652
111	Elem of Gen Chem	S 95	2	133	532
111	Elem of Gen Chem	SS 95	1	29	116
121	General Chemistry	F 94	3	782	2520
121	General Chemistry	S 95	1	356	1424
121	General Chemistry	SS 95	1	76	304
122	General Chemistry	F 94	1	308	1232
122	General Chemistry	S 95	3	401	1604
122	General Chemistry	SS 95	1	75	300
131	Prin of Chemistry	F 94	1	32	128
132	Prin of Chemistry	S 95	1	32	160
151	Gen Chem Special	F 94	2	3	9
151	Gen Chem Special	S 95	1	2	6
151	Gen Chem Special	SS 95	1	1	3
152	Gen Chem Special	F 94	1	6	18
152	Gen Chem Special	SS 95	1	1	3
212	Int OrgChem & Biochem	F 94	1	100	400
212	Int OrgChem & Biochem	S 95	2	139	556
212	Int OrgChem & Biochem	SS 95	1	28	112
253	Quant Analysis	F 94	1	54	216
253	Quant Analysis	S 95	1	75	300
253	Quant Analysis	SS 95	1	38	152
Sub-Total Undergraduate Lower Division				2860	10805

COURSE #	AND NAME	SEMESTER	SECTIONS	STUDENTS	CR HRS
301	Organic Chemistry	F 94	3	370	1110
301	Organic Chemistry	S 95	3	250	750
301	Organic Chemistry	SS 95	1	56	168
302	Organic Chemistry	F 94	2	196	588

302	Organic Chemistry	S 95	3	302	906
302	Organic Chemistry	SS 95	1	59	177
303	Organic Chem Lab	F 94	16	279	279
303	Organic Chem Lab	S 95	10	156	156
303	Organic Chem Lab	SS 95	4	37	37
304	Organic Chem Lab	F 94	6	95	95
304	Organic Chem Lab	S 95	12	149	149
304	Organic Chem Lab	SS 95	4	38	38
311	Physical Chem	F 94	1	62	248
312	Physical Chem	S 95	1	35	140
315	Intro Phy Chem	F 94	1	24	96
331	Chem Lab III	F 94	2	8	16
332	Chem Lab III	S 95	2	9	17
392	Read Select Top	S 95	2	2	4
401	Scient Glassblowing	F 94	1	6	6
401	Scient Glassblowing	S 95	1	8	8

COURSE #	AND NAME	SEMESTER	SECTIONS	STUDENTS	CR HRS
415	Synth & Struc Lab	F 94	1	2	4
423	Intro Biochem	F 94	1	87	261
423	Intro Biochem	S 95	1	55	165
423	Intro Biochem	SS 95	1	28	84
431	Adv Inorgan Chem	F 94	1	10	30
Sub-Total Undergraduate Upper Division				2323	5532

COURSE #	AND NAME	SEMESTER	SECTIONS	STUDENTS	CR HRS
445	Intensive Biochem	F 94	1	61	244
446	Intensive Biochem	S 95	1	44	176
454	Inst. Analysis	S 95	1	17	68
466	Sci Computation	S 95	1	15	45
495	Undergrad Problems	F 94	5	7	15
496	Undergrad Problems	S 95	3	3	9
497	Sr. Honors Resrch	F 94	2	2	6
498	Sr. Honors Resrch	S 95	1	1	3
499	Chem Sem Resrch	F 94	1	9	9
Sub-Total Undergraduate Upper Division				161	578
Sub-Total Undergraduate				2484	6110

COURSE #	AND NAME	SEMESTER	SECTIONS	STUDENTS	CR HRS
501	Molecular Struc Thry	F 94	1	10	30
504	Chemical Dynamics	S 95	1	13	39
513	Org Molec Struct Det	F 94	1	8	24
515	T/Molec Photo Phy	S 95	1	5	15
537	ST/Bioinorg Chem	F 94	1	5	15
537	ST/Materials Chem	S 95	1	1	3
538	Spec Top Inorg Chem	S 95	1	5	15
540	Adv Analytical Chem	F 94	1	9	27
541	Separations	S 95	1	5	15
542	Chem Measurements	F 94	1	13	39
561	Quantum Chem I	F 94	1	11	33
566	Spectroscopy	S 95	1	8	24
599	Masters Thesis	F 94	2	4	11
599	Masters Thesis	S 95	1	1	2
625	S/Inorganic	F 94	7	40	40

COURSE #	AND NAME	SEMESTER	SECTIONS	STUDENTS	CR HRS
625	S/Analytical	S 95	6	37	37
650	Research Readings	F 94	1	4	19
650	Research Readings	F 94	1	4	27
650	Research Readings	F 94	1	4	15
650	Research Readings	F 94	1	1	7
650	Research Readings	F 94	1	2	11
650	Research Readings	F 94	1	1	12
650	Research Readings	F 94	1	7	41
650	Research Readings	F 94	1	1	6
650	Research Readings	F 94	1	3	11
650	Research Readings	F 94	1	2	14
650	Research Readings	F 94	1	3	20
650	Research Readings	F 94	1	2	6
650	Research Readings	F 94	1	1	3
650	Research Readings	S 95	1	5	36
650	Research Readings	S 95	1	8	44
650	Research Readings	S 95	1	4	18
650	Research Readings	S 95	1	1	12
650	Research Readings	S 95	1	2	17
650	Research Readings	S 95	1	1	12
650	Research Readings	S 95	1	6	28
650	Research Readings	S 95	1	1	6

650	Research Readings	S 95	1	4	23
650	Research Readings	S 95	1	3	20
650	Research Readings	S 95	1	5	29
650	Research Readings	S 95	1	1	6
650	Research Readings	S 95	1	2	8
650	Research Readings	S 95	1	1	6
650	Research Readings	SS 95	1	4	17
699	Dissertation	F 94	1	3	18
699	Dissertation	F 94	1	4	18
699	Dissertation	F 94	1	5	27
699	Dissertation	F 94	1	3	15
699	Dissertation	F 94	1	2	22
699	Dissertation	F 94	1	3	9
699	Dissertation	F 94	1	1	6
699	Dissertation	F 94	1	4	27
699	Dissertation	F 94	1	2	12
699	Dissertation	F 94	1	5	37
699	Dissertation	F 94	1	1	6
699	Dissertation	S 95	1	1	6

COURSE # AND NAME		SEMESTER	SECTIONS	STUDENTS	CR HRS
699	Dissertation	S 95	1	3	21
699	Dissertation	S 95	1	5	32
699	Dissertation	S 95	1	3	14
699	Dissertation	S 95	1	2	22
699	Dissertation	S 95	1	4	18
699	Dissertation	S 95	1	1	6
699	Dissertation	S 95	1	4	27
699	Dissertation	S 95	1	2	12
699	Dissertation	S 95	1	4	31
699	Dissertation	S 95	1	1	6
699	Dissertation	SS 95	1	6	22
Sub-Total Graduates				327	1257
GRAND TOTAL - ALL STUDENTS				5671	18172

APPENDIX C
DEPARTMENT OF CHEMISTRY
UNIVERSITY OF NEW MEXICO
SEMINAR SPEAKERS
1994-1995

30 August 1994	Edward McCullough, Utah State University - "Theoretical Calculations on Molyb- denum Model Enzyme Complexes"
03 September 1994	Louis Hegedes, Colorado State University - "From Macrocycles to Macrocycles by Mistake"
09 September 1994	D. Keller, University of New Mexico - "Single Molecule Production"
16 September 1994	William H. Watson, Texas Christian University - "Metal Thiolenes and Molecular Ferromagnets"
22 September 1994	David McAdoo, University of Texas, Galveston - "Dynamics of Ion-neutral Complex-mediated Reactions in the Gas Phase"
30 September 1994	D. McBride, Intel Corporation - "Water Conservation and Chemistry at Intel-Rio Rancho New Mexico"
07 October 1994	Richard Reddington, Texas Tech University - "Vibrational Spectra,Matrix Trapping Sites, and van der Waals Molecules of LiF Species"
21 October 1994	Chunli Bai, Chinese Academy of Sciences - "Progress in Scanning Probe Microscopy at the Institute of Chemistry Chinese Academy of Sciences"
28 October, 1994	J.W. Mintmire, Naval Research Laboratory - "Atomic-Scale Simulations in Materials Science"
04 November 1994	E. Rohlfing, Sandia National Laboratories - "Application of Resonant Four-Wave Mixing to Molecular Spectroscopy and Chemical Dynamics"
11 November 1994	B. Dyer, Los Alamos National Laboratories - "Ultrafast Vibrational Spectroscopy"
18 November 1994	E. Deumens, Florida - "Molecular Vibrational State Distributions in Collisions"
02 December 1994	E. Eisenstein, CNRS, France - CANCELLED
09 December 1994	Terry Gilbertson Upjohn Corporation, Kalamazoo, MI., - "Metabolic Product Studies of Two Drugs"

27 January 1995	H.P. Luethis, ETH-Zurich - "Quantum Chemical Method Development and Application: The Benzene-Rare Gas Complexes and the First Excited State Properties of x-Tetrazine"
02 February 1995	M.S. Coleman, University of New Mexico - "Probing for the Active Site of Human Terminal Deoxynucleotidyl Transferase"
10 February 1995	D. Casadonte, Texas Tech
24 February 1995	Dr. C. Enke, University of New Mexico - "Mass Spectrometry at UNM"
10 March 1995	Barry Carpenter, Cornell University - "Dynamic Effects in Chemistry"
24 March 1995	J. Nichols, PNL - "Binding Energies of Potassium Ion with Ethers (12-Crown-4, 18-Crown-6, and Conformationally Restricted 18-Crown-6)"
31 March 1995	G. Crooks, Purdue - "Ion Surface Chemistry"
07 April 1995	John Stanton, University of Texas - "An Approximation to an Approximate Method"
14 April 1995	J. Collman, Stanford University - Synthetic Functional Analogues of Heme Protein Active Sites: Myoglobin, Cytochrome P-450 and Cytochrome Oxidase"
21 April 1995	J. Walters, St. Olaf - "Freedom Within A Mission"
28 April 1995	William Armstrong, Boston College
05 May 1995	Fleming Crim, University of Wisconsin "Controlling Chemical Reactions with Lasers: Bond Selected Bimolcular Reactions"
18 May 1995	James Atwood, S.U.N.Y. Buffalo

APPENDIX D
FACULTY AND STAFF OF THE DEPARTMENT OF CHEMISTRY

PROFESSORS:

ALLEN, Fritz S., Ph.D.	1969	University of Illinois
ENKE, Christie, G., Ph.D.	1959	University of Illinois
HOLDER, Richard W., Ph.D.	1970	Yale University
MORROW, Cary J., Ph.D.	1970	Tulane University

NIEMCZYK, Thomas M., Ph.D.	1972	Michigan State University
OGILBY, Peter R., Ph.D.	1981	University of California, Los Angeles
ONDRIAS, Mark R., Ph.D.	1979	Michigan State University
ORTIZ, Joseph V., Ph.D.	1981	University of Florida
PAINE, Robert, Ph.D.	1970	University of Michigan
PAPADOPOULOS, E. Paul, Ph.D.	1961	University of Kansas
PARK, Su-Moon, Ph.D.	1975	University of Texas, Austin
WALTERS, Edward A., Ph.D.	1966	University of Minnesota

ASSOCIATE PROFESSORS:

HAMPDEN-SMITH, Mark, Ph.D.	1984	London University
MCLAUGHLIN, Donald R., Ph.D.	1965	University of Utah

ASSISTANT PROFESSORS:

DECK, Lorraine, Ph.D.	1989	University of New Mexico
HAMPTON, Philip D., Ph.D.	1989	Stanford University
KELLER, David, Ph.D.	1984	University of California-Berkeley
KIRK, Martin L., Ph.D.	1991	University of North Carolina

EMERITUS PROFESSORS:

CATON, Roy D., Ph.D.	1963	Oregon State University
HOLLSTEIN, Ulrich, Ph.D.	1956	University of Amsterdam
LITCHMAN, William M., Ph.D.	1965	University of Utah
SCHAFFER, Riley, Ph.D.	1967	University of Chicago

VISITING FACULTY:

FALKENBERG, Kenneth, M.S.	1972	University of New Mexico

POSTDOCTORAL AND RESEARCH FELLOWS:

BURANDA, Tione, Ph.D.	1992	Wayne State University
CID-AGUERO, Pedro, Ph.D.	1992	University of New Mexico
FRANKE, Fransiska, Ph.D.	1992	Rensselear Polytechnic Institute
JASPER, Steve, Ph.D.	1995	Indiana University
KUNZE, Klaus P., Ph.D.	1988	Universitat des Saarlandes

OVERNEY, Gregor, Ph.D. 1991 University of Basel, Switzerland
SCURLOCK, Roger, Ph.D. 1988 University of New Mexico
ZAKJEVSKI, Viatcheslav, Ph.D. 1979 Institute of New Chemical Problems Academy of Sciences, USSR

RESEARCH SCIENTIST:

DUESLER, Eileen, Ph.D., 1973, University of California-Berkeley - Determines structures of materials using x-ray techniques.

SMITH, Karen An, Ph.D, 1984, University of Illinois - Oversees, maintains, and operates the Department's NMR spectrometers, trains students and faculty in their use, and consults with faculty and students concerning the solution of chemistry problems using NMR.

CHEMICAL ANALYST:

JU, Ruby, K.Y., B.S., 1956, University of Illinois - Does analyses of chemicals for faculty and graduate students.

SCIENTIFIC GLASSBLOWER: (and Part-Time Lecturer III)

CAMPBELL, David, R. - Manufactures state of the art glassware as requested by faculty and graduate students across the campus.

INSTRUMENTATION TECHNICIAN:

HARTSWICK, Lewis - Electronics Facility Manager, repairs and maintains instrumentation.

SHAHVAR, Hoshang, B.S., 1981, University of New Mexico - Manufactures state of the arts electronic equipment as requested by faculty and graduate students.

OTHER STAFF:

ANAYA, Monica, Accounting Clerk - Prepares documents relating to contract/ grant purchases Maintains all contract/grant accounting records.

BUSH, Gary, Laboratory Technician III - Services the Freshman teaching laboratories

CANO, Daniel, Laboratory Technician III - Services the Freshman teaching laboratories

GARCIA, Benjamin A., Laboratory Technician III - Takes orders for chemicals, equipment, and supplies not in stock and transmits them to appropriate vendor.

GILLESPIE, Dorothy, Department Secretary/Receptionist - Arranges schedules for visitors. Student-Faculty liaison.

HARGIS, Barbara J., Accounting Technician - Prepares documents relating to department purchases. Maintains spending records

HILTON, Carl, Chemical Stores Operations Manager II - Supervises the storeroom and services teaching laboratories.

QUESNELL, Eva, Editorial Assistant III - Prepares manuscripts, proposals, course syllabi and exams using MacIntosh Word Processor.

STANLEY, Kriss, Laboratory Facilities Coordinator - Serves as Assistant Manager. Responsible for all computer operations in ChemStores.

UTTERBACK, Koelle, Student Academic Coordinator - Assists graduate and undergraduate students.

GRADUATE STUDENTS IN CHEMISTRY 1994-95

Name	Assistantship	Funding Source
ANDERSON, Kelly		
ARCHER, Leo	RA	CMEC
BAILEY, Alec	TA/RA	CMEC
BENCZE, Zsolt	GA/RA	Set-up
BERKEY, Michele		
BEUSSMAN, Douglas	RA	NIH
BOND, Evelyn	RA	DOE
CAI, Ming	TA	

CASH, Michelle	TA	
CHA, Do Kun	TA	
CHAILAPAKUL, Orawon		
CHANG, Leda	TA	
CHEN, Tuqiang	RA	DOE
CHIRAKUL, Panadda	TA	
CONSTANTOPOULOS, Terri	TA	
CORBITT, Thomas	RA	Navy/ONR
DAITCH, Charles	RA	Set-up
DELGADO, Miriam	TA	
DOUGLAS, Heidi		
ELLINGSON, Rebecca	TA	
ENLOW, Mark	RA	NSF
ERICKSON, Tina	RA	DHHS/NIGM
ESPINOZA, Luis	RA	SNL
FAN, Baochen	RA/TA	NIH
FAN, Maomian		
FLEIG, Patrick	TA	
FORRSITER, Ray	TA	
FRUTOS, Dinorah	RA	DHHS
GALLIMORE, David		
GAO, Feng	RA/TA	NIH
GARVEY, John		
GROENENDYK, Adrian	TA	
GUO, Jim		
HAN, Ling	TA/RA	SRC
HANPRASOPWATTANA, Aree		
HODGE, Evangeline		
INSCORE, Frank	RA	Set-up
JI, Qinchung	RA	PHS
JIA, Songling	TA	
JOHNSON, Bryan	RA	WERC
JONES, Robert	TA	
KING, Christopher	RA	LANL
LIN, Lin	RA	NSF
LIU, Fei	RA	Marietta
LOOMIS, Robert	RA	Boeing
LUO, Ke		
MA, Jianguo	TA	
MAHMUD, Tanvir		
MAJUMDER, Hamida		
MESEROLE, Stephen	TA	
MIYARES, Paul	TA	

NYMAN, May	RA	Navy/ONR
ORTIZ, Bertha	RA	SNL/WERC
OSAKI, Gwynne	RA	SNL/Set-up/SNL
PIAO, Tiehua	TA/RA	WERC
SHANG, Guihua	RA	Navy/ONR
SHI, Ting-Mei	TA	
SINGH, Seema	TA	
SMITH, Stacy	TA	
SONG, Xingshi		
SOWER, Angela	TA	
TANG, Hua	TA	
THOMAS, Ross		
THRONE, John		
TONG, Weidong	TA	
WADE, Travis		
WALL, Mark	TA	
WANG, Bojie	RA	NSF
WILKERSON, Marianne		
WU, Si	TA	
XIE, Rong	TA	
XU, Chong, Ying	RA	CMEC
YAN, Hongbin	TA/RA	SRC
ZAWODZINSKI, Christine		
ZHANG, Haiyan		
ZHANG, Lizhong	RA	CHTM
ZNAMIROVSCHI, Calin	RA/TA	Set-up

University of New Mexico
Department of Communication and Journalism
Everett M. Rogers, Chair
July 1, 1994 - June 30, 1995 Annual Report

The past year has seen the continued growth of the Department of Communication and Journalism at the University of New Mexico in terms of new faculty, an increase in external funding for its research and training projects, and the launching of the Doctoral Program in Communication.

The Department was created in 1991 with the merger of the former Department of Journalism, founded in 1947, and the Department of Communication, founded in 1949. This merger was recommended by an external review committee that also urged (1) that a national search be conducted to select a chair of the new department, and (2) that a doctoral program be launched offering a specialization in intercultural communication. Everett M. Rogers became chair of the Department in January, 1993, and the Department's proposal for a doctoral program was approved in November, 1993.

The first cohort of eight doctoral students, offered admission in March, 1995, will begin their studies at UNM in August, 1995. External funding for research and training projects in the Department continues to increase, totaling about $1,000,000 per year in 1994-1995, a rise from only several hundred thousand dollars per year three years ago. Several faculty members are involved in a dozen funded projects, plus nine research assistants, one visiting research scientist, and two secretaries. These funded projects bring an amount of resources to the Department that is approximately equal to that provided by the University administration as state funds.

Assistant Professor Jim Barker (Ph.D., University of Colorado, 1993), Visiting Assistant Professor Nagesh Rao (Ph.D., Michigan State University, 1994), and Visiting Assistant Research Professor Michele Polacsek (Ph.D., Johns Hopkins University, 1994), were added to the faculty in 1994.

Jim Barker joined the Department from Marquette University in Fall, 1994, and teaches undergraduate and graduate courses in organizational communication. He won the 1994 Award of the Academy of Management for the Outstanding publication in Organizational Behavior, for his article in Administrative Science Quarterly, "Tightening the Iron Cage." Barker found that within a year or two of the creation of self-managed work groups in a Colorado electronics factory, the workers adopted most of the bureaucratic regulations (for example, penalties for tardiness) that had previously been eliminated by the decentralization of control to the work groups. He is presently conducting an investigation of the adoption and implementation of DARE drug abuse prevention programs, and the functioning of site-based management, in the Albuquerque Public Schools. Barker also is beginning research on self-managed work groups at Los Alamos National Laboratory. He also serves as Associate Director of the Department's Institute for Organizational Communication.

Nagesh Rao teaches intercultural communication, persuasion, interpersonal communication, communication research methods, and statistical methods, and conducts research (1) on the effects of MADD (Mothers Against Drunk Driving) Victim Impact Panels (a highly emotional communication by parents of children killed by drunk drivers) on the recidivism rates of first-time DWI (Driving While Intoxicated) offenders, and (2) on the communication strategies of HIV/AIDS prevention programs in San Francisco.

Michele Polacsek teaches a course in health communication, and is the project director of the MADD project, which is funded for three years by the National Institute for Alcoholism and Alcohol Abuse (NIAAA). Dr. Gill Woodall is the principal investigator of this project, which began in November, 1994. Dr. Polacsek also collaborates with faculty at the University of New Mexico School of Medicine on such projects as the state-funded (Children Youth and Families Department) "Healthier Communities", and acts as an MPH (Master's in Public Health) student advisor at UNM. Dr. Polacsek is particularly interested in community participatory evaluation

research as well as other aspects of community health promotion. She is currently applying John Prochaska's stages-of-change model, which she utilized in her previous research on the adoption of condoms by inner-city black men in Baltimore, and which is utilized in the MADD/DWI Project.

In part due to the new Doctoral Program, particularly strong applications for graduate study in Communication were received in 1995. The eighteen individuals who were offered and accepted admission for graduate study in the Department came from earning Bachelors or Masters degrees at American University, Purdue, Miami, Ohio, Colorado, Tennessee, Washington State, Oregon, Wyoming, Biola, Penn State, Trinity, Michigan Tech, and the University of New Mexico.

UNDERGRADUATE STUDIES

The Department offers two undergraduate degrees: (1) a BA in Journalism and Mass Communication, with sequences in print journalism, broadcast news, broadcast management, advertising, and public relations, and (2) a BA in Communication, with sequences in organizational communication, interpersonal communication, intercultural communication, and rhetorical communication. There are about 500 majors in the Department, with about 200 in Journalism and Mass Communication, and 300 in Communication. About 100 students receive BA degrees in the Department each year.

About 35 percent of the Department's majors are minorities, mainly Hispanics and Native Americans. We believe this to be one of the highest proportions of minority students in Communication and Journalism in a U.S. university. Dr. Diana Ríos serves as the Minority Affairs Coordinator for the Department.

The Department seeks to cope with the growing demand for its undergraduate courses, with about 60 of its 80 undergraduate courses filled to capacity and closed each semester. In Spring Semester, 1995, more than 2,500 students enrolled in Department courses, another new record. Dr. Jean Civikly-Powell, Associate

Chair of the Department, coordinates course scheduling, seeks to improve the effectiveness of the Department's teachers, and chairs the selection committee for part-time instructors (adjunct professors). She also directs the training program for teaching assistants (TARC) and international teaching assistants (ITAs), programs provided by the Department on a University-wide basis. Civikly-Powell's training of TAs is assisted by Teaching Assistants Leslie Fagre and Nancy VanDevender.

Janet Shiver, a teaching assistant in the Department, was one of five TAs at UNM to be recognized for her outstanding teaching ability in May, 1995. The teaching award carried a cash prize of $500.

During the 1994-1995 academic year, the Department was awarded $2,000 for the purchase of a videotape series on intercultural communication. The successful proposal (in a University-wide competition for instructional improvement) was formulated by Professors Nagesh Rao, Diana Ríos, and Brad Hall, all of who are involved in teaching the Department's courses in intercultural communication.

The UNM Office of Graduate Studies awarded the Department $5,000 for the purchase of new computer equipment for the use of graduate students.

In 1994-1995, the Department established an Honors Program for students who will have at least a 3.5 grade point average at the time of their graduation. These students will receive a BA degree cum laude, summa cum laude, or magna cum laude. Ten seniors presently have Honors theses underway on such topics as the impacts of MTV in the United States and Germany, and on the effects of a sojourn in Japan or Europe on U.S. students.

A recruitment brochure featuring a dozen of the Department's alumni was published in 1995. Undergraduate students in the Department's news writing, photography, and desktop publishing courses created the brochure under the direction of Dr. Fred Bales and Professor Miguel Gandert.

The Little Lobo, a 12-page newspaper, was mailed to the

Department's approximately 5,000 alumni for whom current addresses could be obtained. Professor Hank Trewhitt oversaw the writing and editing of The Little Lobo. He also coordinates the Department's annual student exchange program with German media institutions, in which a dozen of our majors in Journalism and Mass Communication travel to Germany each summer for a tour of German newspapers, and radio and television systems.

Professor Tom Jewell serves as coach of the UNM Debate Team, which continues its winning ways of the past several years. Jewell remarks that the team's winning record in 1994-1995 is particularly outstanding, given that two of the main Lobo debaters are freshman women (most debaters nationally are male). Jewell's Debate Team reached the National Tournament again in 1995. Jewell is assisted by two Teaching Assistants, Kent Radford and Ann Johnson.

Several undergraduate fellowships are available in the Department, with the funding mainly donated by alumni. Some fellowships are specifically intended for minorities, for women, for debaters, etc., but several are open to any undergraduate student majoring in the Department.

The Department's Associate Chair for Undergraduate Affairs is Dr. Fred Bales, who was chosen to receive the University's Student Services Award in April, 1995. Bales will be replaced as Associate Chair for Undergraduate Affairs by Dr. Bob Gassaway after May, 1995. Professor Tom Jewell serves as Coordinator for Student Internships. Most undergraduates majoring in the Department enroll in one internship course, and many enroll in two internship experiences.

LEAVES

Professor Jean Civikly-Powell and Associate Professor Bob Gassaway were on sabbatical leave during Fall Semester, 1994, and Professor Diane Furno-Lamude is on sabbatical leave in Spring Semester, 1995. Professor Jack Condon returned from his leave in February, 1995. He was teaching at International Christian University, in Tokyo. Professor Janice Schuetz is on leave during

Spring Semester, 1995, at the University of Minnesota.

M.A. PROGRAM IN COMMUNICATION

The Department's M.A. Program in Communication has been rated as among the 20 highest quality such programs in U.S. universities, It enrolls 40 students, and graduates about a dozen individuals with M.A. degrees each year. The Program is oriented to communication theory and research, and usually requires two years to complete. Most M.A.-level courses, and all five of the required M.A. courses, are offered after 4:00 p.m. from Monday through Thursday, for the convenience of M.A. students who are employed during the day.

M.A. graduates in 1994-1995 and the titles of their thesis or project, are:

1. Wardene Crowley (1994), A Generic and Metaphoric Analysis of the Extant Letters of St. John of the Cross.
2. Sean Ford (1995), A Pentadic Analysis of the Controversy Surrounding Lesbians and Gays in the Military.
3. Brian Hagen (1995), A Rhetorical Analysis of the Boston Committee of Correspondence Letters.
4. Ann Lea Preece (1994), The Effects of Audio-Visual Redundancy and Recapitulation on Memory and Understanding of a Television Newscast.
5. Karen Truske Rudys (1994), A Content Analysis of Two Albuquerque Newspapers' Stories.
6. Michael Simpson (1994), The Relationship of Communication Competence to the Selective Use of Conflict Resolution Strategies in Superior-Subordinate and Subordinate-Subordinate Interaction Among Juvenile Detention Officers.
7. Annjenette Torres (1995), Navigating the Technology Transfer Network: A Case Study of a Cooperative Research

and Development Agreement Between a Federal Laboratory and a Private Company.

8. Arun Wayangankar (1994), The Empowerment of Indian Women Dairy Farmers.
9. Danielle Wierengo (1994), A Convergence Model Approach to Technology Transfer and Inter-Organizational Communication: Federal Laboratory-Industry Communication.

MA theses or projects presently underway, and nearing completion, include:

1. Julie Branovan, Reception Theory and Uses and Gratification Theory: Interpretive Communities and User Motivation of "The Simpsons" TV Program.
2. Kent Radford, Message-Selection vs. Message-Construction: The Debate Revisited.
3. John Mandes, First and Foremost Do No Harm: An Experimental Study of One Newspaper's Story About an HIV-Positive Physician and the Resultant Effects on Patient Confidence in All Physicians.
4. Amy Massingale, Food as Communication: Investigating the Meaning of Food in the Cuban American Community.
5. Jennifer Chavez, A Rhetorical Analysis of "The Bridges of Madison County": Narrative Rationality and the Evolution of Consciousness.
6. Heidi Carr, An Analysis of "Beverly Hills 90210".
7. Marcel Allbritton, Computer-Mediated Communication (CMC) in Scientific Research Collaborations.
8. Janet Shiver, The Effects of Cultural Diversity Training on Organizational Identification: A Longitudinal Study.
9. Christine Burroughs, If the Journal Says It, It Must Be News: A Study in Media Agenda-Setting.
10. Leslie Fagre, Cross-Cultural Uses and Meanings of Silence in Mediation in the Navajo Peace Maker Program and the University of New Mexico Mediation Clinic.
11. Laura Valdez, The Genre of Short Chicana Narrative Texts: A Rhetorical Analysis.

12. Tami Toops, A Survey of Audience Uses and Gratification of On-Line Newspapers.
13. Barbara Rigg-Healy, The Effects of High and Low Context Communication Styles on Attitudes and Perceptions About Computers.
14. Bob Childers, Global Diffusion of Giant-Screen Theaters: A Communication Study of Filmic Language as Innovation.
15. Alison Richman, Cultural Determinants of Inter-Ethnic Conflicts in the Workplace: A Study of Cuban and Mexican American Women.
16. Omar Sierra, An Agenda-Setting Analysis of Colombian News on Spanish-Language Television in the United States.
17. Cameron T. McVey-Christian, The Modern Superhero Comic Book: Text, Graphics, Formula.

DOCTORAL PROGRAM IN COMMUNICATION

The Department's Ph.D. Program will begin in Fall, 1995, with its first cohort of doctoral candidates. The Program is the only one of its kind in an American university that focuses particularly on intercultural communication (although other doctoral programs in communication may offer intercultural communication as one of several specialty areas). At UNM, all doctoral students share a common interest in intercultural communication, although many also have an interest in organizational communication, rhetorical communication, interpersonal communication, and/or mass communication. All doctoral students are expected to enroll in six core courses during their first academic year: Two doctoral theory courses, a quantitative research methods course, a qualitative research methods course, a course in statistical methods, and a doctoral seminar in intercultural communication.

As the newest Ph.D. program in communication in a U.S. research university, the UNM Doctoral Program can capitalize on exciting opportunities. Our Program is intended to prepare its participants for a career in university teaching and research from

the day that they begin their doctoral study. For instance, doctoral participants will be involved in both teaching and scholarly research, just as are most faculty members. Half-time financial support will be provided to each individual for three academic years. Each doctoral participant will be invited to join a research team led by one or more faculty members as a means to learn the skills of designing and conducting communication investigations and reporting research findings. Collaborative activity is also encouraged by officing all members of each doctoral cohort together in a commons room, located near the center of the Department's offices. The Doctoral Program will be field-based, with each doctoral participant provided with opportunities to make applications of communication theory and research, in order to anchor such understandings in real-life problems. Such field-based experiences may be gained through the Department's Mediation Clinic, its summer workshops, its research projects (including those involving data-gathering in other nations), teaching, and consulting.

The Department of Communication and Journalism at the University of New Mexico has been uniquely successful in obtaining funded research projects from private foundations, Federal and state governments, private companies, and from other sources. Doctoral participants will learn the important skills of designing research and training projects, writing proposals, and achieving success in seeking funding. One key to such success is to forge collaborative arrangements with other organizations that share a mutual interest in our projects. At present, the Department's research projects represent collaboration with:

1. The Department of Communication, Michigan State University, East Lansing, MI.
2. The School of Interpersonal Communication, Ohio University, Athens, Ohio.
3. POFLEP (Population and Family Life Education Project), a research center in Arusha, Tanzania.
4. Population Communications International, New York.

5. IC^2 Institute, University of Texas, Austin, TX.
6. CASAA (Center for Alcohol, Substance Abuse, and Addictions), University of New Mexico.
7. SHRI (Southwest Hispanic Research Institute), University of New Mexico.
8. Mothers Against Drunk Driving (MADD).
9. Los Alamos National Laboratory, Los Alamos, NM.
10. Sandia National Laboratories, Albuquerque, N.M.

FUNDED RESEARCH PROJECTS

In addition to a variety of scholarly research projects that are carried out by individual faculty members, graduate students, and undergraduate students, the following funded research projects are presently underway:

1. EFFECTS OF VICTIM IMPACT PANELS ON DRUNK DRIVING

This research project, mentioned previously, is funded by NIAAA (National Institute for Alcoholism and Alcohol Abuse) for $985,000.00 for three years, from October 1, 1994. Dr. Gill Woodall is Principal Investigator, Dr. Everett M. Rogers and Dr. Phil May (Director of CASAA) are Principal Co-Investigators, Dr. Michele Polacsek is Project Director, and Dr. Nagesh Rao, Visiting Assistant Professor, Rick Burris, Naewon Kang, Research Assistant, and Julie Cady, Project Secretary, are also involved in this project. The objective of this project is to evaluate the effects of Mothers Against Drunk Driving (MADD) Victim Impact Panels (VIP) on first-time DWI (Driving While Intoxicated) offenders. The principal question is whether the Victim Impact Panels deter future drinking and driving on the part of first-time DWI offenders in Albuquerque. This issue is particularly important in New Mexico, which leads the nation in the rate of alcohol-related traffic fatalities.

The Madd VIP is an educational effort intended to deter first-time DWI offenders from drinking and driving again. Approximately

250 first-time offenders attend the VIP each month in Albuquerque. The typical VIP format consists of several victims making dramatic, vivid, and emotional presentations on the impact that a DWI crash has had on their lives. Presenters often break down during their presentations as they describe how their child was killed in a drunk driving crash. While panelists try not to blame or judge the DWI offenders who attend the Panel, they do point to the consequences of drinking and driving, and urge individuals to accept responsibility for these effects.

Initial data suggest that the VIP has a strong impact on first-time DWI offenders. Ninety percent of the VIP participants indicate that they will never drink and drive again. Our NIAAA funded research follows first-time DWI offenders for two years to study the longer-term effects of the VIPs on recidivism. Preliminary results show the importance of the emotional nature of VIPs in preventing drinking and driving, rather than either (1) an informational approach, in which first-time DWI offenders are told about the specifics of punishment for DWI, the symptoms of drunkenness, and the physiological effects of drinking on driving, or (2) the tougher state laws that punish drunk driving.

In order to determine the effects of the Victim Impact Panels on consequent drunk driving arrests, first-time DWI offenders are randomly assigned either to (1) receive the VIP training, or (2) not to receive this training. Both receive training of an informational nature, and, of course, are subject to the state DWI law implemented since January, 1994. Thus the MADD-VIP Project is a field experiment with a longitudinal design.

Work on the MADD/DWI Project actually began in 1993, more than a year prior to receipt of the NIAAA funding, with observation, questionnaire data-gathering, and in-depth interviews with DWI offenders at the monthly MADD-VIP sessions in Albuquerque. This preliminary research involved all of the investigators later carrying out the NIAAA-funded project, plus Research Assistant Joseph Milan, who received his M.A. degree in 1994 and is presently pursuing a Ph.D. degree at the University of Miami. The 1993-1994

preliminary research was supported by a $27,000 grant from the Robert Wood Johnson Foundation.

2. TECHNOLOGY TRANSFER FROM GOVERNMENT R&D LABORATORIES IN THE UNITED STATES AND JAPAN

The purpose of this research project is to investigate the process of technology transfer from government R&D laboratories to private companies in the U.S. and in Japan. Our research concerns the process by which technological innovations developed in government R&D labs are commercialized by private companies into useful products and services that are sold in the marketplace. In both Japan and the United States, technology transfer from government R&D laboratories is expected to enhance international competitiveness, which is the driving force for policy emphasis on technology transfer issues in recent years. Our research is supported by the UNM Japan Center (at about $20,000 in 1994-1995), and by a grant from the Mitsubishi International Corporation, San Francisco ($97,000 per year for five years).

With the end of the Cold War in 1989, the national R&D weapons labs in New Mexico have been ordered by the Federal government to focus on transferring military technologies to private companies in order to commercialize these technologies into consumer products to be sold in the marketplace. The future economy of the state of New Mexico rests on the relative success with which Los Alamos National Laboratory and Sandia National Laboratories can make this difficult transition.

During 1995, we are studying two technology transfer processes in New Mexico:

(1) Technology Transfer by Spin-Off Companies: We are investigating (a) the formation and functioning of spin-off companies from Federal R&D laboratories in New Mexico, and (b) the degree to which universities, Federal R&D laboratories, and private businesses facilitate or inhibit spin-off companies, such as through providing business incubators. We focus on the process of spin-offs from a Federal R&D lab, and the role of this process in

transferring technological innovations. We have presently identified 70 spin-off companies from Sandia National Laboratories and Los Alamos National Laboratory. About one spin-off per month is occurring at present. Later, in summer, 1995, we expect to conduct case studies of spin-offs in Japan.

(2) Technology Transfer by Cooperative Research and Development Agreements (CRADAs). CRADAs are a Federal mechanism for technology transfer which link a government R&D lab with a private partner. We are studying the formation and functioning of a sample of about 400 CRADAs in which New Mexico's Federal R&D labs are partners. The CRADAs represent an investment to date of about $1 billion. We have completed three case studies of CRADAs from Sandia National Laboratories (Eto, Wierengo, and Rogers, 1995).

Everett Rogers is Principal Investigator of this Project, in which Manabu Eto, Visiting Research Scientist (and a career officer in MITI, the Japanese Ministry of International Trade and Industry); Patrick Byrnes, Research Assistant; Marcel Allbritton, Research Assistant; and Danielle Wierengo, consultant, are involved. Dr. Elias Carayannis of the UNM Anderson School of Management collaborates in this Project, as does Dr. David V. Gibson of the IC^2 Institute at the University of Texas at Austin. Gibson is conducting similar research on technology transfer through spin-offs and CRADAs at the NASA Ames Center in Mountain View, CA; the NASA Johnson Space Center in Houston; and at Oak Ridge National Laboratory near Knoxville, TN.

A progress report (Eto, Rogers, Wierengo, Byrnes, and Allbritton, 1995) from our Project, with a summary in Japanese, is available upon request.

3. BOLIVIAN JOURNALISTS' TRAINING PROJECT

Dr. Bob Gassaway directed this 1994 training project, funded at $103,295 by Development Associates for the U.S. Agency for International Development, in which 21 mid-career Bolivian print and broadcasting journalists traveled to Albuquerque for six weeks

of classes, field trips, and on-the-job training in Spanish-language media institutions in New Mexico. All instruction was in Spanish. In addition to Gassaway, Fred Bales, Diana Ríos, Miguel Gandert, and Ev Rogers were involved in teaching the Bolivian journalists.

4. COMMUNICATION STRATEGIES FOR HIV/AIDS PREVENTION IN SAN FRANCISCO

This two-year research project is funded at $237,000 by the U.S. Agency for Health Care Policy and Research (AHCPR), and carried out in collaboration with five scholars in the Department of Communication at Michigan State University: Dr. James W. Dearing, Dr. Jeffrey Henderson, Gary Meyer, Mary K. Casey, and Michelle Campo. Principal Investigator for the UNM Project is Everett Rogers, which also involves Dr. Nagesh Rao and Research Assistant Gary Betts. The UNM and MSU research teams hold weekly telephone conference calls, exchange e-mail messages, and meet for discussions every few months.

San Francisco has the highest death rate due to AIDS of any city in the world. The City now has the most effective HIV/AIDS prevention effort, carried out by some 100 programs, which are targeted at unique audiences of high-risk individuals. We gathered data through personal interviews and by other means with 40 administrators of the 20 most effective, and least effective, HIV prevention programs in San Francisco, in order to understand the communication strategies, based on the diffusion of innovations model and the social marketing model that they utilize. We also conducted in-depth case studies of the six most effective, and least effective, HIV/AIDS prevention programs in San Francisco.

We investigated the most highly targeted prevention programs in San Francisco, those aimed at unique populations characterized by at least five uniqueness factors (a program directed at young gay Vietnamese immigrants who are commercial sex workers and injection drug users, for instance, has six uniqueness risk factors). Program staff, such as administrators and street

outreach workers, generally share the characteristics of their intended audience, and several disclosed to us that they were HIV positive. As a result, the programs' communication messages are homophilous and credible, and appropriate in language and in cultural meanings for the intended audiences.

A summary report from this research project will be available in a few months. The MSU/UNM researchers will present, and apply, their findings at workshops in East Lansing (April 8-9th), Albuquerque (May 24th), and in San Francisco (June 9th). A paper on the impacts of the AIDS epidemic in San Francisco (Rogers, Dearing, Rao, Mayer, Casey, Campo, and Betts, 1995) is available on request.

The "San Francisco model" of HIV/AIDS prevention, centering on programs targeted to unique audiences, is of much interest to many other cities in the world, where the AIDS epidemic poses a very serious threat.

5. AN ENTERTAINMENT-EDUCATION RADIO SOAP OPERA FOR FAMILY PLANNING AND HIV/AIDS PREVENTION IN TANZANIA

The Tanzania Project began in mid-1993 with the two-year broadcast of a 205-episode entertainment-education radio soap opera by Radio Tanzania, with funding provided by the UNFPA (United Nations Population Fund), and with technical assistance from Population Communications International (CPI), an organization with extensive previous experience in entertainment-education soap operas broadcast in India and in Kenya. "Twende na Wakati" (Let's Go with the Times) deals with family planning promotion and with HIV/AIDS prevention in Tanzania. The Tanzania Project is unique in that it is the first such entertainment-education soap opera whose effects are evaluated by means of a field experiment is which one area of Tanzania (Dodoma) with a population of 3.5 million people does not receive the radio broadcasts, while the rest of the nation (with a population of about 23 million) receives the radio broadcasts.

The evaluation research is carried out by Everett Rogers, Dr.

Peter Vaughan (a consultant in Minneapolis), and Research Assistant Ramadhan Swalehe, who is presently enrolled in the M.A. program in Communication at UNM. His studies are supported by a $15,000 grant from the UNFPA. Swalehe is also the Technical Director of POFLEP (Population and Family Life Education Project) in Arusha, Tanzania, with whom UNM communication scholars collaborate in the research project. We gathered data from a sample of 3,000 Tanzanian households in mid-1993 (prior to the broadcasts), in 1994, and will again conduct 3,000 personal interviews in mid-1995, when the two years of radio soap opera broadcasts will terminate. The entertainment-education soap opera will then be broadcast for two years in the Dodoma (control) area, and the radio broadcasts will be repeated in the rest of the country. We also gather data on the effects of "Twende na Wakati" from new adopters of family planning methods at a sample of 77 Ministry of Health clinics in the treatment and control areas. During 1994, 12 per cent of all such new adopters said they were influenced to do so by listening to "Twende na Wakati." Considerable evidence from our annual surveys also indicates that the entertainment-education strategy can have considerable effects in changing audience behavior regarding (1) family planning adoption, (2) HIV/AIDS prevention, and (3) modern attitudes and actions.

A progress report from the Tanzania Project is available on request. Funding for the Tanzania Project is provided by the Lang Foundation ($10,000), the Rockefeller Foundation ($99,750), the Weyerhaeuser Family Foundation ($50,000), and the UNFPA ($117,000).

The Tanzania Project has led to a comparative study in China, scheduled to begin during 1995. A research design similar to that in Tanzania will be utilized to measure the effects of the Chinese television soap opera. Funding of $300,000 will be provided by the Ford Foundation to PCI and to Dr. Arvind Singhal of Ohio University for evaluation research on the entertainment-education television soap opera, which will be viewed by 16 per cent of the world's population. Everett Rogers serves as a consultant to the evaluation research in China, which will be carried out by Arvind

Singhal and Peter Vaughan.

6. RESEARCH ON HISPANIC AUDIENCES FOR THE MASS MEDIA

Dr. Diana Ríos, with support from the Southwest Hispanic Research Institute (SHRI) and the Center for Regional Studies (CRS), directs an investigation of the effects of mass-mediated communication on culture change and preservation among Spanish and Mexican heritage people in the Albuquerque area. In her research, Ríos moves away from looking at what media do to individuals and focuses more intensively on what audiences do with media. The Albuquerque research study tests an ethnic subgroup model constructed (1) from the mainstream communication model of "uses and gratifications," and (2) from cultural group theories of ethnic and cultural maintenance, and assimilation. Ríos' research explains how Spanish/Mexican heritage audiences use mass media for cultural maintenance (to keep being Spanish/Mexican) as well as for cultural and structural level assimilation (to acquire selected Anglo American cultural characteristics, and to integrate into the socio-economic spheres). The Albuquerque study is a comparative project with Ríos' previous investigation in the Austin, Texas area. Two chapters (Ríos, 1994; in press) report the results of this research project.

Professor Ríos also investigates how advances in technological forms such as film and video may provide important potential for facilitating increased cross-cultural understanding by transmitting poignant imagery of the human condition. "Like Water for Chocolate" is a Mexican film which women around the world have found compelling, and relevant to their personal lives. Ríos seeks to identify key intercultural qualities in the internationally acclaimed film among Mexican/Spanish and Anglo American women viewers in New Mexico. Audience response data provide information about how and why women can relate to issues in a Mexican technological form of popular culture. Personal responses from participants reveal the degree that positive intercultural communication between Mexico and the U.S. is possible and how

popular communication technologies can be used responsibly to enhance cross-border relations. This research project marks a turning point in cultural audience studies research since no previous investigations have made a comparative analysis of particular cultures, nor used a Mexican film as a textual stimulus. This quasi-experiment is partially funded by SHRI; a UNM RAC grant is pending for this research.

Ríos and Bob Gassaway presently are investigating changes in newspaper readership among Hispanic and Anglo audiences in the El Paso market over the past five years, with special attention to the language preferences of Hispanics when they are seeking information.

7. TEACHING PARTICIPANTS IN THE UNM JAPAN CENTER

Dr. Brad Hall and Dr. Jack Condon offer a graduate-level course on U.S./Japanese Intercultural Communication each year through the University's Instructional Television System that is broadcast to participants of the UNM Japan Center (who are presently employees of Los Alamos National Laboratory, Sandia National Laboratories, the Air Force Phillips Research Laboratory, and several high-tech companies in the Albuquerque area). In alternate semesters each year, Everett Rogers teaches a course via instructional television on Technological Innovation, centering on technology transfer processes in the United States and Japan. These courses help prepare Japan Center participants to work in Japan for a period of several years, in order to gain cultural understanding and experience that can be useful to U.S. companies and government R&D laboratories on their return. In addition to funding these two courses in the Department, the Japan Center also supports Rogers' research on technology transfer in the U.S. and Japan, including funding for data-gathering in Japan. The Department also works closely with Wally Lopez, Director of the Japan Center, and his staff in a variety of other activities related to intercultural communication and to communication on the Internet with Japan.

Jack Condon returned in February, 1995 from two years of teaching communication courses at International Christian University, in Tokyo. Condon, Hall, Rogers, and several other faculty are interested in intercultural communication between Japan and the United States.

8. SUBSTANCE ABUSE PREVENTION

Dr. Gill Woodall is the Principal Investigator and Associate Professor Nina Wallerstein in the UNM School of Medicine is Co-Principal Investigator for a research project on preventing alcohol and tobacco use via the Adolescent Social Action Program (ASAP). This proposal was funded by the Drug Free Schools and Communities Division of the U.S. Department of Education, with a two-year budget of $386,435. This Project expands the ASAP prevention model and curriculum to include tobacco as a substance for prevention, along with alcohol and other drugs.

9. MINORITY ALCOHOL AND SUBSTANCE ABUSE PREVENTION

Nina Wallerstein is Principal Investigator and Gill Woodall is Co-Principal Investigator for this project, funded by NIAAA for five years at $1,610,332, which began in 1994. This Project provides an evaluation of the Adolescent Social Action Program (ASAP), a substance abuse prevention program for minority youth in New Mexico.

10. DRUG AND ALCOHOL PREVENTION AT UNM

Gill Woodall is Principal Investigator and J. Miller, J. Lisbin, and Orcilia Zuniga-Forbes are Co-Principal Investigators for this media campaign and peer education for substance abuse prevention on college campuses. This Project is funded by FIPSE (Fund for the Improvement of Post-Secondary Education) of the U.S. Department of Education, for two years (1993-1995) at $107,894. This project implements and evaluates peer education and media campaign drug and alcohol prevention strategies for university students at UNM.

11. UNIVERSITY CONSORTIUM FOR SUBSTANCE ABUSE

Gill Woodall is Principal Investigator and S. Comer and J. Miller are Co-Principal Investigators of this project for a substance abuse prevention consortium of institutions of higher education in Central and Northern New Mexico. This research is funded by FIPSE (of the U.S. Department of Education) at $36,688 for 1993-1995. UNM hosts the consortium, which provides a forum for the exchange of information, training, and research concerning substance abuse prevention for university students and their surrounding communities.

12. PROJECT SIRVE (Server Intervention, Research, Verification, and Evaluation)

This project consists of (1) telephone interviews with liquor license holders about the Server Training Act in New Mexico, (2) a pseudo-patron study where trained actors simulate intoxication in liquor establishments to determine whether they would be served, and (3) in-depth interviews with servers about server training. This project is conducted with supplementary funding from the National Institute on Alcohol Abuse and Alcoholism (NIAAA), to the Prevention Research Center at UC Berkeley. This initial project will lead to a large multi-year project.

13. INTERCULTURAL COMMUNICATION

Dr. Brad Hall continues his research on the problematic aspects of intercultural communication. During 1994 he published an analysis of intercultural conflict related to Native American Treaty rights (Hall, 1994), as well as a discussion of strategies for handling problematic intercultural encounters. The later study was conducted in collaboration with William Gundykunst (Gudykunst and Hall, 1994). Hall also progressed in his study of the role of prejudice in intercultural encounters. An initial paper from this research was accepted for presentation at the International Communication Association's annual conference in Albuquerque in May, 1995. In addition, Hall continued to coordinate international

conversation groups at the University of New Mexico (ten over the course of 1994), and to assist with the interdisciplinary Asian Studies program on the UNM campus.

FUTURE RESEARCH PROJECTS

Department faculty and students are preparing proposals for the investigation of the following topics:

1. Self-Managed Work Groups at Los Alamos National Laboratory, Jim Barker.

2. Decision-Making about School-Based Drug-Prevention Programs, Jim Barker, Everett M. Rogers, Nagesh Rao, Michele Polacsak, and others.

3. The Role of University Research Centers in Technology Transfer, Ev Rogers, Brad Hall, and others.

4. Health Communication for Family Practice Residents at the UNM School of Medicine, Dr. Chris Urbina (UNM Department of Family Practice), Nina Wallerstein, and Michele Polacsek.

5. "Oh No!" to "Ok": A Training Program to Improve Effective Communication between Undergraduate Students and Foreign Teaching Assistants, Nagesh Rao and Jean Civikly-Powell.

6. Effects of Media Consumption on Preadolescent and Adolescent Sexual Attitudes and Sexual Activities, Diane Furno-Lamude, Associate Professor C. Victor Strasburger (Division of Adolescent Medicine, UNM Medical School), and Everett M. Rogers.

7. Communication of Hazard-Management Organizations with Journalists and Other Mass Media Professionals in a Disaster, Bob Gassaway.

8. Making Sophisticated Audience Research Techniques Available to Community Newspapers through the Application of Minicomputer Technology and In-House Training, Bob Gassaway.

DOCUMENTARY PHOTOGRAPHY BY MIGUEL GANDERT

Professor Miguel Gandert is gaining a reputation as a leading documentary photographer of the Latino experience. He received a

grant from the Arizona Commission on the Arts and curated and produced images for a show titled "*Colonias de Nogales*." This exhibit will travel for two years. He also received a commission from the Mexican Museum in San Francisco to create a body of work for the exhibition "From the West: Chicano Narrative Photography." This show will travel for three years, and the pictures will become a part of that museum's permanent collection. Gandert was featured in one-person exhibitions at the CEPA Gallery, Buffalo, NY, "VSJ/Scenes from an Urban Chicano," in 1994; and in the MARS Artspace, Phoenix, "*La Frontera*: A Way to Survive," in 1994. His work was included in group exhibitions at the International Book Fair (Guadalajara, Mexico, 1994), Purdue University, the Bronx Museum (New York), El Paso Museum of Art (Texas), and several others. He served as photographer/editor for *Los Tesoros del Espiritu: Familia y Fe* (Academia El Norte Publications, 1994), and for *Cuando Hablan Los Santos* (Maxwell Museum, 1995).

UNM MEDIATION CLINIC

Kathy Domenici, an MA graduate of the Department and a part-time instructor, in collaboration with Professor Jean Civikly-Powell, and with assistance from Adjunct Professor Stephen Littlejohn, established the UNM Mediation Clinic in 1994. It provides an active program in teaching, service, and research. Domenici teaches an undergraduate course in the Department, C & J 330, Mediation, which trains mediators. The Clinic serves the UNM community, including students, faculty, administrators, and staff in mediating conflict situations. Often such mediation is cost-effective to both parties before a conflict escalates into more serious legal processes. As might be expected in New Mexico's tri-ethnic society, some of the conflicts mediated by the Clinic are intercultural in nature. The UNM Mediation Clinic sees the mediation process as one involving interpersonal communication between disagreeing parties, assisted by mediators who act as nonjudgemental facilitators of communication. The Mediation Clinic coordinates with the newly-created Office of Dispute Resolution at

UNM, by providing mediators and mediation services. The Clinic offers workshops on mediation issues and anticipates assisting in training programs organized by the Dispute Resolution Center.

CONFERENCES

The 1995 Conference on Research in Gender and Communication was held April 7-8, 1995, in Albuquerque. Dr. Karen Foss served as the local host for this meeting. The conference theme, "The Anatomy of Freedom: Creating Feminist Communication Theories," came from the title of a book by Robin Morgan, the conference keynote speaker. Morgan, a long-time feminist author and activist and the first editor of Ms. magazine in its advertising-free format, suggested the need to explore connections among contexts that often are seen as disparate. The purpose of the conference was to reconceptualize communication theories in such contexts as interpersonal communication and organizational communication, for example, in order to integrate feminist perspectives into the communication discipline.

In October, 1994, Dr. Estelle Zannes served as host and local arrangements coordinator for the IEEE International Carnahan Conference on Security Technology, held in Albuquerque.

In May, 1995, the International Communication Association (ICA) held its annual conference in Albuquerque. Some 1,500 communication scholars participated in this four-day conference. Dr. Ken Frandsen was chair of local arrangements for the ICA conference.

TEACHING ASSISTANT RESOURCE CENTER (TARC)

Professor Jean Civikly-Powell, Teaching Assistant Leslie Fagre, and Teaching Assistant Nancy VanDevender provide a university-wide training program for both international and U.S. teaching assistants called TARC. The Teaching Assistant Resource Center was developed in 1983 by its Director, Jean Civikly-Powell.

It provides training and consultation services to UNM teaching assistants. TARC has been cited by the Dean of the UNM College of Arts and Sciences as a model for the instructional training of UNM faculty. During 1994-1995, TARC offered the Classroom Teaching Skills Program (a series of six workshops) at three different times. TARC also offered five workshops on special topics: Gender Issues in the Classroom, Sexual Harassment Issues for TAs, Multimedia Presentations, Cyberspace at UNM, and Testing and Grading. The TARC program also provides specialized training for UNM's international teaching assistants (ITAs). The international TA program is offered in the Fall and Spring Semesters. Director Civikly-Powell and the two graduate assistants have submitted several research proposals and presented papers at professional conferences. TARC's proposal for Classroom Management Issues for TAs and Faculty received funding (approximately $2,500) as an Effective University Instruction Research Grant.

FACULTY, STAFF, PART-TIME INSTRUCTORS, TEACHING ASSISTANTS, AND RESEARCH ASSISTANTS, 1994-1995

Faculty	
Fred V. Bales	Associate Professor and Director of Undergraduate Studies
James Barker	Assistant Professor
Jean M. Civikly-Powell	Professor, Associate Chair and Director of the Teaching Assistant Resource Center (TARC)
Charles Coates	Associate Professor
John Condon	Professor
Karen Foss	Associate Professor
Kenneth D. Frandsen	Professor & Associate Dean, College of Arts and Sciences
Diane Furno-Lamude	Associate Professor
Bradford "J" Hall	Assistant Professor
Miguel Gandert	Assistant Professor
Bob M. Gassaway	Associate Professor
Thomas E. Jewell	Lecturer III and Director of Forensics
Dianne M. Lamb	Associate Professor
Michele Polacsek	Visiting Assistant Research Professor
Nagesh Rao	Visiting Assistant Professor
Diana I. Ríos	Assistant Professor
Everett M. Rogers	Professor, Chair, and Director of Graduate Studies
Janice E. Schuetz	Professor
Henry L. Trewhitt	Associate Professor
LaVonne Wahl	Visiting Assistant Professor
W. Gill Woodall	Associate Professor
Estelle Zannes	Associate Professor

Adjunct Professor	
Stephen Littlejohn	Fall

Visiting Research Scientist:	
Manabu Eto	Fall, Spring

Part-Time Instructors:	
Richard Bakkerud	Fall
Wardene Crowley	Fall
Joe Day	Fall, Spring
Kathy Domenici	Fall, Spring
Jack Ehn	Spring
Arthur Gonzales	Fall
Kent Goshorn	Spring
Jennifer Gruenewald	Fall, Spring
Gregg Levoy	Summer
MaryBeth Libbey	Fall
Claudia Lucas	Fall
Gaylord Mance	Fall, Spring

Jill Marron	Fall, Spring
Crystal McClernon	Fall
Eve Munson	Fall
James Overton	Fall
Ann Skinner-Jones	Spring
Toby Smith	Spring
Ron Steiner	Spring
Nancy Traver	Fall, Spring
Catherine Waggoner	Spring
Christian Westphal	Fall, Spring
Steve Wingfield	Fall, Spring

Teaching Associates:

John Griffin	Fall, Spring
Elizabeth Martinez	Fall
Steven Rives	Fall

Teaching Assistants:

Marcel Allbritton	Fall, Spring
Gary Betts	Spring
Julie Branovan	Fall, Spring
Patrick Byrnes	Fall
Heidi Carr	Fall, Spring
Leslie Fagre	Fall, Spring
Sean Ford	Spring
Ann Johnson	Fall, Spring
John Mandes	Fall, Spring
Amy Massingale	Fall, Spring
Kent Radford	Fall, Spring
Alison Richman	Fall, Spring
Janet Shiver	Fall, Spring
James Stowers	Spring
Nancy VanDevender	Fall, Spring

Research Assistants:

Marcel Allbritton	Spring
Gary Betts	Fall, Spring
Julie Branovan	Fall, Spring
Patrick Byrnes	Spring
Naewon Kang	Fall, Spring
Randall Starling	Fall, Spring
Ramadhan Swalehe	Spring
Arun Wayangankar	Fall
Soo-Jin Yoon	Fall, Spring

Staff:

K. Jenison Klinger	Department Administrator
Patrick Kiska	Electronic Technician
Mary Alice Strain	Department & Undergraduate Secretary
Katherine Vazquez	Staff & Graduate Secretary

PUBLICATIONS IN 1994

Bales, Frederick V.

"Hantavirus and the Media: Double Jeopardy for Native Americans," American Indian Culture and Research Journal, 18(3):251-263, 1994.

"The Mass Media and New Mexico Politics," in P.Hain, Chris Garcia, and G. St.Clair (eds.), New Mexico Government, Third Edition, Albuquerque, University of New Mexico Press, Bob M. Gassaway and Fred Bales.

Barker, James, R.

"Identification in the Self-Managing Organization: Characteristics of Target and Tenure," Human Communication Research, 21(2):223-240. James R. Barker and Phillip K. Tompkins, 1994.

"The Concept and the Practices of Discipline in Contemporary Organizational Life," Communication Monographs, 61(1): 9-43, James R. Barker and George Cheney, 1994.

Foss, Karen A.

"The Construction of Feminine Spectatorship in Garrison Keillor's Radio Monologues," Quarterly Journal of Speech, 80:410-426, Karen A. Foss and Sonja K. Foss, 1994.

"Particularities and Possibilities: A Research Agenda for Sexual Harassment," in Shereen Bingham, Karen A. Foss, and Richard A. Rogers (eds.), Conceptualizing Sexual Harassment as Discursive Practice, Westport, CT, Greenwood, 1994.

"Robin Morgan," in Karlyn Kohrs Campbell (ed.), The Rhetoric of American Women: Critical Studies and Sources, Westport, CT, Greenwood, 1994.

"The Logic of Folly in the Political Campaigns of Harvey Milk," in R. Jeffrey Ringer (ed.), Queer Words Queer Images: Communication and the Construction of Homosexuality, pp. 7-29, Albany, New York University Press, 1994.

Inviting Transformation: Public Speaking for a Changing World, Karen A. Foss and Sonja K. Foss, Prospect Heights, IL, Waveland, 1994.

Furno-Lamude, Diane

"Baby Boomers' Susceptibility to Nostalgia," Communication Reports, 7(2):130-135, Diane Furno-Lamude, 1994.

Gandert, Miguel

Los Tesoros del Espiritu: Familia y Fe, Academia El Norte Publications, photography editor, photographer, 1994.

Homeland: Use and Desire, Massachusetts College of Art, contributing artist, 1994.

"*Retratos Mestizaje*: Photographic Survey of the *Indo-Hispano* Traditions of the Rio Grande Corridor," Albuquerque, University of New Mexico, Southwest Hispanic Research Institute, manuscript submitted to the Rockefeller Foundation, 1994.

Gassaway, Bob M.

"Showing--But Not Knowing--Inequality's Pain," Mirage magazine, p.39, Winter, 1994.

"The News Media and Politics in New Mexico," in P. Hain, Chris Garcia, and G. St.Clair (eds.), New Mexico Government, Third Edition, Albuquerque, University of New Mexico Press, Bob M. Gassaway and Fred Bales, 1994.

Hall, Brad 'J'

"Understanding Intercultural Conflict through an Analysis of Kernal Images and Rhetorical Visions," International Journal of Conflict Management, 5:62-86, Brad 'J' Hall, 1994.

"Strategies for Effective Communication and Adaptation in Intergroup Contexts," in Strategic Interpersonal Communication, pp. 225-271, Hillsdale, NJ, Lawrence Erlbaum Associates, W.B. Gudykunst, and Brad 'J' Hall, 1994.

Ríos, Diana I.

"Sor Juana," Multicultural Education, 1994, Diana I. Ríos.

Rogers, Everett M.

A History of Communication Study: A Biographical Approach, New York, Free Press, Everett M. Rogers, 1994.

R&D Collaboration on Trial: The Microelectronics and Computer Technology Corporation, Boston, Harvard Business School Press, David B. Gibson and Everett M. Rogers, 1994.

"The Field of Health Communication Today," American Behavioral Scientist, 38(2):208-214, Everett M. Rogers, 1994.

"Claude Shannon's Cryptography Research during World War II and the Mathematical Theory of Communication," in Larry D. Sanson (ed.), Proceedings of the IEEE International Carnahan Conference on Security Technology, Piscataway, NJ, IEEE Service Center, pp. 1-5, Everett M. Rogers, 1994.

"The Future of Population Communication," Commonwealth Association for Education in Journalism and Communication (CAEJAC) Journal, 6: 68-79, Everett M. Rogers, 1994.

"Planned Social Change," in Ervin P. Bettinghaus and Michael Cody (eds.), Persuasive Communication, Fifth Edition, NY, Holt, Rinehart and Winston, pp. 379-397, Everett M. Rogers and Arvind Singhal, 1994.

"Diffusion Theory and HIV Risk Behavior," in Ralph J. DiClemente and John L. Petterson (eds.), Preventing AIDS: Theories and Methods of Behavioral Interventions, New York, Plenum Press, pp. 79-83, James W. Dearing, Gary Meyer, and Everett M. Rogers, 1994.

"Television Promotion of Gender Equality in Societies," in Michael Cody and Pamela J. Kalbfleisch (eds.), Gender, Power and Communication in Human Relationships, Norwood, NJ, Lawrence Erlbaum Associates, Everett M. Rogers, Thomas M. Hirata, Ankila S. Chandran, and Jeffrey D. Robinson, 1994.

"The PEN Project in Santa Monica: Interactive Communication Equality, and Political Action," Journal of the American Society for Information Science, 45(6):1-10, Everett M. Rogers, Lori Collins-Jarvis, and Joseph Schmitz, 1994.

Communication and Journalism from "Daddy" Bleyer to Wilbur Schramm: A Pampliset, *Journalism Monograph* 148, Everett M. Rogers and Steven H. Chaffe, 1994.

"The Economy of Television Program Trade in Far East Asia," Journal of Communication, 44(3):89-111, David Waterman and Everett M. Rogers, 1994.

"Empowering Indian Women Dairy Farmers: The Cooperative Development Program of the National Dairy Development Board (NDDB)," Journal of Rural Construction, Arun Wayangankar, Everett M. Rogers and Nagesh Rao, 1994.

"Reconstructing the Story of 'Simplemente María', The Most Popular Telenovela in Latin America of All Time," Gazette, 54(1):1-15, Arvind Singhal, Rafael Obregon, and Everett M. Rogers, 1994.

"The Evolution of Technology Transfer at MCC," in Suleiman K. Kassicieh and H. Raymond Radosevich (eds.), From Lab to Market: Commercialization of Public Sector Technology, New York, Plenum Press, pp. 257-273, David V. Gibson and Everett M. Rogers, 1994.

Technology Transfer from Government R & D Laboratories in the United States and in Japan: Focus on New Mexico, Albuquerque, University of New Mexico, Department of Communication and Journalism, Report to the Mitsubishi International Corporation, Manabu Eto, Everett M. Rogers, Danielle Wierengo, Patrick Byrnes, and Marcel Allbritton, 1995.

Schuetz, Janice

Women Public Speakers in the United States, 1925-1990: A Biocritical Sourcebook, Karlyn Kohrs Campbell (ed.), (Janice Schuetz is one of two associate editors of the volume), Westport, CT, Greenwood Press, 1994.

"Aimee Semple McPherson," in Karlyn Kohrs Campbell (ed.), Women Public Speakers in the United States, 1925-1990: A Biocritical Sourcebook, Westport, CT, Greenwood Press, Janice Schuetz, 1994.

The Logic of Women on Trial, Carbondale, IL, Southern Illinois University Press, Janice Schuetz, 1994.

Editor of the Journal of Communication and Religion, Volume 17.

Trewhitt, Henry

The Baltimore Sun,
"U.S. Diplomacy Stumbles", April 24, 1994.
"The Watergate Record", June 12, 1994.
"The Averted Gaze", July 14, 1994.
"Boris's Army", September 5, 1994.
"What Foreign Policy?", November 21, 1994.

Woodall, W. Gill

Nonverbal Communication: The Unspoken Dialogue, New York, McGraw-Hill, J.K. Burgoon, D.B. Buller, and W.Gill Woodall, 1994.

"Training Medical Students in Smoking Cessation Counseling", Academic Medicine Supplement, 69: 548-550, D.B. Coultas, D.A. Klecan, R.M. Whitten, S.S. Obenshain, R.H. Rubin, W.H. Weise, B.E. Wilson, W.G. Woodall, and C.A. Stidley, 1994.

Department of Communicative Disorders
Annual Report
July 1, 1994 - June 30, 1995
Submitted by
Linda Riensche
Professor and Chair, Department of Communicative Disorders
Director, UNM Speech and Hearing Center

1. Significant developments during the academic year, 1994-1995.

Research

An adult language research laboratory and an augmentative communication research laboratory were established. A tenure track faculty member was recruited. Equipment additions included 12 computers with printers and software, a video otoscope (on indefinite loan from Starkey Laboratories), and a video cassette recorder, camera, and monitor.

Curriculum

The curriculum was updated for 1995-1997 course catalogues. New requirements more than meet the recommendations of the American Speech-Language-Hearing Association for undergraduate students as well as the accreditation requirements of the Educational Standards Board of the American Speech-Language-Hearing Association for Graduate programs. The conversion of course sequencing to blocks designed to maximize preparation for placement in clinic, public school, and medical sites was implemented. Requirements for the 1995-97 graduate catalogue include a 3 credit hour 500-level elective course which may be selected from certain courses within the department or from certain courses in other departments including Psychology, Communications and Journalism, Anthropology, Sociology, and Special Education.

Minimum grades for graduate students were established at B- in Communicative Disorders classes as well as a minimum grade point average for 500 level Communicative Disorders classes. Standard grade sheets were established for clinical practicums and internship. Advisement was transferred to two faculty members. Orientation sessions were held for faculty, new graduate students, and all clinic

students. Separate convocations were held for all graduate students and all undergraduate and nondegree students.

Mentorships

A faculty mentorship program was established with each graduate student assigned to a mentor.

Loans for Service

Students in speech-language pathology and audiology were included in a loan-for-service program of the New Mexico Commission on Higher Education. It requires New Mexico residency and a declaration of intent to practice in one of the designated NM shortage areas for up to 3 years for full loan forgiveness.

ASHA Accreditation Report

The Educational Standards Board Reaccreditation Application was submitted. This application has been made once every 5 years in the past. The usual 5 year period was extended by one year for our program as the accreditation period is transitioning to an 8 year period for all programs.

Speech and Hearing Center

Customized software for central scheduling was implemented. Vaccination requirements or signed waivers were implemented for all clinic students along with a requirement of annual attendance to a blood and infectious diseases workshop.

The Speech and Hearing Center Test and Materials Library

Over 140 additions were made to the Speech and Hearing Center Test and Materials Library. Many of these were contributions made by the UNM Chapter of The National Student Speech, Language and Hearing Association via the exhibitors at the Southwest Conference.

Audiology Clinic

The clinic schedule was again revised to increase its efficiency. Assistive Listening Devices were added to available materials for the hard of hearing.

Special Programs

Augmentative Communication Program

The restructuring of the Augmentative Communication Grant to include both a full time and a part time doctoral level speech-language pathologist as well as a part time master's level speech-language pathologist was completed. An open house was held in the Spring semester with about 60 people in attendance. Two summer Augmentative Communication Consumer Groups were added.

Mexico City Interdisciplinary Program

The Mexico City Interdisciplinary Program was privatized for the August, 1994 clinic.

Albuquerque Public Schools Programs

The Albuquerque Public Schools program was expanded. Ann Marquis completed her fourth year at Jefferson Middle School. Ginny Bejarano served one semester at Longfellow Elementary School. Annie Rowland completed her first year at Albuquerque High School. Betty Braught established a preschool through the Albuquerque Public Schools Child Find Program. Kate Blaker established a diagnostic program through the Albuquerque Public Schools program. The contract was rewritten for the coming year.

Leadership Training Program

New leadership training opportunities were offered through a cooperative project with the New Mexico University Affiliated Program Maternal and Child Health Interdisciplinary Leadership Training Program. The program uses the Problem-Based Learning Approach used by the UNM School of Medicine. It also recognizes the rural needs of New Mexico and emphasizes sensitivity to specific ethnic groups representative of the Southwest.

Program for Rural Areas

This allied health program is designed to provide an opportunity for students in the various health related disciplines to learn together and gain an understanding and appreciation for the expertise that each brings to the solution of health problems. The program uses the Problem-Based Learning Approach of the UNM School of Medicine with the experience extended to the rural setting through clinical placements and the use of centralized library resources such as computer-aided instruction, electronic mail network, and accessing library resources.

Special Events

Annual Picnic

The Department held its fourth annual picnic on Saturday, September 10 at Holiday Park. Faculty, staff, undergraduate, non-degree, and graduate students were invited. Approximately 90 persons attended.

Faculty-Student Attendance at National Conventions and Conferences

Five faculty members, 1 staff member, and 2 students attended the American Speech-Language-Hearing Association Convention held in New Orleans, Louisiana in November. One faculty member, 2 staff members, and 6 students attended the American Academy of Audiology Convention in Dallas in March.

Holiday Party

The Holiday Party was held on November 30 at the Family Practices Center. The party was a potluck. Approximately 50 people were in attendance. Unlike last year, only department members were invited because of constra ıts in the amount of space available. Entertainment included a quiz show skit presented by graduate students.

December Graduation Reception

A Graduation Reception was held at the Department facilities to honor those graduating at the end of summer session and fall semester. Approximately 70 were in attendance. This was the first year for the department to provide a mid-year graduation celebration.

Interdisciplinary Career Fair

Speech-Language Pathology students were included in the Career Fair hosted by the UNM Physical Therapy Club and the UNM Student Occupational Therapy Association held from 9:00 a.m. to 2:00 p.m. on January 21, 1995 at the SUB ballroom on the UNM campus. Representatives from 30 companies from New Mexico and across the nation participated. The event was free and included food, door prizes, a raffle and a mini-seminar.

NSSLHA Fourth Annual Southwest Conference

This was the fourth year for the Southwest Conference. It was held at the old Albuquerque Convention Center on February 24 and 25 and was designed for attendance by both students and professionals, though it was put on by students. There were 14 speakers including both local talent and professionals from other

states who had made outstanding contributions to our field. Three or four sessions were conducted concurrently and were organized to include public school, medical, audiology, scientific and professional interest areas. The conference had 15 exhibitors and recruiters for speech-language pathology/audiology positions. Two hundred fifty-four students, professionals, and speakers were in attendance. Students had the opportunity to meet and spend time with professionals, especially through participation on conference committees and at dinner Thursday evening. There was a special reception on Friday night that allowed alumni to meet old friends, and of course, to recognize those who had earned awards or made special contributions as well as to give out prizes from drawings. Continuing Education Units were offered for professionals. Pre-registration fees were $60 for professionals and $30 for students. After February 15, fees were $75 for professionals and $35 for students. Speakers included the following:

Mary Oelschlaeger, Assistant Professor, Department of Communicative Disorders, The University of New Mexico, Albuquerque, New Mexico.
Presentation: "Infectious Disease and Cognitive-Communication Disorders"

Marion P. Downs, Professor Emerita, Department of Otolaryngology
University of Colorado School of Medicine.
Presentation: "Universal Newborn Hearing Screening: Alive and Well and Cost Effective"
Presentation: "Prevention and Remediation of the Language Deficit From Recurrent Otitis media--A High Risk Concept"

Roger Ingham, Professor, Department of Speech & Hearing Sciences
University of California at Santa Barbara.
Presentation: "Developments in Research & Treatment of Stuttering"

Jack Damico, Doris B. Hawthorne Professor of Special Education and Communicative Disorders, University of Southwestern Louisiana, Lafayette, Louisiana
Presentation: "ADDing a label: Attention Deficit Disorder and the Social/Educational Implications"

Deborah Detorie, Visiting Assistant Professor and Acting Clinic Director,

Department of Communicative Disorders, The University of New Mexico, Albuquerque, New Mexico
Presentation: "Toward A Collaborative Model of Service Delivery"

Sheela Stuart, Assistant professor, New Mexico State University, Las Cruces, New Mexico.
Presentation: "Everybody Needs Low-Tech, Some People Need High-Tech"

Robert Waterman, Professor, Departments of Anatomy and Biology, The University of New Mexico
Presentation: "Problem-Based Learning in Multidisciplinary Education"

Karen Patterson, Associate Professor, Department of Speech Pathology & Audiology, Central Missouri State University, Warrensburg, Missouri.
Presentation: "Identification of Syndromes Associated with Communication Disorders"

Janis Costello Ingham, Professor, Department of Speech and Hearing Sciences, University of California-Santa Barbara.
Presentation: "Measurement & Treatment of Childhood Stuttering: New Data"

Audrey L. Holland, Professor & Head, Department of Speech and Hearing Sciences, University of Arizona, Tucson, Arizona.
Presentation: "Innovative Approaches to the Treatment of Naming Disorders in Aphasia"

Debra L. McBride, Manufacturer's Representative, ZYGO Industries, Inc.
Presentation: "The KEYS to SUCCESS for Use of Communication Devices"

Paula Rotundi, Audiologist, Veterans Administration Medical Center-Albuquerque, Albuquerque, New Mexico.
Presentation: "Aural Rehabilitation at the Albuquerque V.A.M.C.

Orlando Taylor, Interim Vice President for Academic Affairs, Howard University, Washington, D.C.

Featured Presentation: "Cultural Diversity and Communication Disorders: Theoretical and Practical Considerations"

Bruce Porch Honor Reception

A reception and "roast" was held for Dr. Bruce Porch at the Double Tree Hotel on Friday evening of the Conference. About 120 people attended. Annie Rowland managed the ceremony. Speakers on Dr. Porch's behalf included Dr. Linda Riensche, Dr. Audrey Holland, Dr. Jack Damico, Debra Harbaugh (alumna), and Meg Porch (Dr. Porch's wife). A gift was presented from the faculty and staff. A buffet and Mariachi band contributed to the occasion. Meg Porch announced a new scholarship that would be given to the department in Bruce's name.

Graduation Luncheon

The Graduation Luncheon was held at the Albuquerque Country Club in May with about 140 people in attendance. The event was chaired by Kate Blaker. Randy Davis served as the speaker. All graduates were presented with certificates recognizing their completion of graduation requirements. Students were also recognized for special honors earned in their academic careers.

Other activities

NSSLHA Monthly Meetings

NSSLHA meetings were held at the Family Practice Center

Month	Topic and Speaker	Attendance
September	Deborah Detorie, Ph.D., CCC-SLP	65
October	Gwen Charley, M.S., CCC-SLP	43
November	Christina Brown, M.A., CCC-SLP	26
February	(conference final planning)	26
March	Laurie Ross-Brennan, M.S., CCC-SLP	25
April	Election	11
May	End of Semester Potluck	25

Grand Rounds

The Grand Rounds meetings were held at the Family Practice Center.

Month	Topic and Speakers	Attendance
September	George Papcun Los Alamos National Laboratory	23

	Computing and Communications Division	
	"Speech as Gestures: Recent Technical Advances	
October	Sandra Damico	24
	The University of New Mexico	
	Department of Communicative Disorders	
	"Integrating Technology into the School Curriculum"	
November	Judith Carlson	27
	New Mexico Preschool for the Deaf	
	"Pediatric Aural Rehabilitation"	
March	Jon Aase	15
	The University of New Mexico	
	University Hospital Pediatrics	
	"Genetic Dyspmorphology and	
	Related Audiological Deficits"	
April	Mary Oelschlaeger	36
	The University of New Mexico	
	Department of Communicative Disorders	
	"Psychosocial Issues and (Aphasia) Stroke"	
	Other Continuing Education Activities	
November 19	Ted Peters	16
	Professor Emeritus	
	University of Wisconsin-Eau Claire	
	"What You Can Expect in Recovery from Stuttering"	
	One Day Workshop co-sponsored with	
	the National Stuttering Project	

Facility Modifications

The main building was modified to meet requirements for the handicapped. Changes included modifications of one bathroom and the replacement of a drinking fountain. The door to the department offices was changed to two half doors to close off business offices and a mailbox was added to the bottom half. A privacy light was added to indicate when the Department Chair should not be interrupted. A lock was added to the door between the reception area of the main building and the main hallway for security purposes. The therapy room used for small groups was modified to

accommodate the Assistive Listening Devices Center. The classroom became too small for classes and was converted to a therapy room.

An open area in Building N was enclosed to allow for use as offices for 3 supervisors and student mailboxes were built into the wall. A display rack was added to the reception area for recruiting purposes and public information. A latch was added to the door to the student work area in Building M for children's safety. The wooden ramp was replaced by a concrete ramp to meet fire code and handicapped requirements. The roofs were repaired.

A security system was added to the house at 915 Vassar, NE and the living room was converted into a conference room. The items stored in the garage were moved to a different storage area and the garage itself was demolished with the area scheduled to be replaced with a parking area and landscaping. Phone lines were added to the reception area in the main building, new offices, the reception area in Building N, and to the xerox room. Electrical outlets were added to the house and Room 130 of the main building. Bright lights were added around the outside of the buildings for safety. An area adjacent to the buildings was zoned for (school) bus loading and a 20 minute parking meter was added by the buildings to allow students access to their advisor.

Public Information

a. The Fall 1994 Communicative Disorders Newsletter was expanded to 12 pages and mailed to alumni.

b. An article appeared in Campus News on Free Hearing Clinic in November 4, 1994 issue.

c. Janet Patterson was noted as Associate Director of the Linguistic Institute in an article of the American Speech-Language-Hearing Association Journal in November, 1994.

d. Teri Hamill was interviewed by KRQE-TV Channel 13 for "Eye On New Mexico" segment on how noise affects hearing. Aired 11/11/94.

e. Deirdre Curle, Graduate Student, and a client appeared on HBO, Channel 21 in a demonstration of therapy with an augmentative communication device.

f. Patrick Finn appeared in a full page article in UNM's Quantum magazine in Fall, 1994.

g. Janet Patterson's picture and biographical profile were included in the information booklets for the Linguistic Institute released in December.

h. Teri Hamill was interviewed in an article in Advance for Speech-Language Pathologists and Audiologists, appearing November 21, 1994.

i. Hearing screenings provided under the supervision of Joe Lobato were noted in the University Hospital Weekly Information Bulletin in December, 1994.

j. Karen (Kurowski) Stewart was recognized as the newly elected Secretary of the New Mexico Speech, Language and Hearing Association in the Albuquerque Journal.

k. Fair participations included Welcome Back Days in August and Better Speech and Hearing Month at Coronado Center,

l. The Southwest Conference was publicized in the Albuquerque Journal.

2. Significant plans and recommendations for the near future.

a. Complete American Speech-Language-Hearing Association Educational Standards Board Site Visit.

b. Split advisement among 4 faculty members.

c. Begin educational program with Albuquerque Public Schools.

d. Expand the augmentative communication program to include a full time faculty member and a full time staff member.

e. Convert the office from a MacIntosh system to an IBM compatible system.

f. Move the comprehensive examinations to the proctoring system provided by University College.

g. Review the curriculum for the audiology program.

h. Begin a clinical program in Mexico.

i. Develop an undergraduate internship.

3. Appointments to staff.

a. Mary Oelschlaeger, Assistant Professor

b. Sandra Damico, Research Assistant Professor and Director, Augmentative Communication Technologies Center

c. Deborah Detorie, Assistant Professor and Acting Director, UNM Speech and Hearing Center

d. Elizabeth (Betty) Braught, Clinical Supervisor

e. Janet Patterson, Assistant Professor

f. Annette (Annie) Rowland, Clinical Supervisor

g. Shirley Padilla, Receptionist

h. Derron Sanchez, Department Administrator

4. Separations from staff.

a. Janet Patterson, Lecturer

b. Virginia (Ginny) Bejarano, Clinical Supervisor

c. Ann Marquis, Clinical Supervisor

d. Florence Gonzales, Department Administrator

e. Kerry Coddington, Audiology Clinic Secretary

f. Karen Stewart, Audiology Clinic Coordinator

g. Barbara Rodriguez, Speech-Language Pathology Clinic Coordinator

5. Publications, either of division or of individuals on staff, not elsewhere mentioned.

a. Damico, S.K. "Empowering nonvocal populations: An emerging concept". National Student Speech Language Hearing Association Journal, 21, 31-44, 1994.

b. Damico, S.K., Augustine, L.E., and Damico, J.S. Multicultural populations and language disorders. In M. Smith and J.S. Damico (Eds.) Childhood language disorders. New York: Thieme Medical Publishers, Inc.

c. Damico, J.S. and Damico, S.K. Socio-communicative and cultural perspectives in language disorders. In M. Smith and J.S. Damico (Eds.) Childhood language disorders. New York: Thieme Medical Publishers, Inc.

d. Damico, S.K. Parental perspectives in attention deficit disorders and the role of the speech-language pathologist. Seminars in Speech and Language.

e. Damico, S.K., and Damico, J.S. Re-establishing communication through optimal augmentation: An ethnographic study. To be submitted to Augmentative and Alternative Communication.

f. Damico, J.S., Damico, S.K., and Waldron, C.A. Oral language sampling in the schools: Addressing concerns and overcoming problems. To be submitted to Language Speech Hearing Services in Schools.

g. Damico, S.K., and Damico, J.S., "The Impact of Diversity on Academic Skills: Considerations for the Speech-Language Pathologist." National Student Speech Language Hearing Association Journal, 22, 1995.

h. Oelschlaeger, M., Straight Talk about Stroke, American Heart Association.

i. Oelschlaeger, M., Stroke Information Booklet, American Heart Association.

j. Porch, B., "Treating Stuttering: Are We Treating the Right Part of the Circuit?" National Student Speech, Language Hearing Association Journal, 22, 1995.

6. Outside professional activities of staff members.

Presentations

a. Damico, S., "What is Augmentative/alternative Communication and who will benefit?" Presented to members of Sertoma Club, Albuquerque, March, 1995.

b. Damico, S., "What is Augmentative/alternative Communication and who will benefit?" Presented to members of Sertoma Club, Hobbs, NM, 1995.

c. Detorie, D., "Service Delivery Models" presented to the "inclusing' with the best of them" Seminar, Albuquerque, February, 1995.

d. Detorie, D., "Supervising Supervisors" presented to the Albuquerque Public Schools Supervisors, Albuquerque, March.

e. Detorie, D., "Introduction to ASHA Clinical Practicum Standards," presented to Albuquerque Speech-Language and Audiology Field Supervisors, August, 1994.

f. Finn, P. "Unassisted recovery from stuttering in preschool children: A perceptual study" presented to the American Speech-Language-Hearing Association Convention. New Orleans. November, 1994.

g. Finn, P., "Unassisted recovery from stuttering: A research program." invited presentation to the Miniconference on Stuttering. University of Arizona, Tucson, March, 1995.

h. Oelschlaeger, M. "Language and Cognitive Changes in Herpes Encephalitis" presented to the American Speech-Language-Hearing Association Convention, November, 1994.

i. Oelschlaeger, M., "Psychosocial Issues in Aphasia," Grand Rounds, Department of Communicative Disorders, The University of New Mexico, Albuquerque, April, 1995.

j. Oelschlaeger, M., "Stroke Recovery," presented to Albuquerque Stroke Club, April, 1995.

k. Oelschlaeger, M., "Psychosocial Issues and Aphasia" presented to Albuquerque Stroke Club, Albuquerque, May, 1995.

l. Oelschlaeger, M., "Psychosocial Issues and Aphasia", presented to Albuquerque Stroke Club, Albuquerque, June, 1995.

m. Patterson, J.L., and Rodriguez, B., "Early simultaneous bilingualism: Normal development and clinical implication." Miniseminar presented to the American Speech-Language-Hearing Association Convention, New Orleans, 1994.

Professional Memberships and Leaderships

a. All faculty and professional staff held membership in the American Speech-Language-Hearing Association.

b. Detorie, D., Damico, S., and Riensche, L., members, Albuquerque Sertoma Club.

c. Blaker, K., member, Albuquerque Speech and Audiology Professionals (ASAP).

d. Brown, C., Continuing Education Coordinator, New Mexico Augmentative and Alternative Communication (NEWMAAC) Association.

e. Damico, S., Editorial Advisor, National Student Speech, Language, Hearing Association Journal.

f. Damico, S., Occasional Reviewer, Language, Speech, and Hearing Services in Schools.

g. Detorie, D., State of New Mexico, Department of Special Education, Individuals with Disabilities Education Act (IDEA) Panel, 1995.

h. Finn, P., Reviewer for the Journal of Speech and Hearing Research.

i. Finn, P., featured article on research program in Quantum, Fall, 1994.

j. Finn, P., featured article on research program in Stuttering Foundation of America Newsletter,

k. Finn, P., "Unassisted recovery from stuttering" radio spot on stuttering,

l. Hamill, T., Reviewer for the Rocky Mountain Journal of Communication Disorders.

m. Hamill, T.A., Member, New Mexico Speech, Language, and Hearing Association (NMSHA) Legislative Committee.

n. Hamill, T.A., Chair, Health Care Reform Adhoc Committee, New Mexico Speech, Language, and Hearing Association.

o. Hamill, T.A., Member, Licensure Reform Committee, New Mexico Speech, Language, and Hearing Association.

p. Hamill, T.A., "Effects of Noise on Hearing" Interview by Channel 13, November, 1994.

q. Patterson, J.L., Session Chair, "Promoting Friendships among Preschoolers with and without Special Needs" American Speech-Language-Hearing Association Annual Convention, New Orleans. November, 1994.

r. Patterson, J.L. Reviewer, Teaching Exceptional Children.

s. Patterson, J.L., Editorial Consultant, National Student Speech-Language-Hearing Association Journal.

t. Riensche, L., member, the New Mexico Speech, Language and Hearing Association.

u. Riensche, L., member, Advisory Board for Easter Seals, Inc.

v. Riensche, L., Site Visitor for the Educational Standards Board of the American Speech-Language-Hearing Association.

w. Riensche, L., Editorial Consultant for the National Student Speech-Language-Hearing Association Journal.

x. Riensche, L., Member, Project Access, State of New Mexico, Department of Special Education Committee.

y. Stewart, K., Vice President of Professional Affairs for the New Mexico Speech, Language and Hearing Association through October 1994.

z. Stewart, K., Secretary for the New Mexico Speech-Language-Hearing Association, October 1994-September 1995.

Continuing Education

a. Blaker, UNM Seminar: Traumatic Brain Injury, Albuquerque, Summer, 1994.

b. Blaker, Southwest Conference on Communicative Disorders, March, 1995.

c. Blaker, UNM Communicative Disorders Grand Rounds Series, Albuquerque, 1994-95.

d. Blaker, American Speech-Language-Hearing Association Convention, New Orleans, November, 1994.

e. Braught, E., UNM Communicative Disorders Grand Rounds, 1994-95.

f. Damico, S., Southwest Conference on Communicative Disorders, March, 1995.

g. Damico, S., UNM Grand Rounds in Communicative Disorders, Albuquerque, 1994-95.

h. Detorie, D., American Speech-Language-Hearing Association Convention, New Orleans, 1994.

i. Detorie, D., Southwest Conference on Communicative Disorders, March, 1995.

j. Detorie, D., UNM Grand Rounds in Communicative Disorders, Albuquerque, 1994-95.

k. Detorie, D., "Confidentiality of Medical Records in New Mexico," presented by Medical Educational Services, inc. August, 1994.

l. Finn, P., Annual Convention, American Speech-Language-Hearing Association, New Orleans, Louisiana, November, 1994.

m. Finn, P., Southwest Conference on Communicative Disorders, March, 1995.

n. Finn, P., Miniseminar on Stuttering, Tucson, March, 1995.

o. Hamill, T., New Mexico Speech, Language, Hearing Association Annual Convention, October, 1994.

p. Hamill, T., American Academy of Audiology, Annual Convention, Dallas, Texas, April, 1995.

q. Hamill, T., Southwest Conference on Communicative Disorders, Albuquerque, NM, March, 1995.

r. Hamill, T., UNM Communicative Disorders Grand Rounds Series, Albuquerque, NM, 1994-95.

s. Karasik-Rush, S., "New Dimensions in Diagnostic & Prescriptive Fitting," Resound Corp., Albuquerque, 1994.

t. Karasik-Rush, S., American Academy of Audiology Convention. Dallas, TX, April, 1995.

u. Lobato, J., Southwest Conference on Communicative disorders, March, 1995.

v. Oelschlaeger, M., American Speech-Language-Hearing Association Convention, New Orleans, November, 1994.

w. Oelschlaeger, M., Southwest Conference on Communicative Disorders, Albuquerque, March, 1995.

x. Oelschlaeger, M., Linguistic Institute, Albuquerque, Summer, 1995.

y. Oelschlaeger, M., received Board Certification: Academy of Neurogenic Communication Disorders and Sciences.

z. Oelschlaeger, M., attended the New Mexico Speech, Language, and Hearing Association Convention, Albuquerque, NM, October, 1994.

aa. Patterson, J., American Speech-Language-Hearing Association Convention, New Orleans, November, 1994.

bb. Patterson, J., UNM Communicative Disorders Grand Rounds Series, Albuquerque, 1994-95.

cc. Patterson, J., Southwest Conference on Communicative Disorders, March, 1995.

dd. Patterson, J., Linguistic Institute, Albuquerque, Summer, 1995.

ee. Riensche, L. L., American Speech-Language-Hearing Association Convention, New Orleans, November, 1994.

ff. Riensche, L.L., Council of Graduate Programs in Communication Sciences and Disorders, April, 1995.

gg. Riensche, L.L., Grand Rounds Series, UNM Department of Communicative Disorders, 1994-95.

hh. Riensche, L.L., Southwest Conference on Communicative Disorders, Albuquerque, March, 1995.

ii. Rowland, A., National Stuttering Project: What to Expect from Therapy (Ted Peters), Albuquerque, November, 1994.

jj. Stewart, K., New Mexico Speech, Language, and Hearing Association Annual Convention, Albuquerque, October, 1994.

kk. Stewart, K., New Mexico Speech, Language, and Hearing Association Annual Convention, Albuquerque, October, 1994.

ll. Stewart, K., Southwest Conference on Communicative Disorders, Albuquerque, April, 1995.

mm. Stewart, K., American Academy of Audiology Annual Convention, Dallas, April, 1995.

nn. Stewart, K., Southwest Conference on Communicative Disorders, Albuquerque, April, 1995.

Internal Fundings

a. Blaker, K., and Rowland, University of New Mexico Graduate Student Computer Grant, 1994. $7,500.

b. Mary Oelschlaeger, UNM Research Allocations Grant Committee Large Grant. $6,000.

7. Outside sponsored research and training.

a. UNM Speech and Hearing Center ($213,000).

b. Maternal and Child Health Interdisciplinary Leadership Training Program, .50 FTE of Pat Osbourn's salary for service as a clinical supervisor to our program from July 1, 1994 through June 30, 1995. Funds were directed through the University Affiliated Program. ($23,823).

c. Butt, D. S., Augmentative Communication Outreach Grant, U.S. Department of Special Education, ($98,000).

d. Audiology Clinic ($66,000)

e. Hamill, T.A., "TPL, Inc. Contract." ($1,240).

f. Hearing Aid Dispensing ($42,144).

g. New Mexico Elks Cerebral Palsy Fellowship Fund and ACT Center ($5,879).

h. Bybee, J., Leonard, L., Menn, L., and Patterson "Specific Language Impairment and Williams' Syndrome", National Science Foundation grant ($30,277).

8. Honors.

a. Marquis, M. A., Teacher of the Year Award. Department of Communicative Disorders

b. Hoeft, Michael, Honor Membership, The National Student Speech, Language and Hearing Association.

c. Hoeft, Michael, Honor Membership, The UNM Chapter of the National Student Speech, Language and Hearing Association.

d. Olivas, Gwen, Honor Membership, The UNM Chapter of the National Student Speech, Language and Hearing Association.

e. Undergraduate honors reported to the department included the following:

- Kelly McMullen and Demian Perry were named to Phi Kappa Phi.
- Demian Perry and Renee Ratcliff were named to Phi Beta Kappa
- Demian Perry graduate Magna cum laude.
- Fereshteh Kunkel was named to Who's Who Among Students in American Colleges and Universities.
- Fereshteh Kunkel, Demian Perry, and Kelly McMullen were named to Golden Key Honor Society.
- Renee Ratcliff was included on the Dean's Honor List.

Appendices

Program Inquiries

	1993	1994
Undergraduate	98	68
SLP Non-Degree	214	219
SLP Graduate	397	475
Audiology Non-Degree	25	29
Audiology Graduate	102	105
	836	896

Enrollments

	Fall 94	Sp 95
College of Arts and Sciences Count	87	99
Non-Degree	44	44
Graduate Programs College Count	56	63
University College Count	15	33
Double Major with Creative Writing	2	5
Total	204	244

Bachelor of Arts Program

	Su 94	Fa 94	Sp 95	Total
Number of Bachelor of Arts Degrees Awarded	--	11	18	29

Master of Science Program

	Su 94	Fa 94	Sp 95	Total
Number of Program Graduates	5	6	10	21
Number of Program Applicants		130	31	161
Number of Students Accepted		36	12	48
Number of Students Attended		23	12	35

Percentile Scores on CCC (National) Examination* by Semester of Exam Taken.

Summer 94 = 770, 770 Mean = 770

Fall 94 = 660, 690, 690, 750 Mean = 698

Spring 95 = 640, 710, 720, 730 Mean = 700

Mean for 1994-95 = 713

*The procedures for reporting scores on the national examination changed for Fall, 1993 with the result being that percentiles were no longer reported. However, according to p. 17 of the May 1994 copy of the American Speech -Language-Hearing Association journal, "NESPA exams are designed and administered by the Educational Testing Service. The passing score is 600. Between 1988 and 1991, 26% of speech-language pathology examinees and 22% of audiology examinees failed. In that same time period, students scored a mean of 625 in speech-language pathology and 652 in audiology." All UNM scores this year were obtained by speech-language pathology examinees.

Master's Theses

Sandra P. Mayne, "Development of a multidimensional scoring system for quantifying levels of patient independence: A professional survey" (Directed by Dr. Bruce Porch).

0630

Enrollment Statistics
Summer 1994

Course #	Section	Instructor	Enrolled	Credit	Hours Total
500	001	Finn, Patrick	5	3	15
500	002	Riensche, Linda	7	3	21
500	004	Hamill, Teri	8	3	24
506	001	Finn, Patrick	5	3	15
522	001	Hamill, Teri	3	3	9
539	400	Damico	16	3	48
551	002	Finn, Patrick	1	3	3
558	001	Rodriguez	4	9	36
599	002	Porch	1	3	3
599	004	Finn, Patrick	1	3	3
				Total	180

Enrollment Statistics
Fall 1994

Course	Section	Instructor	Enrolled	Credit	Hours
302	400	Rowland, Annette	66	3	198
303	001	Houlihan	21	3	63
321	001	Kurowski, Karen	94	3	282
350	001	Finn, Patrick	95	3	285
428	001	Patterson, Janet	53	3	159
431	001	Patterson, Janet	39	3	117
450	001	Oelschlaeger, Mary	41	3	123
451	001	Bejarano, Virginia	4		12
458	001	Marquis, Marjorie	12	4	48
458	002	Kurowski, Karen	4	4	16
500	001	Finn, Patrick	9	3	27
500	002	Riensche, Linda	7	3	21
500	003	Hamill, Teri	7	3	21
500	004	Hamill, Teri	3	3	9
500	005	Gonzales, Victoria	10	3	30
506	001	Finn, Patrick	20	3	60
507	001	Oelschlaeger, Mary	3	3	9
515	001	Rappaport, Bruce	3	3	9
520	001	Hamill, Teri	4	3	12
536	001	Rigor, Sandra	7	1	7
537	001	Porch, Bruce	13	3	39
539	001	Lang, Karen	13	3	39
551	001	Bejarano, Virginia	10	3	30
551	004	Detorie, Deborah	2	3	6
551	005	Detorie, Deborah	1	3	3
551	009	Finn, Patrick	2	3	6
558	001	Detorie, Deborah	5	9	45
560	001	Crum, Michael	5	3	15
561	001	Hamill, Teri	3	3	9
599	006	Porch, Bruce	1	3	3
599	002	Finn, Patrick	1	3	3
					1706

Enrollment Statistics
Spring 1995

Course	Section	Instructor	Enrolled	Credit	Hours
302	400	Rowland, Annette	57	3	171
303	001	Oelschlaeger, M.	73	3	219
407	001	Lang, K.	53	3	159
425	002	Carlson, J.	80	3	240
430	001	Patterson, J.	79	3	237
432	001	Osbourn, P.	15	3	45
432	002	Patterson, J.	16	3	48
451	001	Hamill, T.	1	3	3
458	001	Brown, C.	23	4	92
500	001	Riensche, L.	9	3	27
500	002	Patterson, J.	8	3	24
500	003	Finn, P.	8	3	24
500	005	Hamill, T.	6	3	18
500	004	Oelschlaeger, M.	7	3	21
525	001	Finn, P.	17	3	51
531	001	Damico, S.	31	3	93
536	001	Damico, S.	6	1	6
538	001	Finn, P.	30	3	90
551	001	Oelschlaeger, M.	1	3	3
551	003	Patterson, J.	1	3	3
551	004	Riensche, L.,	1	3	3
551	006	Hamill, T.	7	3	21
551	007	Porch, B.	6	3	18
558	001	Detorie, D.	10	9	90
563	002	Hamill, T.	6	3	18
567	001	Lionbarger, J.	9	3	27
599	001	Finn, P.	1	3	3
			561		1754

Clinical Hours

SUMMER 1994

Child				Adult						
Eval		Treatment		Eval		Treatment			Audiology	
Speech	Lang	Speech	Lang	Speech	Lang	Speech	Lang	Other	Dx/Scrng.	Re/Hab
99:40	84:32	214:05	156:30	110:11	97:34	298:05	801:25	19:15	98:02	105:03

FALL 1994

Child				Adult						
Eval		Treatment		Eval		Treatment			Audiology	
Speech	Lang	Speech	Lang	Speech	Lang	Speech	Lang	Other	Dx/Scrng.	Re/Hab
249:12	276:57	381:36	853:37	176:07	276:02	403:06	820:37	335:28	180:48	174:03

SPRING 1995

Child				Adult						
Eval		Treatment		Eval		Treatment			Audiology	
Speech	Lang	Speech	Lang	Speech	Lang	Speech	Lang	Other	Dx/Scrng.	Re/Hab
177:46	263:35	571:47	1081:53	156:53	207:32	376:57	749:37	178:23	94:14	123:55

ANNUAL TOTAL FOR SPEECH-LANGUAGE PATHOLOGY 10,191 hours; 33 minutes

Audiology Clinic

Number of appointments based on an average of one hour each:

Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
153	203	157	175	164	154	182	160	174	179	226	111	=2,038

Number of baby screens:

Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
20	24	17	32	26	11	43	21	14	28	39	6	=281

Number of Patients seen for Screens

Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
N/A	N/A	N/A	35	114	28	29	35	53	163	4	24	=485

Number of Adolescent Mental Health Screens:

Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
10	15	13	9	18	10	9	16	12	14	24	0	=149

Number of Aural Rehab Sessions:

Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
N/A	N/A	N/A	32	34	8	9	32	30	28	22	14	=209

Number of Hearing Aids Sold:

Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
0	8	6	5	5	7	7	7	7	8	10	8	= 78

THE ANNUAL REPORT OF THE DEPARTMENT OF EARTH AND PLANETARY SCIENCES

July 1, 1994 to June 30, 1995

0636

Department of Earth and Planetary Sciences

Annual Report

July 1, 1994 - June 30, 1995

Barry S. Kues, Chair

TABLE OF CONTENTS

I. GENERAL DEPARTMENT INFORMATION i
Faculty and Staff 1
Departmental Committees 4
Appointments and Separations 6

II. ACTIVITIES, ACHIEVEMENTS AND PLANS 7
Introduction 8
Faculty and Staff Accomplishments 8
General Departmental Activities 15
Alumni Programs and Support 19
Plans and Goals 20

III. ACTIVITIES OF THE FACULTY AND RESEARCH SCIENTISTS (1994) 22
Teaching Accomplishments 23
Publications 37
Research Grants and Contracts 57
Research Projects in Progress 64
Activities in Professional Societies 84
Other Professional Activities 93
Non-teaching University Service 101
Scholastic Honors 107
Sabbaticals and Travel 108
Public Service 112

IV. GEOLOGY MUSEUM AND COLLECTIONS 115

V. GRADUATE PROGRAMS AND SCHOLARSHIPS 119
Summary of Graduate Programs 120
Student Scholarships and Other Awards 127

****

I. GENERAL DEPARTMENTAL INFORMATION

****

FACULTY AND STAFF

PROFESSORS:

Rodney C. Ewing, Ph.D., Stanford University, 1974. (Regents Professor)
John W. Geissman, Ph.D., University of Michigan, 1980.
Karl E. Karlstrom, Ph.D., Wyoming, 1981.
Cornelis ("Kase") Klein, Ph.D., Harvard University, 1965.
Albert M. Kudo, Ph.D., University of California, San Diego, 1967.
Barry S. Kues, Ph.D., Indiana University, 1974.
Leslie D. McFadden, Ph.D., University of Arizona, 1982.
James J. Papike, Ph.D., University of Minnesota, 1964. (Regents Professor)
Lee A. Woodward, Ph.D., University of Washington, 1962.
Crayton J. Yapp, Ph.D., California Institute of Technology, 1980.

ASSOCIATE PROFESSORS:

Michael E. Campana, Ph.D., University of Arizona, 1975.
Laura J. Crossey, Ph.D., University of Wyoming, 1985.
Stephen P. Huestis, Ph.D., University of California, San Diego, 1976.
Gary Smith, Ph.D., Oregon State, 1986.

ASSISTANT PROFESSORS:

Yemane Asmerom, Ph.D., University of Arizona, 1988.
Maya Elrick, Ph.D., Virginia Tech., 1990.
Frank Pazzaglia, Ph.D. Pennsylvania State, 1993.

RESEARCH PROFESSORS:

Roger Y. Anderson, Ph.D., Stanford University, 1960. (Senior Research Professor)
Wolfgang E. Elston, Ph.D., Columbia University, 1953. (Senior Research Professor)

PROFESSOR EMERITI:

J. Paul Fitzsimmons, Ph.D., University of Washington, 1949.
Sherman A. Wengerd, Ph.D., Harvard University, 1947.

RESEARCH STAFF:

Bruce Allen, Post-Doctoral Scientist, Ph.D., University of New Mexico, 1993.
Adrian J. Brearley, Senior Research Associate (Institute of Meteoritics), Ph.D., University of Manchester, Great Britain, 1984.
James Connolly, Research Associate (Institute of Meteoritics), M.S., University of New Mexico, 1981.
John Husler, Senior Staff Chemist, M.S., University of New Mexico, 1968.
Rhian H. Jones, Senior Research Associate (Institute of Meteoritics), Ph.D., University of Manchester, Great Britain, 1986.

Graham D. Layne, Senior Research Associate (Institute of Meteoritics), Ph.D., University of Toronto, 1988.
Rick Livaccari, Post-Doctoral Scientist, Ph.D., University of New Mexico, 1994.
Mark L. Miller, Senior Research Associate, Ph.D., University of New Mexico, 1992.
Roberto S. Molina-Garza, Senior Research Associate, Ph.D., University of Michigan, 1991.
Horton Newsom, Senior Research Associate, (Inst. of Meteoritics), Ph.D., University of Arizona, 1981.
Matt Nyman, Post-Doctoral Scientist, Ph.D., Virginia Polytechnic Institute, 1992.
Harald Poths, Senior Research Associate, Ph.D., Johannes Gutenberg University, 1981.
Franciscus J.M. Rietmeijer, Senior Research Associate, Ph.D., Rijksuniversiteit-Utrecht, Netherlands, 1979.
Charles K. Shearer, Jr., Senior Research Associate (Institute of Meteoritics), Ph.D., University of Massachusetts, 1983.
Michael N. Spilde, Research Associate (Institute of Meteoritics), M.S., South Dakota School of Mines and Technology, 1987.
Lu-Min Wang, Senior Research Associate, Ph.D., University of Wisconsin-Madison, 1988.

ADJUNCT PROFESSORS:

Gary Acton, Ph.D., Northwestern University, 1990.
Warren S. Baldridge, Ph.D., Caltech University, 1978.
M. Susan Barger, Ph.D., Pennsylvania State University, 1982.
William F. Chambers, Ph.D., Duke University, 1967.
Alan Cheetham, Ph.D., Columbia University, 1959.
Michael Fehler, Ph.D., Massachusetts Institute of Technology.
Ernest S. Gladney, Ph.D., University of Maryland, 1974.
Robert J. Glass, Ph.D., Cornell University, 1988.
Fraser E. Goff, Ph.D. University of California, Santa Cruz, 1977.
Charles D. Harrington, Ph.D., Indiana University, 1970.
Grant H. Heiken, Ph.D., University of California, Santa Barbara, 1972.
A. William Laughlin, Ph.D., University of Arizona, 1969.
Spencer G. Lucas, Ph.D., Yale University, 1983.
Matthew Nyman, Ph.D., Virginia Polytechnic Institute and State University, 1992.
John Shomaker, M.S., University of New Mexico, 1965.
Daniel B. Stephens, Ph.D., University of Arizona, 1979.
Erik Webb, Ph.D., University of Wisconsin, Madison.
Stephen G. Wells, Ph.D., University of Cincinnati, 1976.
Thomas Williamson, Ph.D., University of New Mexico, 1993.
Kenneth H. Wohletz, Ph.D., Arizona State University, 1980.

STAFF:

George Carnako, Building Systems Mechanic
Mabel T. Chavez, Editorial Assistant II
Sara Coulie, Staff Assistant, Institute of Meteoritics
Grant Fowler, SIMS Technician, Institute of Meteoritics
Yongxiang Guo, STEM Lab Technician
Gilbert E. Griego, Harding Mine Maintenance Mechanic
Patricia Halcli, Editorial Assistant II
Sally E. Hayes, Accounting Technician
Cindy Jaramillo, Staff Assistant
Robert Macy, Electronics Technician
Kenneth Nichols, Photographer, Institute of Meteoritics

Alice Quattrocchi, Department Administrator
Florine Rietmeijer, Lab Aide
Mary Sisley-Franson, Administrative Assistant, Institute of Meteoritics
Debra Spilde, Administrative Assistant, Institute of Meteoritics

VISITING SCIENTISTS (in residence, 1994-1995):

Dr. Weiliang Gong, Institute of Geochemistry, Chinese Academy of Sciences, visiting scientist working with R. Ewing.
Dr. Anne Charland, University of Montreal, working with Dr. Graham Layne (IOM), Sept.-Dec. 1994.
Dr. Subir Bannerjee, Director, Institute of Rock Magnetism, University of Minnesota, Jan.-Feb. 1995.
Dr. Janusz Janeczek, Silesian University, Sasnowiec, Poland, working with Rod Ewing, May-July, 1995.

DEPARTMENTAL STANDING COMMITTEES, 1994-95

GRADUATE COMMITTEE

J. Geissman
G. Smith
K. Karlstrom
J. Papike
F. Pazzaglia

UNDERGRADUATE COMMITTEE

L.D. McFadden
M. Campana
L. Crossey
M. Elrick
R. Ewing
S. Huestis
C. Klein
L. Woodward

SCHOLARSHIP COMMITTEE

B. Kudo
L. Crossey
M. Elrick
C. Yapp

FACILITIES COMMITTEE

J. Papike
Y. Asmerom
A. Brearley (SRA)
R. Ewing
J. Geissman
C. Yapp

COLLECTIONS COMMITTEE

G. Smith
R. Ewing
C. Klein

COMPUTER USE & PLANNING COMMITTEE

S. Huestis
J. Connolly (RA)
J. Geissman
M. Miller (SRA)
M. Grubensky (Grad. student)
F. Pazzaglia
M. Spilde (RA)

MICROSCOPE COMMITTEE

M. Elrick
B. Kudo

GRADUATE ADVISORS

J. Geissman
G. Smith

UNDERGRADUATE ADVISOR

L. Crossey

HONORS ADVISOR

R. Ewing

ALUMNI RELATIONS

L. Crossey
W. Elston

LECTURES AND COLLOQUIUM

B. Kudo
G. Smith

VEHICLES

M. Elrick
G. Carnako
A. Quattrocchi
(Student Representative)

LIBRARY LIAISON

S. Huestis

THIN SECTION LAB

K. Karlstrom

DEPARTMENTAL PUBLICATIONS

B. Kudo
A. Quattrocchi

APPOINTMENTS AND SEPARATIONS

APPOINTMENTS TO FACULTY

David Gutzler, Associate Professor (to arrive, Fall, 1995)
Jane Selverstone, Associate Professor (to arrive Fall, 1995)

SEPARATIONS FROM FACULTY

Sherman Wengerd, Emeritus Professor (Deceased, Jan. 28, 1995)
Crayton Yapp, June 30, 1995

APPOINTMENTS TO STAFF

Grant Fowler, SIMS Technician, IOM, July 1, 1994.
Rick Livaccari, Post-Doctoral Scientist, July 15, 1994.
Mary Sisley-Franson, Administrative Assistant, Institute of Meteoritics, September 26, 1994.
Mary Caress, Research Associate Staff, April 1, 1995.
Cathy Ratcliff, Technical Editor, March 1, 1995.

SEPARATIONS FROM STAFF

Harald Poths, January 31, 1995.
Debra Spilde, September 30, 1994.
Kenneth Nichols, September 30, 1994.

****

II. ACTIVITIES, ACHIEVEMENTS, AND PLANS

****

INTRODUCTION

This annual report summarizes the activities, accomplishments and plans of the Department of Earth and Planetary Sciences (E&PS), including the Institute of Meteoritics (IOM), during the 1994-95 academic year. Most details of faculty activities (Part III) are derived from biographical supplements for 1994, whereas the general discussions and information on other aspects of the Department include the period from July 1, 1994 to June 30, 1995. This inconsistency in reporting UNM data (calendar year for individuals; academic year for departments) is unfortunate, and UNM should choose one or the other period for its standardized reports. As this is the only document that comprehensively summarizes the Department's history during the past year, and is used as a source of information by many people both within and outside of the University, we have endeavored to make it as complete as possible.

During the 1994-95 academic year, the faculty of the Department of Earth and Planetary Sciences consisted of 17 regular tenured or tenure-track faculty, and two senior Research Professors. In addition, 13 Ph.D.-level research scientists (5 within IOM) filled a variety of non-faculty positions within the Department. Most are scientific staff with specific responsibilities relating to analytical laboratories and departmental research endeavors; three were post-doctoral scientists. The Departmental faculty is thus augmented by a significant number of other doctoral-level geoscientists, who in some cases participate in teaching and advising of graduate students, and add to the research capabilities and scholarly reputation of the Department.

Permanent scientific staff also include several technicians and Research Associates, and the office administrative, clerical, and support staff also contribute vitally to the functioning of the Department. Several other geoscientists affiliated with other institutions were in residence in the Department for periods ranging from weeks to the entire year, conducting research as visiting scientists and working with faculty and staff members. The names of all these departmental personnel are included in Part I of this report.

FACULTY AND STAFF ACCOMPLISHMENTS

Position Changes in Faculty

Two faculty vacancies existed in the Department in 1994-95. A vacancy in palaeoclimatology created by Dr. Roger Anderson's retirement in June 1993 was not filled; we have received authorization to search for a new palaeoclimatologist during the 1995-96 academic year. The vacancy in Precambrian and metamorphic geology created by Jeff Grambling's death in August 1993, will be filled by Dr. Selverstone (see below) beginning in Fall, 1995.

One new faculty member joined the Department in 1994-95, Dr. Frank Pazzaglia, who arrived in August 1994 following reception of his Ph.D. in 1993, and a year's appointment as a post-doctoral research scientist at Yale. Frank is a geomorphologist and neotectonicist, who will play a central role in the Department's Quaternary Studies Program. Besides teaching core geomorphology undergraduate and graduate courses, Frank is conducting research on both the east and west coast of the U.S., as well as in the Southwest, and is already primary advisor to several geomorphology graduate students.

After a search completed in June 1994, the Department will add two additional faculty members who will begin in Fall, 1995. Dr. Jane Selverstone (Ph.D., MIT, 1985), works in metamorphic petrology and tectonics, particularly the application of petrologic techniques to interpretation of tectonic processes, the determination of pressure-temperature-time deformation paths, and fluid-rock interactions. Arriving with Dr. Selverstone will be her husband, Dr. David Gutzler, a climatologist who will assume a tenured position as Associate Professor jointly in the Departments of Earth and Planetary Sciences and Geography. Dr. Gutzler's research on modern climates

will add a new dimension to UNM's expertise in studying present and past global climate changes, an effort involving the E&PS, Biology and Geography Departments. We look forward to their arrival in August, 1995.

Professor Crayton Yapp resigned in June 1995 to assume a faculty position in the Department of Geological Sciences, Southern Methodist University. As a member of the E&PS faculty since 1981, Crayton's stable isotope research, especially relating to ancient climate change, has become internationally known, and his presence will be missed in the Department.

Emeritus Professor Sherman Wengerd, a member of the E&PS faculty from 1947 to 1976, died unexpectedly on January 20, 1995, at age 79. Sherm taught many courses in the Department, including photogeology, historical geology, stratigraphic analysis, and especially, petroleum geology. His publications numbered more than 140, and his research was instrumental in the discovery of several oil and gas fields in the Four Corners region. Sherm edited the Bulletin of the AAPG for several years, was President in 1971-72, and was a recipient of its highest award, the Sidney Powers Gold Medal, in 1992.

In Spring 1995, after much discussion, the faculty approved departmental guidelines for appointing Research Assistant, Associate and Full Professors. Several Research Associates in the Department applied for these titles. Charles Shearer and Frans Rietmeijer were recommended for appointment as Research Professors and Adrian Brearley and Lu-Min Wang as Research Associate Professors. These appointments will began in the 1995-96 annual year.

Barry Kues was nominated and elected by the faculty to a second four-year term as Chair, and the Dean so appointed him in Spring 1995.

Other Position Changes

David Ward, half-time geochemistry lab technician, resigned in June, 1994, and this position remained vacant through the year. Yemane Asmerom will lead a search for a Ph.D. level scientist for the isotope lab in Fall, 1995. Harald Poths, research scientist in the stable isotope lab resigned in January, 1995 to accept a position at Los Alamos National Lab. With the departure of Professor Yapp, this position will remain vacant until a new stable isotope faculty member arrives in Fall, 1996. Jim Connolly, Research Associate in the Institute of Meteoritics, assumed on a part-time basis many of the duties of managing the Department's computing and network facilities in April.

Faculty Advancement

Karl Karlstrom and Les McFadden were promoted to full Professor effective Fall, 1994. The Senior faculty reviewed and recommended Associate Professor Gary Smith for tenure in Fall 1994, and tenure was awarded effective Fall, 1995. The Department conducted Maya Elrick's Code 5 review, Yemane Asmerom's Code 2 review, and Frank Pazzaglia's Code 1 review during the Spring, 1995 semester.

In May, 1995, following nomination by the Department, Kase Klein was honored by being selected a Presidential Teaching Fellow for a two-year period. This award is the highest recognition the University bestows for excellence in teaching, and was based on Professor Klein's undergraduate teaching and mentoring of graduate teaching assistants in E&PS, and on his contributions, nationally and internationally to the education of students in mineralogy.

Sabbatical Activities

None of the E&PS faculty were on sabbatical leave during the 1994-95 year.

Instructional Activities

1. Total enrollments

Student enrollments in Department of E&PS courses during the 1994-95 academic year, as indicated by total student credit hours (SCH), was 6763, a decline of 6.7% from the previous year. These figures include academic year courses plus field courses (EPS-319, -420, -451) taught during the summer. The Department's SCH figures (adjusted to include these field courses) for the past five years are given below. The decline mirrored a general decline in Arts and Sciences enrollment this year, thought to be mainly related to Albuquerque's booming economy and high employment rate.

Year	SCH	% change from previous year
1990-91	7682	-2.6
1991-92	7679	-
1992-93	8190	+6.7
1993-94	7249	-11.5
1994-95	6763	-6.7

The number of declared undergraduate E&PS majors (UNM records) stood at 89 in Spring 1995, an increase of 7 from Spring 1994. During Fall 1994, 34 M.S. and 29 Ph.D. students were pursuing degrees in the Department. In the Spring 1995 semester there were 34 M.S. and 26 Ph.D. students. Additional, more detailed information about the graduate students and their activities and accomplishments are presented in Part V of this report.

2. Degrees Awarded

Twelve students received Bachelors Degrees from Summer 1994 through Spring 1995:
B.A. - Johan Forsman, Madigan Chandler, Anthony Feig, Lavanda Wilson-Jones, Mary McCormick and Neal Mitchell.
B.S. - Chris Andronicos, Laurie E. Bowman, Sally A. Cole, Windy Jaeger, Michael Mann and Charles Morse.
Six students received M.S. degrees during this period: Rhawn Denniston, Grant Fowler, Armand R. Groffman, Eric Kirby, Todd LaMaskin, and Christina L. Ruzicka.
Three students received Ph.D. degrees: Eric McDonald, Richard Livaccari and David Ward.

3. Adjustments in Normal Course Offerings

Current faculty vacancies slightly decreased course availability this past year, but did not impact on courses required for our undergraduate majors. Absence of a metamorphic petrologist required K. Klein to teach all of EPS-302 (Optical Mineralogy), and post-doctoral scientist M. Nyman taught the metamorphic half of EPS-303. Los Alamos volcanologists Ken Wohletz and Fraser Goff instructed EPS-550 (Advanced Volcanology).

As in the past, Ph.D. students taught two lecture sections of EPS-101 during the year, in order to broaden their teaching experience in preparation for academic careers. A few other courses were taught by non-faculty part-time instructors, drawn mainly from research scientists in the Department, but as is our tradition, members of the regular faculty taught the large majority (84%) of our course offerings. R. Ewing and L. Crossey co-taught a course in the General Honors Program, and B. Kudo taught a section of Natural Sciences for University College, in Spring 1995.

4. Summer Course Offerings

Summer 1994 offerings included our seven week Beginning and Advanced field course sequence (EPS-319, -420), coinstructed by J. Geissman, K. Karlstrom and M. Elrick. In late July-early August Gary Smith and several participants from Los Alamos National Lab offered the third edition of Field Volcanology (EPS-451), based at UNM's Young Ranch facility near Cochiti, and attracting students from across the U.S. and some foreign countries. G. Heiken (LANL) also conducted EPS-300 (Volcanoes and Human Affairs) in the Department.

In summer 1995, the Beginning and Advanced Field Geology sequence was offered, together with one section of EPS-101 and its laboratory, EPS-105.

5. Undergraduate Curriculum Changes

After much discussion, the faculty approved major changes in its undergraduate B.A. and B.S. degree programs, with implementation of the new programs to begin in Fall 1995. Required courses of a core B.S. sequence were reduced to 22 units (previously 30), consisting of revised mineralogy, petrology, stratigraphy-sedimentology, structural geology, beginning field geology and geologic presentations courses. This reduction considerably expands upper division electives to 14 units for a total of 36 E&PS units in all. The electives are distributed into 10 "tracks" (major subdiscliplines of the geosciences), allowing students to assemble a strong body of more specialized courses in areas of interest to them beyond the core courses. In addition, B.A. students, who previously took an almost completely different series of courses than B.S. majors, now will also take the single core sequence. For the B.S. student, the outside science/math requirements still number 32 units, but a wider latitude in choosing courses to fill this distributed minor is now available. This new curriculum combines solid, fundamental knowledge in the essential core disciplines of geology with greater flexibility for students to also acquire significant training in specific areas of the geosciences, such as environmental geology, that will become increasingly important for employment or graduate school.

6. Non-traditional Undergraduate Education

During 1994-95 the Department again participated in the MEMS (Minorities in Engineering, Math, and Science) program, funded at UNM by the DOD and designed to increase the recruitment and retention of minority students in science and engineering fields. L. Crossey and Y. Asmerom served as departmental co-coordinators for this program. Components of the program include organized study groups, detailed tracking of students through their science/engineering courses, undergraduate scholarships, research support, tutoring opportunities, graduate teaching assistantships, and a summer bridge program. Graduate student Tony Garcia was the MEMS Teaching Assistant; he organized and led small study groups and provided individual tutoring of students as well. Y. Asmerom supervised the Department's portion of the 1995 summer bridge program, which provided incoming freshmen with declared interests in math, science and engineering the opportunity to participate in a variety of laboratory and field trip experiences in the earth sciences, and perhaps to kindle an interest in majoring in this subject. The MEMS program of 1994-95 is its second year and it will continue for at least a third year.

The Department also continued as an REU (Research Experiences for Undergraduates) site, based on a two-year, $98,000 NSF grant to K. Karlstrom and J. Geissman. This program provides support for undergraduate students to work on research projects with faculty advisors, in effect broadening the training of these students beyond the context of formal courses, and stimulating enhanced interest in the geosciences through the research experience. Many students present professional talks on their research and some will publish upon it as well. On February 3, 1995 the 21 students currently working in the REU program gathered to report on their research in a departmental Undergraduate Research Symposium. A list of these students and their research appears in Part V of this report.

7. Graduate Program Changes

Changes in the Ph.D. Curriculum instituted late last year went into effect this year. Doctoral students now develop two different dissertation proposals, and prepare them both in written form. During the Ph.D. exam one of these proposals is presented orally and the exam committee questions the student on subjects directly and indirectly related to the scientific content of the proposal. Both the written (two-proposal) and oral components must be passed. The faculty is still refining this procedure, especially the issue of sufficient breadth or differences between the two proposals, based on experience with several students this year.

In addition, upon recommendation of the graduate committee, the faculty moved to fully implement admissions procedures that will allow us to better compete for the relatively small number of top graduate applicants across the country, and allow students who are admitted and enter our program to be assured of adequate long-term financial support. In general, the Department now admits only students who have a faculty "sponsor", and to whom we can offer two (M.S.) or three (Ph.D.) years of financial aid, via teaching or research assistantships. Exceptions can be made for students who provide their own support, and a few TA-ships are reserved for competition each semester by continuing students.

Research and Publication

The faculty, research staff and students of the Department continued their high level of productivity in research in 1994-95. Research--contributing to human knowledge in one's discipline--is an essential and fundamental function of the Department of Earth and Planetary Sciences at UNM. The Department's status and respect within its discipline depends primarily on the quality and quantity of its research, just as a university's stature depends mainly on the scholarly activities of its entire faculty. In addition, active research programs form an essential teaching tool in keeping students up to date, in educating them not only about facts but also about how knowledge is gained, and (especially with graduate students) providing support for thesis/dissertation work and in the mentoring process of future geoscientists.

During 1994 members of the Department and Institute of Meteoritics (including faculty, research scientists and students) produced a total of nearly 250 publications, in the following categories:

Books Written:	1
Books Edited:	2
Scholarly Papers	
Refereed Journals	40
Conference/symposium volumes	34
Book Chapters	2
Geologic Maps	1
Book Reviews:	3
Other Publications:	7
Technical Reports:	7
Published Abstracts:	147
TOTAL	244

A few highlights of the Department's publication effort are worth mentioning. Several E&PS members published papers in the two most widely read international science journals, Science and Nature in 1994. Master's student Cathy Ratcliff, with John Geissman and others, published a major paper in Science based on her M.S. thesis research on the paleomagnetic record of a Miocene intrusion in southern Nevada. Adrian Brearley with coauthors published two papers in Science, one on olivine in a Russian meteorite, and the other on olivine phase transition in the earth's mantle. Caswell Silver Research Professor Gary Acton also had a paper published in Science, and Crayton Yapp and Harald Poths, published a paper in Nature on the productivity of early plants inferred from stable isotope studies of goethite. In addition, the second revised edition of Kase Klein's widely used 400-page laboratory manual in crystallography, mineralogy and petrology appeared this year.

Rod Ewing's research group produced 20 refereed papers in 1994, most of them in materials science and nuclear waste management journals and volumes. Of unusual interest was the development and patenting of an idea by R. Ewing, W. Lutze (UNM Center for Radioactive Waste Management), and W. Weber (Battlle National Lab), to utilize naturally occurring zircon as a material for the disposal and long-term storage of the more than 100 metric tons of plutonium that will result from the dismantling of nuclear weapons.

As in past years, graduate students and even some undergraduates participated significantly in the Department's publication effort. Some 20% of refereed papers published in 1994 had student coauthors and students contributed to about 45% of the published abstracts based on presentations made at professional meetings; in many cases students were the presenters. These figures testify to the importance the faculty places on involving students in research and to presenting the results of their research through professional talks and publications, an important part of their preparation for careers in the geosciences. All 1994 departmental publications are listed by author in Part III-2 of this report.

Faculty and research scientists also continued their success in attracting external funding to support their research. About 75 different externally funded grants and contracts were in effect among Department and Institute of Meteoritics scientists in FY 1994-95, (see Part III-3 for a complete list), having a total value of about $6.5 million. At a single representative point in the year (December 31, 1994), the total value of active grants and contracts was about $4.3 million, a figure that provides a snapshot of external funding activity during the year. Some 20 new grants, worth about $1.75 million, were awarded to Department and Institute of Meteoritics personnel in FY 1994-95. Total expenditures from grant/contracts during the fiscal year amounted to more than $1.0 million.

The great majority of these awards was from Federal agencies, especially the National Science Foundation, Department of Energy, the National Labs, and the National Aeronautics and Space Administration Competition for these awards with scientists across the country has always been rigorous, but has become increasingly severe in recent years, which makes the success of the Department and IOM in 1994-95 all the more noteworthy. The amount of new research funding received each year by the faculty and research scientists exceeds the entire state/university - supported budget of the Department. Not only do these grant and contract funds support a large proportion of departmental research, and benefit the University as a whole through the overhead funds they generate, but many graduate students are supported as research assistants by these funds as well (see Part V).

In addition to publications and grant/contract-supported research, the E&PS faculty and research staff also pursued a wide variety of other research projects during 1994-95 that were not externally funded or published upon during the year (see Part III-4).

Other Scholarly Activities

Most of the faculty and research staff participated widely in professional societies and organizations, presenting numerous talks and poster sessions, organizing and chairing symposia, leading field trips, and serving as officers in professional societies. Such activities are a form of service to the profession, but also increase professional recognition, contacts, the exchange of ideas and potential for joint research, and leads to greater visibility for UNM and the work of its faculty. This participation is summarized in Part III-5 of this report, and other professional activities are listed in Part III-6.

The faculty's total involvement in professional activities is too lengthy to completely survey here, but some of these contributions were especially important nationally and internationally, and are worth mentioning.

Several faculty participated as panel members for Federal agencies. For the National Science Foundation, R. Anderson served on the review panel on Geologic Records of Global Change and a steering

committee for Earth System History; J. Geissman on the panel for Instrumentation and Facilities and K. Karlstrom on panels for Tectonics and Continental Dynamics. A Brearley, H. Newsom and F. Rietmeijer served on various NASA committees and panels. R. Ewing served on National Academy of Sciences/National Research Council panels on the Waste Isolation Pilot Plant and on Remediation of Buried and Tank Wastes, as well as on a National Advisory Council on Environmental Policy and Technology for the Environmental Protection Agency.

Notable contributions to professional societies include J. Papike, President of the Mineralogical Society; M. Campana, U.S. National Committee of the International Association of Hydrogeologists; W. Elston, working group on explosive volcanism, International Association of Volcanology and Chemistry of the Earth's Interior; and R. Ewing's many assignments for the Materials Research Society and service as President-Elect of the International Union of Materials Research Societies. L. Crossey was honored by selection as an American Association of Petroleum Geologists Distinguished lecturer, and M. Campana received a Fullbright Fellowship to teach and study in Belize, Central America next year.

Faculty playing leading roles in planning and organizing or presenting invited papers in national/international symposia include R. Ewing, Co-chair of program committee for Scientific Basis for Nuclear Waste Management 18, international symposium in Kyoto Japan, October 23-27, 1994; workshop on problems of the disposition of weapons plutonium, Bonn, Germany, March 1995 and International Atomic Energy Meeting, Beijing, China, October 1994; R. Anderson, Co-chair of NSF symposium on Past Global Change in Western North America and the Pole-Equator-Pole transect (faculty members, Y. Asmerom, F. Pazzaglia and C. Yapp participated on the planning committee), held in Albuquerque, January 19-21, 1995, and K. Karlstrom, who organized and led the 3rd Annual Proterozoic Orogenesis and Metallogenesis Project field trip/meeting, in Taos, October 6-9, 1994, and organized an NSF-sponsored workshop on "lithospheric structure and evolution of the western U.S.", held in Albuquerque, May 4-7, 1995.

Participation by the faculty and research staff as Associate Editors and on Editorial Boards of international journals is substantial. A. Brearley (American Mineralogist), L. Crossey (Geology), R. Ewing (Journal of Nuclear Materials; Journal of Materials Research), J. Geissman (Geological Society of America Bulletin; Journal of Geophysical Research; Geology), R. Jones (Meteoritics), K. Karlstrom (Precambrian Research), C. Klein (Precambrian Research), L. McFadden (Catena), H. Newsom (Geochimica et Cosmochimica Acta), and G. Smith (Journal of Sedimentary Petrology) all contributed their efforts in assisting the dissemination of new knowledge through editorial work on these varied journals. In January, 1995, J. Geissman became co-chief editor of the Geological Society of America Bulletin, possibly the most widely read geoscience journal in the world.

Numerous faculty participated in and often presented talks to symposia and meetings outside the U.S., during the 1994-95 academic year. Countries in which E&PS faculty interacted professionally with international colleagues include Germany, Israel, China, Japan, Taiwan, Mexico, South Africa, Italy, Czechoslovakia and France.

University and Public Service

Service to the University and to the public is an important component of the Department's activities. During the past year, Geology faculty participated on numerous College and University committees, and J. Geissman served on the Faculty Senate during the spring 1994 semester. The faculty also served as a resource of expertise in the geosciences for individuals, groups and organizations outside the University (see Parts III-7 and III-10 for lists of these activities). Members of the Department routinely identify rock, mineral, fossil and suspected meteorite specimens for the public, give talks to civic groups and public school classes, judge in science fairs, answer questions for radio, TV and newspaper reporters, and host open houses for local gem and mineral groups.

In Fall, 1994, planning began for a KNME-TV program on the E&PS Department and its research, and on the geology of New Mexico, involving several faculty and graduate students. Filming began in early summer, 1995 and the program is scheduled for airing in October.

An important resource provided by the Department to the University and the public is maintenance (without specified University support) of two public museums, one devoted to geology (rocks, minerals, fossils, New Mexico geology) and the other to meteorites. These museums are open each weekday, are free, and are visited by thousands of school children and adults each year. A free pamphlet provides information for a self-guided tour, and faculty and graduate students on occasion lead tours when arrangements have been made in advance. A more complete description of activities involving the Department's museum and geological collections is presented in Part IV of this report.

The Department also maintains the Harding Pegmatite mine in southern Taos County, donated to UNM by Dr. Arthur Montgomery, as an unusual mineral-collecting locality and outdoor geological laboratory. Mr. Gilbert Griego, a Department staff member, is the long-time caretaker of the property. Last year about 788 people visited the Harding Mine. The Department welcomes visitors, but permission from the Chairperson must be obtained prior to each visit.

GENERAL DEPARTMENTAL ACTIVITIES

Institute of Meteoritics 50th Anniversary

The Institute of Meteoritics celebrated its 50th anniversary in 1994, marking the occasion by hosting a conference, "Chondrules and the Protoplanetary Disk," and by holding an Open House and celebratory banquet. These events were very well attended, and were enjoyed enthusiastically by those who participated.

The conference was held on October 13-15, 1994, in the Department of Earth and Planetary Sciences. It was co-sponsored by NASA and the Lunar and Planetary Institute, Houston, which played an important role in the organization. The conference lasted two and a half days, and consisted of invited and contributed talks, as well as a poster session. Its aim was to bring together petrologists, who study the physical and chemical properties of chondrules, and astrophysicists, who model the wide variety of processes that have been suggested to be responsible for chondrule formation. Long and lively discussions after each paper contributed to a very successful scientific exchange, bringing the two disparate communities closer together as well as inspiring many new ideas. About 100 people from all corners of the world attended the conference, including about 20 present and former students or members of staff of the Institute.

Following the conference, an Open House was held in the Institute of Meteoritics and Department of Earth and Planetary Sciences. Analytical laboratories, the Curation facility, and both the Meteorite and Geology Museums were open during the afternoon for visits from conference attendees and other guests.

The 50th anniversary banquet was held in the evening of October 15, at La Posada hotel in downtown Albuquerque. About 100 people attended the dinner, including present and former staff and student members of IOM, and friends of the Institute including faculty of the Department of Earth and Planetary Sciences, the UNM Provost (Dr. Mary Sue Coleman), and conference attendees. Several letters of good wishes were also received from former members who were unable to attend. This was a memorable occasion for all present, and many old acquaintances were renewed. Drs. Klaus Keil and James Papike (former and present Directors) made addresses that emphasized the importance of research institutes such as IOM within the University. It is clear that the Institute is held in high regard by its alumni and that over its 50-year history it has made a significant impact in the field of planetary science.

Facilities

1. Capital Improvements

There were no major capital improvements to Northrop Hall in 1994-95. A long-standing Departmental proposal to enclose the area along the north wall of the basement for a secure storage and work area was again not acted upon.

During summer, 1995, two offices and a small lab were modified for incoming faculty Jane Selverstone and David Gutzler, and the Mineralogy lab (Room 115) was renovated. This renovation included the installation of new countertops on the tables, additional cases for specimen storage, wall cabinets for storage of crystal models, and modification of a closet for secure storage of a computer and CD-Rom system. The last vestige of the Departmental library, extensive collections of U.S.G.S. publications, was disbanded and the volumes given to Centennial Library. The room was converted into graduate student office space.

2. Science-Technology Building

During 1994-95 planning proceeded for a proposed new Science-Technology Building that would house the Computer Science Department and provide expansion space for the Departments of E&PS, Biology and Chemistry. Planning was coordinated by the Facility Planning Office, Architectural Research Consultants, and a committee consisting of the Chairs of the four departments and others. The Department, allocated 20% of the space in the new building, submitted a plan for about 20,000 ft^2 of new space in the building based on input from the faculty and consideration by the departmental facilities committee. The Department's request was modified to 12,000 $ft.^2$ an absolute minimum to usefully address our space needs, after it became apparent that the amount of usable space in a new building based on an estimate of $26 million construction costs was only 60,000 ft^2. By summer, 1995, it had become apparent that a much larger, costlier building will be needed to address the space needs of all four departments. Planning will continue next academic year, with the hope that the Science-Technology Building will continue to be a strong University priority.

3. Analytical facilities

A reception and tour on May 10, 1995, officially opened the Department's new radiogenic isotope lab, which will be supervised by Y. Asmerom. This event culminated about a year of planning and another year of construction in completely renovating the old geochemistry lab in Rooms 307 and 309. This lab provides fully-equipped clean room facilities for uranium-series and other isotope and trace element work, will be utilized in a wide variety of isotope-based research projects, and is among the most modern of the small number of such labs in the U.S. Currently the lab houses the VG-354 mass-spectrometer, which will be replaced by a newer model obtained by Asmerom with NSF funding sometime in the 1995-96 year. The UNM Research Administration and Business and Finance Offices provided most of the $600,000 + cost of renovation.

4. Other Research/Teaching Facilities

A new 9-passenger field vehicle was purchased and arrived in September 1994, a welcome addition to the Department's aging vehicle fleet. A second similar vehicle will be ordered in Fall, 1995.

5. Computing Facilities

Much progress was made on upgrading the Department's computing and networking facilities in 1994-95. With the help of CIRT, the Department's computers were completely connected to the campus Ethernet system, and a high-quality, flexible local area (departmental) network was established. This departmental network is based on a DEC Alpha file server platform augmented by addition of a 4 gigabyte hard drive; use of PATHWORKS as the network server was superceded by installation of a Windows-NT server due to problems with PATHWORKS. The main office systems were upgraded to -486s and the computers they replaced were installed as upgrades to the word processing facilities. A Tektronix color printer came on line to supplement several other black-and-white printers available for general use. Purchase of another -486 computer plus Power Book 550c and Dubane overhead projection system now allows display of large-screen images from computer and CD-ROM programs for teaching purposes. Software continues to be added as needed.

J. Connolly assumed major responsibility for managing the Department's computer and networking systems in Spring 1995, but only at about 0.25 FTE, which is insufficient for the complexity and widespread usage of our system. Members of the department's computer committee, especially F. Pazzaglia, also helped considerably in researching and recommending necessary components, and in presenting numerous seminars, training sessions, and information memos to aquaint departmental personnel and students with our rapidly advancing capabilities.

Guest Lecturers

Each year the Department invites a large number of earth scientists from other institutions to visit and present lectures based on their research to faculty and students. This very important departmental activity is an essential part of educating E&PS students, widens faculty interactions with colleagues, both nationally and internationally, and offers us the opportunity to inform colleagues about our research and facilities. Many of these visitors speak at the weekly Thursday morning colloquium, which is followed by a pizza lunch in the Department, where faculty and students can meet informally with the speaker to further explore the subject of the talk or other topics. Professional talks given in the Department during the 1994-95 academic year are listed below.

Dr. Knut Bjorlykke, University of Oslo, Norway: "Fluid Flow and Transport of Dissolved Solids in Sedimentary Basins - Consequences for Oil Migration, Diagenesis and the Formation of Sedimentary Ores" (September 1, 1994)

Dr. Peter Flemings, Penn State University - EEE Distinguished Lecturer: "Origin of Transgressions in Foreland Basins" (September 8, 1994)

Dr. Peter Flemings, Penn State University - EEE Distinguished Lecturer: "Hydrostratigraphy in the Pleistocene Gulf Coast" (September 9, 1994)

Dr. Jillian Banfield, University of Wisconsin, Madison: "From Rocks to Soil: Chemical Weathering and Clay Formation in the Near Surface Environment" (September 15, 1994)

Dr. Tim Herbert, Scripps Institute of Oceanography: "Orbital Climatic Cycles: A New Way of Dating Climate Change, Catastrophes, and Sea-floor Creation" (September 22, 1994)

Dr. Charles Harper, Harvard University: "The Origin of the Earth and the Lost World of the Hadean" (September 29, 1994)

Dr. Charles Harper, Harvard University: "The Astrophysical Site of the Origin of the Solar System: Evidences from Extinct Radionuclides" (September 30, 1994)

Dr. Carol Simpson, Johns Hopkins University and National Science Foundation: "Structural Analysis of General Shear Zones" (October 6, 1994)

Dr. Carol Simpson, Johns Hopkins University and National Science Foundation: Informal Question and Answer Session Concerning NSF Procedures/Proposals, (October 6, 1994)

Dr. Peter Knuepfer, SUNY Binghamton: "Geomorphic Evidence for Tectonic Evolution of Active Collisions, Taiwan and New Zealand" (October 20, 1994)

Dr. Peter Lipman, U.S. Geological Survey, Menlo Park: "Ash-Flow Sheets and Calderas of the San Juan Volcanic Field, Colorado, New Results and Remaining Problems for a Long-Studied Region" (October 31, 1994)

Dr. Blair Jones, U.S. Geological Survey, Reston, Virginia: "Clay Minerals as Indicators of Paleohydrology" (November 3, 1994)

Dr. Rebecca Lange, University of Michigan: "How Oxidized and Hydrated is the Subarc Mantle? Evidence From Western Mexico" (November 10, 1994)

Dr. Alfred Fischer, University of Southern California: "The Question of Order in Earth History" or "Is There Meaning in Our Stratigraphic Systems?" (November 17, 1994)

Dr. Alfred Fischer, University of Southern California: "Aspects of the Chicxulub Impact Crater, Mexico" (November 17, 1994)

Dr. Katherine Giles, New Mexico State University: "Lithospheric Flexure During the Antler Orogeny Interpreted From Upper Devonian - Lower Mississippian Stratigraphic Patterns, Nevada and Utah" (December 1 1994)

Dr. Subir Banerjee, University of Minnesota: "Chasing the Paleomonsoon Over China: Magnetostratigrapic Proxies of a Climate Variable" (January 19, 1995)

Dr. Susan Kieffer, Caswell Silver Distinguished Lecturer, University of British Columbia: "Meteorite Impacts and Volcanic Eruptions: Catastrophic Agents of Planetary Change" (January 26, 1995)

Dr. Susan Kieffer, Caswell Silver Distinguished Lecturer, University of British Columbia: "Geologic Nozzles: the (underestimated) Roles of Supersonic and Supercritical Flow in Geological Processes" (January 27, 1995)

Dr. Susan Altman, Sandia National Laboratory: "Behavior of Nutrients in Groundwater of an Agricultural Valley and its Riparian Zone" (February 2, 1995)

Dr. William Leeman, Rice University: "Hot and Cold Subduction Zones; Implications for Element Recycling at Convergent Margins" (February 9, 1995)

Ing. Jorge Nieto Obregon, National University of Mexico: "Natural and Induced Seismicity and Rupture in Quaternary Sediments of the Graben de Aguascalientes, West Central Mexico" (February 9, 1995)

Ing. Jorge Nieto Obregon, National University of Mexico: "Tectonic Evolution of Major Structural Features in the States of Jalisco and Nayarit, Mexico" (February 10, 1995)

Dr. Robert Dill, Dill Geosciences, San Diego, California: "Stromatolites and Submarine Sedimentary Secrets of the Eastern Margin of the Great Bahama Bank" (February 16, 1995)

Dr. Robert Dill, Dill Geosciences, San Diego, California: "Map-making with the MacIntosh and Other Off the Shelf Software" (February 16, 1995)

Dr. Antonio Lanzirotti, SUNY Stony Brook: "U-Pb Dating of Metapelites" (February 23, 1995)

Dr. Norman Gaume, Water Resources Program, City of Albuquerque: "Albuquerque's Three Water Challenges" (March 2, 1995)

Dr. Mark Brandon, Yale University: " Baja B.C.: Late Cretaceans Motions of Batholithic Belts of the Western Cordillera" (March 7, 1995)

Dr. Mark Brandon, Yale University: "Exhumation Processes Operating Above Active Subduction Zones: Olympic Mountains (Washington State) and Franciscan Subduction Complex (California)" (March 9, 1995)

Dr. Robert Woodward, U.S. Geological Survey, Albuquerque: "The Large-scale Seismic Structure of the Earth's Mantle and its Implications for Convection" (March 23, 1995)

Dr. Nelia Dunbar, New Mexico Bureau of Mines and Mineral Resources: "Eruption Dynamics and Magmatic Evolution of the Bishop and Bandelier Tuffs: Insights From Melt Inclusions" (March 30, 1995)

Dr. Nancy Riggs, Northern Arizona University: "Tectonism at the Paleozoic-Mesozoic Boundary and Volcanism of the Early Mesozoic Magmatic Arc, Southwestern Cordillera" (April 6, 1995)

Dr. Kenneth McClay, Royal Hollaway University of London, UK, A.A.P.G. Distinguished Lecturer: "3-D Fault Systems in Rifts" (April 10, 1995)

Dr. Mark Boslough, Sandia National Laboratory: "Comet Crash Physics" (April 13, 1995)

Dr. Andrew Knoll, Caswell-Silver Distinguished Lecturer, Harvard University "Proterozoic Stratigraphy" (April 20, 1995)

Dr. Richard Walker, University of Maryland: "OS Isotopes in Terrestrial and Meteoritic Systems" (April 27, 1995)
Dr. Tim Clark, University of Illinois: "Seismic Experiments Using Portable Broad-Band; How, When, Why" (May 4, 1995)
Dr. Edwin Romanowicz, Colby College: "Seasonal Variations in Dissolved Methane Profiles, or a Drought Induces Catastrophic Release of Methane in the Lake Agassiz Peatlands, Minnesota?" (May 5, 1995)
Dr. Padinare V. Unnikrishna, Utah State University: "Stable Isotope Tracer Study of Snowmelt Recharge and Flow Generation in a Semi-Arid Watershed" (May 11, 1995)

ALUMNI PROGRAMS AND SUPPORT

The Department is very fortunate in being supported by a large group of active and enthusiastic alumni. Individually and collectively these graduates provide generous financial, advisory and moral support for many departmental activities, which contribute significantly to our success in our educational and research missions.

First among sources of alumni support is the Caswell Silver Foundation. Funds generated by the investments of the Foundation in 1994-95 provided generous stipends supporting two Caswell Silver/Vincent Kelley graduate student Fellows (Tracey Cascadden and Brad Ilg), and subsidized the bulk of faculty travel to scientific meetings the past year. No Silver Research Professor was in residence this year. The Foundation also supports the visits of distinguished geoscientists as Caswell Silver Distinguished Lecturers.

In 1994-95 two noted geoscientists, both members of the National Academy of Sciences, visited the Department as Caswell Silver Distinguished Lecturers. Dr. Susan Kieffer, Head, Department of Geological Sciences, University of British Columbia, visited from January 25-27, and presented two talks, "Meteorite impacts and volcanic eruptions: Catastrophic agents of planetary change," and "Geologic nozzles, the (underestimated) roles of supersonic and supercritical flow in geological processes." Dr. Andrew Knoll, Chairman, Department of Organismic and Evolutionary Biology, Harvard University, was on campus April 20-21. He presented a talk to the E&PS Department, "Proterozoic stratigraphy," and a second lecture, in the Biology Department auditorium, "Early evolution of Life." Both Distinguished Lecturers were feted in receptions in the Geology Museum and many faculty and students visited with them during their time at UNM.

The Silver Foundation also made possible, as it does each year, the presentation of two $500 Caswell Silver Meritorious Staff Awards to outstanding non-academic staff members. These awards are a tangible way the faculty expresses its deep appreciation to the Department staff for its efforts in contributing to the operation and advancement of the Department. This year's recipients were George Carnako (Department Building Systems Mechanic) and Mike Spilde (Research Associate in the Microprobe SEM Labs).

Donations and contributions from alumni, faculty and friends of the Department support about a dozen scholarship funds, mostly managed by the UNM Foundation. The interest generated by these funds annually is utilized to award scholarships to undergraduate and graduate students. Such scholarships are augmented by other scholarships awarded by the Department, and scholarships from institutions outside the University and occasionally fellowship funds from the University. A full summary of scholarships and fellowships received by Earth and Planetary Sciences students is presented later in this report. Here we note that in 1994-95, scholarships derived from alumni-supported funds amounted to $22,480 awarded to 24 undergraduate students (Leonard, Campbell and Pfeiffer Scholarships), plus $9,555 awarded to 20 graduate students (Alumni Fellowship, Miossec, Rhodes, Vann and Wengerd Scholarships).

A new scholarship fund, The Alexander and Geraldine Wanek Scholarship, was established through a generous endowment of the Waneks. This fund will support graduate students working in areas of the geosciences involving economically important geologic resources. In addition, the Wengerd Traveling Fellowship was placed on permanent footing by Florence M. Wengerd, with the establishment of an endowment fund in

honor of Sherm, who died early in 1995. Both new endowments will add to the support the Department is able to provide its students, and we greatly appreciates the generosity of the donors.

The Energy, Exploration, Education Fund, which supports the Department's Basin Studies program and education in such fields is petroleum geology, was reduced by about one-third, as one donor transferred his earlier contributions to the Law School.

The Department also maintains contact with its alumni through gatherings at professional meetings, newsletters and many personal and professional contacts. In summer 1995, the fourth edition of the Department's newsletter, Geologic Tracks, was mailed to nearly 1,000 alumni and friends. This newsletter was compiled and organized by L. Crossey, and is published annually. In addition, the Rio Reunion reception for current and past members of the Department was held at the annual American Association of Petroleum Geologists meeting in Houston on March 6, 1995. The UNM reception has traditionally included alumni of geoscience departments at other universities along the Rio Grande (N.M. Tech, N.M. State and Texas-El Paso); this year's reception was attended by about 40 people, 20 from UNM. Alumni Pat Gratton, Charlie Dodge and other sponsors helped to organize and support this year's event. Our alumni and the Department have been arranging such gatherings for more than 10 years, and they are always an excellent opportunity for alumni and present members of the Department to get together and compare notes.

PLANS AND GOALS

During the coming year, the Department will pursue several goals to increase our ability to carry out our educational and scholarly missions. Some of these relate to items identified in the departmental five-year plan of January 1994 that have not yet been realized; others have emerged since that plan was formulated.

1. Conduct searches for, and hire new tenure-stream junior faculty in the areas of Quaternary palaeoclimatology and stable-isotope geochemistry. Addition of these faculty, both of whom will fill gaps in strong programs, will bring the faculty to 19.5 FTE. One additional new faculty member, possibly in volcanology but subject to departmental reevaluation, will be sought the following year.

2. Conduct a search for and hire, by December, 1995, a 0.5 FTE Ph.D.-level research scientist for the radiogenic isotope lab.

3. Continue to press for 0.5 FTE state-funded support for the microprobe/SEM lab technician, currently entirely supported by grants and lab user fees.

4. Continue efforts to obtain a 0.5 FTE staff position for management of the Department's computer and networking facilities. Currently this function is supported at 0.17 FTE, with the Department adding sufficient salary funds to bring the manager's (J. Connolly) position to 0.25 FTE. It is clear, based on the past year's experiences, that at least a 0.5 FTE position is needed.

5. Continue to upgrade and maintain the Department's recently expanded computer facilities, and augment present computer hard ware and software for student use.

6. Continue to pay close attention to and reallocate as needed, current space in Northrop Hall. Departmental input into planning for a new Science-Technology Building will continue, and the current list of departmental functions (e.g. new graduate student, research scientist and visiting scientist offices; several new or expanded research labs, three to five teaching labs, expansion of collections facilities) planned for E&PS space in the new building will be kept updated.

7. Work to attain a more equitable and realistic distribution of support for the operation and maintenance expenses of the Department's teaching and research facilities. Current support for the analytical laboratories is mainly from faculty grants and user fees, but 25% (~ $50,000/year) of lab expenses are created by activities relating to the education and training of students, which should be supported to a much greater extent by the University. The Department will continue to return some funds from its I & G account for the analytical labs, to the best of its limited ability, and to support, through equipment-use scholarships, student use of the labs.

8. Upgrade or add new teaching equipment and facilities. A second new field vehicle will be purchased; some attention to the Department's supply of good, functioning microscopes for the teaching labs, as well as to minor renovation of one or two of these labs, will also be required.

9. Discuss the graduate curriculum in order to ascertain whether the present, very flexible system of course choice by graduate students is best, or if some breadth requirements are needed, such as course requirements in several subdisciplinary groups.

10. Monitor and refine the revised undergraduate curriculum that will be initiated in 1995-96, and guide several new course and minor course-change proposals relating to the new curriculum through the approval process.

11. Discuss and develop procedures for "outcomes assessment" for both Undergraduate and Graduate students. These procedures will be based on consideration of our expectations of students, methods of assessing whether these expectations have been met, and ideas for using these assessment methods for future program planning.

12. Plan and hold an event of high visibility involving UNM administers and others, to celebrate the 15th anniversary of the establishment of the Caswell Silver Foundation and its many contributions to the vitality of the E&PS Department.

0660

****

III. ACTIVITIES OF THE FACULTY AND RESEARCH SCIENTISTS
(Calendar Year 1994)

****

1. TEACHING ACCOMPLISHMENTS

Bruce Allen

Course taught

Spring: E&PS 481L - Geomorphology and Surficial Geology (25 enrolled)

Roger Anderson

Course taught

Fall: E&PS 209 - Earth Environment (40 enrolled)

Retired from teaching July 1, 1994

Yemane Asmerom

Courses taught

Spring: E&PS 504 - Geochronology (2 enrolled)
Fall: E&PS 333 - Environmental Geology (33 enrolled)

Developed new materials and approaches for both courses which had not been taught in a number of years.

Put in a large effort towards the construction and associated activities of the new lab.

Graduate Student Advising

Academic advisor and thesis co-advisor: Allen Gresham and Raul Almaguer
Thesis committee member: Eric Kirby

Susan Barger

Course taught

Spring: UNM Art History 429/529 - Seminar in Conservation - "Detection of Art Fakes and Forgeries" (4 enrolled), UNM - North Santa Fe.

Adrian Brearley

Courses taught

Spring: E&PS 513 - Planetary Materials and the Evolution of the Solar System. Co-taught with other members of IOM.
Fall: E&PS 265 - "Planetary Geology." Presented guest lecture, November 8, 1994.
E&PS 301 -"Mineralogy." Presented two guest lectures. October 17 and 19, 1994.
E&PS 303 -"Igneous and metamorphic petrology." Presented guest lecture, October 27, 1994.

Served on comprehensive exam committee for Chris Daniel
Served as Advisor and Ph.D. committee member for Nicolaus Hanowski
Member of Ph.D. thesis committee for Jane Pedrick

Michael Campana

Courses taught

Spring: E&PS 472 - Groundwater Analysis (with L.J. Crossey) (19 enrolled)
Fall: E&PS 462 - Hydrogeology (38 enrolled)
E&PS 474L - Hydrogeology Laboratory (8 enrolled)

Graduate students

Student advisement/thesis supervision (*indicates support provided)

M.S.: James Brainard, Rhawn Denniston (w/ C. Shearer), Sharman Carpenter, Leslie Hohweiler, Armando Groffman, John Appel, Gregory Wroblicky, Jerry Bird*, Robert Gray

Ph.D.: Charles Heywood and Armando Groffman

Thesis Completed: Armando R. Groffman, 1994 (M.S.), "The characterization of groundwater chemistry and colloids downgradient from uranium mill tailings at Slick Rock and Rifle, Colorado."

Thesis and Dissertation Committees

M.S.: Judy Stoopes, Peter McCarville, and Kirk Bemis (M.S. in Civil Engineering)

Ph.D.: David Ward, Eric McDonald, Jennifer Loomis ,Drew Baird (Ph.D. in Civil Engineering), Kathleen Bower (Ph.D. in Civil Engineering), John Morrice (Ph.D. in Biology), Colleen Hatfield (Ph.D. in Biology), Michelle Baker (Ph.D. in Biology) and M. Tad Crocker (Ph.D. in Biology)

Examination Committees

M.S.: Sharman Carpenter and Janet Hurley

Ph.D.: Charles Heywood, Gwen Easterday (MWRA), Robert Beers (MWRA), Kathy Schiel (MWRA), John Morrice (Ph.D. in Biology), Kathleen Bower (Ph.D. in Civil Engineering)
Michelle Baker (Ph.D. in Biology)

Laura Crossey

Courses taught

Spring: E&PS 472 - Groundwater Analysis (21 enrolled)
E&PS 544L- Sedimentary Petrology (5 enrolled)
E&PS 699 - Dissertation (1 enrolled)

Summer: MEMS Summer Bridge Science Coordinator (28 enrolled)

Fall: E&PS 101 - Physical Geology (57 enrolled)
E&PS 501 - Sedimentary Geochemistry (10 enrolled)
E&PS 699 - Dissertation (1 enrolled)

Ph.D. Committees

Chair: Deborah Bergfeld, Daniel Larsen, Jennifer Loomis
Committee member: Bruce Allen (reader), Michelle Baker (Biology), Armand Groffman, John Morrice (Biology), Carol Treadwell (exam committee), Dave Ward, Paula Watt

MS Committees

Chair: Peter McCarville (gr. 1994)
Exam committee and/or committee member: John Appel, Jerry Bird, Rhawn Denniston, Carter Dunaway, Bob Gray, Skip Hohweiler, Alexis Lavine, Greg Wroblicky

Student grant support

Graduate: Daniel Larsen (full), Jennifer Loomis (full), and Peter McCarville (full)
Undergraduate: Karen Holmes (partial), Johann Forsman (partial) and Susan Vorenberg (partial)

Maya Elrick

Courses taught

Spring: E&PS 102 - Historical Geology (40 enrolled)

E&PS 490 - Geologic Presentations (7 enrolled)
Fall: E&PS 304 - Sedimentology-Stratigraphy (14 enrolled)
E&PS 101 - Historical Geology (guest lecturer for G. Smith)
E&PS 401 - Seminar (23 enrolled)

Graduate students advised:

M.S: Todd Lamaskin and Gabriella Savarese

Thesis committee member:

Ph.D.: Jennifer Loomis and Ancheng Ma
M.S.: Harold Rowe

Wolfgang E. Elston

Courses taught

Spring: E&PS 252 - Volcanoes, Benign and Malign (31 enrolled)
E&PS 492 - Problems (1 enrolled)
E&PS 599 - Thesis (1 enrolled)
E&PS 699 - Dissertation (1 enrolled)

Fall: E&PS 210 - Earth Resources and Man (35 enrolled)
E&PS 491 - Problems (1 enrolled)
E&PS 599 - Thesis (1 enrolled)
E&PS 699 - Dissertation (1 enrolled)

Graduate student committees

Chairman: Ph.D. Candidate: Charles Bryan; M.S. Candidate: Kevin McKeown (disenrolled, Fall 1994)
Committee member: Ph.D. Candidate: Dan Larsen; M.S. Candidate: Kyle Gay

Curriculum Development

On-going development of courses as part of the UNM - Los Alamos National Laboratory Volcanology Program. (For details, see 1993 Biographical supplement).

Rodney C. Ewing

Courses taught

Spring: E&PS 101 - Physical Geology (88 enrolled)
E&PS 492 - Problems (1 enrolled)
E&PS 552 - Problems (1 enrolled)
E&PS 699 - Dissertation (2 enrolled)

Fall: E&PS 301 - Mineralogy I (23 enrolled)
E&PS 311 - Mineralogy I Laboratory (10 enrolled) - Al Meldrum, T.A.
E&PS 311 - Mineralogy I Laboratory (11 enrolled) - Carter Dunaway, T.A.
E&PS 551 - Problems (1 enrolled)
E&PS 599 - Masters Thesis (1 enrolled)
E&PS 699 - Dissertation (2 enrolled)

Graduate Students:

Ph.D. Candidates (advisor): Paul Eberly (supported by SKB) Les McFadden is co-advisor, Al Meldrum (supported by TA/UNM), and Shixin Wang (supported by BES) Lu-Min Wang is co-advisor
M.S. Candidate (advisor): Paula Newcomer (supported by SNL)
M.S. Committee (member): Peter McCarville
M.S. Examination Committee: Harold D. Rowe
Honors, undergraduates: Kerim Martinez and Kate Helean

John W. Geissman

Courses taught

Spring: Sabbatical

Summer: E&PS 319L/EPS420L - Introductory/Advanced Field Geology (overlap)(11 enrolled)

Fall: E&PS 508 - Paleomagnetism and Applications (7 enrolled); Non-credit paleomagnetism seminar

Graduate students supervised:

Ph.D.: Richard Livacarri, James Callian, Steve Hayden, Mike Grubensky (co-advised), Tim Wawryzniec, John Byrd (University of Utah)

M.S.: Hope Mullally, Cathy Ratcliff, Suzanne Meuret, Eileen Romano, Greg Overtoom (University of Utah), Marc Melker, and Harry Rowe

Exam committees

MS comprehensive exam: Marc Melker and Harry Rowe

Graduate Students financially supported: Steve Hayden, Richard Livaccari, Hope Mullally, Suzanne Meuret, Tim Wawryzniec and Marc Melker

Course Development

Continued to organize, with Roberto Molina, a non-credit weekly "seminar" meeting for the users of the paleomagnetism laboratory, focussing on laboratory improvements, current research by users of the laboratory, and controversial research topics in paleomagnetism. Continued continue to modify/improve undergraduate field geology program; served as the "overlap" instructor for the Introductory and Advanced courses (because three faculty were involved in 1994) introduced one new project. Nominated for UNM Outstanding Teacher of the Year Award, Spring, 1994.
"Guest" lecturer in E&PS 101 and E&PS 102 courses.

Undergraduate Research Advising: Tony Feig and Alfred Gomez

Graduate Theses Completed

"Role of extensional deformation in the late Mesozoic and Cenozoic tectonic evolution of the western U.S. Cordillera: A regional tectonic model and paleomagnetic study of the South Mountains metamorphic core complex"
PhD, Richard Livaccari

"Synvolcanic Oligocene stress reorientation in eastern Nevade: evidence from the Golden Gate Range"
MS, Gregory Overtoom, University of Utah

"Neotectonics of the Teton Fault, Wyoming",
PhD, John Odard Dutton Byrd, University of Utah.

Reader: Eric Kirby, MS

Stephen P. Huestis

Courses taught

Spring: E&PS 101 - Physical Geology (33 enrolled)
E&PS 115 - Geological Disasters (36 enrolled)
E&PS 548 - Continuum Mechanics (5 enrolled) (with K. Karlstrom)

Fall: E&PS 225 - Oceanography (40 enrolled)
E&PS 318 - Applications of Mathematics in Earth Science (10 enrolled)

New course developed: E&PS 548 - Continuum Mechanics (with K. Karlstrom)

Guest lectures: E&PS 504 - Geochronology (2 lectures)
M.S. Exam committees: Sharman Carpenter, Janet Hurley, and Stephanie Maehr
Ph.D Exam Committees: Chris Daniel, Charles Heywood, Ancheng Ma, and Armando Groffman

John Husler

Instruction on required safety information and Right to Know law to new faculty, staff and students.

Rhian Jones

Courses taught

Spring: E&PS 513 - Planetary materials and the evolution of the solar system. Co-taught with other members of IOM.

Fall: E&PS 301 - Introduction to mineralogy and materials science. Three guest lectures.
E&PS 265 - Exploring the Solar System. One guest lecture, one lab session.

Undergraduate supervised: Lisa Danielson

Karl E. Karlstrom

Courses taught

Spring: E&PS 307 - Structural Geology (31 enrolled)
E&PS 307L- Structural Geology Lab (31 enrolled)
E&PS 548 - Introduction to the mechanics of continuous media (new course - team taught with Steve Huestis) (5 enrolled)

Summer: E&PS 420L - (11 enrolled)

Fall: E&PS 417 - Advanced Structural Geology (10 enrolled)

Undergraduate student supervised (* = supported by NSF funding)

Chris Andronicos - Senior thesis - MEMS student
* Mike Timmons - University of Nebraska at Omaha - REU student
* Michael Smith - Saw room technical work - REU student
* REU site coordinator (about 20 students funded)

Graduate students supervised (* = supported by NSF funding)

One MS student finished in 1994:
* Eric Kirby: Tectonic setting of the Sandia pluton: an orogenic 1.4 Ga granite in New Mexico

Active graduate students supervised (estimated defense date) (* supported by NSF funding)

Ph.D.: Brad Ilg (1996), Amy Thompson (1995), Jane Pedrick (1995), Chris White, Alan Gresham* (co-supervised with Yemane Asmerom) (1997), Tim Wawrzyniec (co-supervised with John Geissman) (1997)

M.S.: Jimmie Hutchison (1995), Adam Read* (1996)

Thesis committees: Eileen Romano, Suzanne Mueret, Tony Garcia, Stephen Grimes - Ph.D. student, U.T. Austin, and Steve Hayden

Exam committees: Merri-Lisa Trigilio and Rick Livicarri

Cornelis Klein

Courses taught

Spring: E&PS 302 - Mineralogy II (15 enrolled)
E&PS 312L - Mineralogy II (lab; 15 enrolled)
E&PS 322L - Introduction to Petrology (17 enrolled)
E&PS 105L - Physical Geology Labs (faculty coordinator; 172 enrolled)

Fall: E&PS 321L - Introduction to Mineralogy (15 enrolled)
E&PS 105L - Physical Geology labs (faculty coordinator; 174 enrolled
E&PS 491 and 493 (one student in each)

Course development

Developed the new package of mineralogy (earth materials) and laboratory with R.C. Ewing for the new combined B.A. and B.S. sequences in the department. This package of new courses (E&PS 301 (3 cr) and E&PS 302L (2 cr)) will be taught by me in the fall of 1995.

Outlined two other new courses for offerings in future years:
E&PS 201 (2 cr) - Gem Minerals and Gems
E&PS 402 (2 cr) - Environmental Mineralogy

Production of teaching materials

In August 1994, in collaboration with the S.M. Stoller Co. of Albuquerque (the developers) began the very challenging task of animating mineralogical concepts for a future CD-ROM entitled "Mineralogy

Tutorials." This project is now about 65% completed, with a preliminary CD-ROM now in national peer review. The publication date of the final, complete product (John Wiley, New York, Publishers) is set for June 1995.

Graduate students

M.S. thesis committee member: Marc Melker and Paula Newcomer
M.S. exam committee member: Marc Melker
D.Sc. (outside) dissertation examiner for T. Majumder, Indian School of Mines, Bhandad, India, fall 1994.

Undergraduate advising

Served as undergraduate advisor for our department through August 1, 1994.

Albert M. Kudo

Courses taught

Spring: E&PS 225 - Oceanography (88 enrolled)
E&PS 401 - Seminar (48 enrolled)

Fall: E&PS 101 - Physical Geology (174 enrolled)
E&PS 303 - Igneous & Metamorphic Petrology (15 enrolled)
E&PS 313L - Lab for 303 (15 enrolled)
E&PS 531L - Igneous Petrology (5 enrolled)
E&PS 491 - Problem (1 enrolled)
E&PS 551 - Problem (1 enrolled)

Supervised Ph.D. dissertation research of Tracey Cascadden (National Park Service Grant)
Supervised M.S. thesis research of Joe Andrew

Daniel W. Erskine, Ph.D. dissertation:
Geologic and Isotopic Study of Igneous Rocks, Northern Great Basin, Nevada: Constraints on Lithospheric Structure and Magma Genesis, May, 1994
Reader for Phil Noll's dissertation
Reader for Sally Ann Paschall M. S. thesis

M.S. exam committees: Janet Hurley, Stephanie Maehr, Alexis Lavine and Paula Newcomer

Ph.D. exam committee: Ancheng Ma

Barry S. Kues

Courses taught

Spring: E&PS 101 (198 enrolled)
E&PS 492 (1 enrolled)

Fall: E&PS 411 (8 enrolled)
E&PS 493 (1 enrolled)
E&PS 599 (1 enrolled)
E&PS 699 (1 enrolled)

Dissertation completed: Adrian P. Hunt, "Vertebrate paleontology and biostratigraphy of the Upper Triassic Bull Canyon Formation, east-central New Mexico, with revision of the Families Metoposauridae (Amphibia: Temnospondylii) and Parasuchidae (Reptilia: Archosauria)" (S.G. Lucas, co-advisor), Spring 1994.

Graduate students supervised: Ancheng Ma (Ph.D.), Tom Goodspeed (M.S.), and Andy Heckert (M.S.)

Exam committees: Andy Heckert (M.S.) and Don Cedarquist (M.S.)

Thesis committee: Todd Lamaskin

Les D. McFadden

Courses taught

Spring: E&PS 101 - Physical Geology (76 enrolled)

Fall: E&PS 484 - Soil Genesis (12 enrolled)
E&PS 490 - Geologic Presentations (12 enrolled)

Guest lecturer: Department of Architecture and Planning - Community and Regional Planning 570: Soil-geomorphic and ecologic studies of landscapes of the Hopi-Navajo disputed lands, Arizona.

Graduate students supervised or co-supervised

Ph.D.: Paula Watt (Funded R.A., L.A.N.L.), Paul Eberly (Funded R.A., L.A.N.L.), Eric McDonald (Funded R.A., N.S.F., NASA; graduate 12/94), Carol Treadwell (Funded R.A., D.O.E/L.A.N.L. & NASA), Tom Bullard

M.S.: Janet Hurley (Funded R.A., L.A.N.L.), Cristina Terhune (defended 5/94, graduated 12/94), Karen Shaffran, Scott Aby, and Amy Ellwein

Thesis committees: John Appel, John Rogers, Merri Lisa Trigilio-Formento, Antonio Garcia, and Alan Gellis

Ph.D. Comprehensive exam committee: Shixin Wang

Undergraduate students supervised (NSF-REU program): Marsha Abernathy, Maria Elena Amza

Mark Miller

Courses taught

Fall: E&PS 486 - X-ray Mineralogy lab (16 enrolled)
E&PS 551 - Problems (1 enrolled)
E&PS 491 - Problems (1 enrolled)

Exam Committees: Paula Newcomer (MS), Al Meldrum (Ph.D.)

Horton Newsom

Course taught

Spring: Co taught E&PS 513 - Planetary materials and the evolution of the solar system
Lecture, E&PS 265 - "The origin of the Moon", Aug. 30, 1994 and "Asteroid evolution," Nov. 3, 1994.

Research advisor for the following students:

Ph.D. students:

Phillip Noll, Jr.
Completed thesis entitled: Siderophile and chalcophile trace element concentrations in young subduction-related volcanics: Implications for continental crust formation and crust-mantle evolution.

MS students: Stephanie Maehr (supported by NSF)

Undergraduates: Windy Jaeger and Charles Hibbets (supported by NSF)

Committee member: Peter McCarville (MS)

Matthew Nyman

Course taught

Fall: E&PS 303 - Metamorphic Petrology (14 enrolled)

James Papike

Courses taught

Spring: EPS 513 - Planetary Materials and the Evolution of the Solar System (6 enrolled)

Fall: EPS 265 - Exploring the Solar System (20 enrolled)

Ph.D. Graduate Advisor for Aurora Pun, and Mark Servilla.
Support provided by NASA NGT-70223 (Pun) and IGPP Grant (Servilla)

M.S. Graduate Advisor for Grant Fowler. Support provided by NASA NAG 9-497 and NASA NAGW-3347. Graduated with M.S. July 1994.

M.S. Graduate Advisor for Laurie Bowman. Supported by IOM

Ph.D. Exam Committees served on: Shixan Wang, and Andy Heckert

M.S. Exam Committees served on: Grant Fowler M.S. Thesis Defense

Thesis/Dissertation Committees served on: Laurie Bowman (advisor), Charles Bryan, Tracy Cascadden, Grant Fowler (advisor), Nicholaus Hanowski, James Karner, Jane Pedrick, Aurora Pun (advisor), Mark Servilla (advisor), Shixan Wang

Guest Lectures: EPS 301 - Mineralogy I (R. Ewing)
EPS 321L - Introductory Mineralogy (C. Klein)

Frank J. Pazzaglia

Courses taught

Fall: E&PS 516 - Selected Topics in Geomorphology (11 enrolled)
E&PS 484 - Guest lecturer for Soil Genesis

Undergraduate student supervised

Heather Gustafson - REU student

Graduate students supervised

M.S.: Merri-Lisa Formento-Trigilio and Anthony Garcia
Ph.D.: Allan Gellis

Thesis committees

Ph.D.: Carol Treadwell and Tim Wawrzyniec
M.S.: Karen Shaffran, Scott Aby, Janet Hurley, Jerry Bird, Amy Ellwein, and Andrika Kuhle

Frans Rietmeijer

Guest Lecturer

"Interplanetary Dust Particles-IDPs," E&PS 265 - Exploring the Solar System.

Research Assistant Training

Analytical electron microscope analysis of condensed nanoparticles.

Gary Smith

Courses taught

Spring: E&PS 544 - Sedimentary Petrology (7 enrolled)
E&PS 450 - Volcanology, (6 enrolled)
Guest lecture in EPS 102 - Historical Geology

Summer: Field Studies in Volcanology, Geology 451L, (15 enrolled)

Fall: E&PS 102 - Historical Geology (37 enrolled)
Guest lectures in E&PS 304 - Sedimentology and Stratigraphy

Graduate Students Supervised

Ph.D.: Michael Grubensky, and Deborah Bergfeld (co-advised with F. Goff)
M.S.: Kyle Gay, Andrika Kuhle, Alexis Lavine, John Rogers, and Judith Stoopes

Thesis/dissertation committees of completed students

Richard Livaccari (Ph.D., 1994)
Eric McDonald (Ph.D., 1994)

Service on other thesis/dissertation committees

Ph.D.: Carol Treadwell, Paula Watt, Paul Eberly, Mark Servilla, Tracey Cascadden, Thomas Bullard and Thomas Wilch (NMIT)
M.S.: Joseph Andrew, Todd LaMaskin, Janet Hurley, Marc Melker, Hope Mullally and Scott Aby

Service on M.S./Ph.D. Examination committees: Scott Aby, Donald Cederquist, Alexis Lavine and Marc Melker

Students supported on research assistantships: Michael Grubensky, Alexis Lavine, Marc Melker and Tim Wawryniec

Michael N. Spilde

Courses taught

Spring: E&PS 552 - (Problems Class) "Advanced Microprobe Analysis" (6 enrolled)

Fall: E&PS 551 - (Problems Class) "Tutorial Training on the Electron Microprobe" (with A. Brearley), (1 enrolled)
E&PS 265. Guest lecture on Electron Microbeam Analytical Techniques, December 6, 1994.
IOM Research Seminar, Lecture on "Applications of elemental mapping on the electron microprobe." May, 1994.
Conducted Microprobe & SEM lab tours and demonstrations for Anthropology 570 class, November 3, 1994.
Conducted Microprobe & SEM lab tours and demonstrations for E&PS 265 class, December 6, 1994.

Tutorial training

Tutorial training on the SEM for 3 Departmental and 1 NM Tech undergraduate/ graduate students and 1 faculty member from NM Tech.

Tutorial training on the microprobe for 1 Departmental and 1 NM Tech faculty.

Lumin Wang

Courses taught

Spring: E&PS 552 - Problems (4 graduate students enrolled)

Fall: E&PS 538 - Analytical Electron Microscopy (8 graduate students enrolled)

Graduate Students advised:

Ph.D. Candidate (co-advisor): Shixin Wang (R.C. Ewing is advisor)
M.S. Candidate (committee member): Paula Newcomer
Ph.D. examination committee: David Reicher (Dept. of Electrical and Computer Engineering)

Lee A. Woodward

Courses taught

Spring: E&PS 255L - N.M. Field Geology, (27 enrolled)
E&PS 471L - Mineral Deposits (9 enrolled)

Fall: E&PS 255L - N.M. Field Geology (22 enrolled)
E&PS 493 - Independent Study (1 enrolled)

Crayton J. Yapp

Courses taught

Spring: E&PS 405 - Thermodynamic and Physical Foundations of Geochemistry (4 enrolled)
E&PS 410 - Fundamentals of Geochemistry (10 enrolled)
E&PS 699 - Dissertation (1 enrolled)

Fall: E&PS 101 - Physical Geology (112 enrolled)
E&PS 551 - Independent Problems (1 enrolled)
E&PS 699 - Dissertation (1 enrolled)

Graduate students

Ph.D. co-supervisor for David Ward
Continued training in stable isotope laboratory methods for Bruce Allen and Jennifer Loomis for post-doctoral and Ph.D. research
M.S. comprehensive exam committee - Scott Aby, Stephanie Maehr, Laurie Bowman, Carter Dunaway
M.S. temporary advisor - Carter Dunaway
M.S. thesis defense - Grant Fowler (reader)
Ph.D. dissertation defense - Dan Larsen (reader), Robert Finch (reader)
Ph.D. dissertation committees - David Ward (co-chair), Dan Larsen (reader), Robert Finch (reader), Aurora Pun (reader), Charles Bryan (reader), Chris White (reader), Jennifer Loomis (reader)

2. 1994 PUBLICATIONS

Book Written

Rocks and minerals: exercises in crystallography, mineralogy, and hand-specimen petrology, 2nd, revised edition
C. Klein
John Wiley & Sons, New York, 405 p. (1994)

Books Edited

Mogollon slope, west-central New Mexico and east-central Arizona
R.M. Chamberlin, B.S. Kues, S.M. Cather, J.M. Barber and W.C. McIntosh (editors)
New Mexico Geological Society, Guidebook 45, 335 p. (1994)

Analysis of interplanetary dust
F.J.M. Rietmeijer**, M.E. Zolensky, T.L. Wilson & G.J. Flynn (editors)
American Institute of Physics, Conference Proceedings, v. 310, 357 p. (1994)

Articles in Refereed Journals

Paleomagnetic tests of Pacific Plate reconstructions and implications for motion between hotspots
G.D. Acton** and R.G. Gordon
Science, v. 263, p. 1246-1254 (1994)

Studying oceanic plate motions with magnetic data
G.D. Acton** and K.E. Petronotis**
Eos, v. 75, p. 49, 52 (1994)

Factors and processes governing the ^{14}C content of carbonate in desert soils
R. Amundson, Y. Wang, O. Chadwick, S. Tumbore, and L. McFadden, E. McDonald*, S.Wells and M. DeNiro
Earth and Planetary Science Letters, v. 125, p. 385-405 (1994)

Variations in magma source regions during large-scale continental extension, Death Valley region, western U.S.
Y. Asmerom, S. Jacobsen and B. Wernicke
Earth and Planetary Science Letters, v. 125, p. 235-254 (1994)

Transformation mechanisms of San Carlos olivine to β-phase under subduction zone conditions
A.J. Brearley** and D.C. Rubie
Physics of the Earth and Planetary Interiors, v. 86, p. 45-67 (1994)

The Teton fault, Wyoming: topographic signature, neotectonics, and mechanisms of deformation
J.O.D. Byrd, R.B. Smith and J.W. Geissman
Journal of Geophysical Research, v. 99, no. B10, p. 20,095-20,122 (1994)

Geochemical evidence for enhanced preservation of organic matter in the oxygen minimum zone of the continental margin of northern California during the late Pleistocene
W.E. Dean, J.V. Gardner and R.Y. Anderson
Paleoceanography, v. 9, p. 47-61 (1994)

Petrographic analysis of samples from the uranium deposit at Oklo, Republic of Gabon
P. Eberly*, J. Janeczek and R.C. Ewing
Radiochimica Acta, v. 66/67, p. 455-461 (1994)

Energetics of radiation damage in natural zircon ($ZrSiO_4$)
S. Ellsworth, A. Navrotsky and R.C. Ewing
Physics and Chemistry of Minerals, v. 21, p. 140-149 (1994)

Siliceous volcanic centers as guides to mineral exploration: review and summary
W.E. Elston
Economic Geology, v. 89, p. 1662-1686 (1994)

The metamict state: 1993-the centennial
R.C. Ewing
Nuclear Instruments and Methods in Physics Research B91, p. 22-29 (1994)

Materials science of radioactive waste forms
R.C. Ewing and W. Lutze
Materials Research Society Bulletin, v. 19, p. 16-18 (1994)

Diogenites as asteroidal cumulates: insights from orthopyroxene major and minor element chemistry
G.W. Fowler*, J.J. Papike, M.N. Spilde** and C.K. Shearer**
Geochimica et Cosmochimica Acta, v. 58, p. 3921-3929 (1994)

Generation of nanometer-size fullerene particles via vapor condensation
A.S. Gurav, T.T. Kodas and L.M. Wang**
Chemical Physics Letters, v. 218, p. 304-308 (1994)

Paleomagnetism of the Middle Proterozoic Laramide anorthosite complex and Sherman Granite, southern Laramie Range, Wyoming and Colorado
S.S. Harlan, L.W. Snee, J.W. Geissman and A.J. Brearley**
Journal of Geophysical Research, v. 99, no. B9, p. 17,997-18,020 (1994)

Radiation effects in ceramics
L.W. Hobbs, F.W. Clinard Jr., S.J. Zinkle and R.C. Ewing
Journal of Nuclear Materials, v. 216, p. 291-321 (1994)

Mapping the Piute Mountains, CA, with thermal infrared Multispectral scanner (TIMS) data
S.J. Hook, K.E. Karlstrom, C. Miller and K. McCaffrey
Journal of Geophysical Research, v. 99, p. 15605-15622 (1994)

Petrology of FeO-poor, porphyritic pyroxene chondrules in the Semarkona chondrite
R.H. Jones**
Geochimica et Cosmochimica Acta, v. 58, p. 5325-5340 (1994)

Restoration of Laramide right-lateral strike slip in northern New Mexico by using Proterozoic piercing points: tectonic implications from the Proterozoic to the Cenozoic: reply
K.E. Karlstrom and C.G. Daniel*
Geology, v. 22, p. 863-864 (1994)

An anomalously large Exogyra from the Paguate Sandstone Tongue of the Dakota Sandstone (Cretaceous, Middle Cenomanian)
B.S. Kues and O.J. Anderson
New Mexico Geology, v. 16, p. 49-54 (1994)

Geology of Prisoners Rock and the Peninsula: Pleistocene hydrovolcanism in the Tule Lake Basin, northeastern California
A. Lavine*
California Geology, v. 47, p. 93-103 (1994)

Deep crustal structure of central Mexico derived from interpretation of Bouger gravity anomaly data
R.S. Molina-Garza** and J. Urrutia-Fucugauchi
Journal of Geodynamics, v. 4, p. 181-201 (1994)

Concordant paleomagnetic directions from the Tehuantepec Isthmus: constraints on the Neogene evolution of the North American-Caribbean plate boundary
R.S. Molina-Garza**, J. Urrutia-Fucugauchi and R. Van der Voo
Tectonophysics, v. 235, p. 339-346 (1994)

Mesoproterozoic contractional orogeny in western North America: evidence from ca. 1.4 Ga plutons
M.W. Nyman**, K.E. Karlstrom, E. Kirby* and G.M. Graybard
Geology, v. 22, p. 901-904 (1994)

Orthopyroxene as a recorder of Lunar crust evolution: an ion microprobe investigation of Mg-suite novites
J.J. Papike, G.W. Fowler* and C.K. Shearer **
American Mineralogist, v. 79, p. 796-800 (1994)

Isotopic evidence for preservaton of lithospheric mantle during the Sevier-Laramide orogeny, western U.S.: comment and reply
F.V. Perry and R.F. Livaccari**
Geology, v. 22, p. 671-672 (1994)

Exsolution in ferromagnesian olivine of the Divnoe meteorite
M.I. Petaev and A.J. Brearley**
Science, v. 266, p. 1545-1547 (1994)

A 57-Ma Pacific plate paleomagnetic pole determined from a skewness analysis of crossings of marine magnetic anomaly 25r.
K.E. Petronotis**, R.G. Gordon and G.D. Acton**
Geophysical Journal International (1994)

Paleomagnetic record of a geomagnetic field reversal from late Miocene mafic Intrusions, southern Nevada
C.D. Ratcliff*, J.W. Geissman, F.V. Perry, B.M. Crowe and P.K. Zeitler
Science, v. 266, p. 412-416 (1994)

Synkinematic contact metasomatism: implications for the timing of pluton emplacement and regional deformation in the Scanlon Shear zone, southeastern California
D.A. Rothstein, K.E. Karlstrom, T.D. Hoisch and J. Morrison
Journal of Metamorphic Geology, v. 12, p. 709-721 (1994)

Phase transitions between β and γ $(Mg, Fe)_2 SiO_4$ in the Earth's mantle: mechanisms and rheological implications
D.C. Rubie and A.J. Brearley**
Science, v. 264, p. 1445-1448 (1994)

Classification, metamorphic history and pre-metamorphic composition of chondrules
E.R.D. Scott, R.H. Jones** and A.E. Rubin
Geochimica et Cosmochimica Acta, v. 58, p. 1203-1209 (1994)

Sector-zoned aegirine from the Ilimaussaq alkaline intrusion, south Greenland: implications for trace-element behavior in pyroxene
C.K. Shearer** and L.M. Larsen
American Mineralogist, v. 79, p. 340-352 (1994)

The systematics of light lithophile elements (Li, Be, and B) in Lunar picritic glasses: implications for basaltic magmetism on the Moon and the origin of the Moon
C.K. Shearer**, G.D. Layne** and J.J. Papike
Geochimica et Cosmochimica Acta, v. 58, p. 5349-5362 (1994)

Climatic influences on continental sedimentation during late-stage filling of an extensional basin, southeastern Arizona
G.A. Smith
Geological Society of America Bulletin, v. 106, p. 1212-1228 (1994)

The radiation-induced crystalline-to-amorphous transition in zircon
W.J. Weber, R.C. Ewing and L.M. Wang**
Journal of Materials Research, v. 9, p. 688-698 (1994)

Effect of temperature and recoil-energy spectra on irradiation-induced amorphization in $Ca_2La_8(SiO_4)_6O_2$
W.J. Weber and L.M. Wang**
Nuclear Instruments and Methods in Physical Research (B), v. 91, p. 63-66 (1994)

Relation of gold placers in Montana to bedrock geology-implications for lode exploration
L.A. Woodward
Northwest Geology, v. 23, p. 45-60 (1994)

Restoration of Laramide right-lateral strike slip in northern New Mexico by using Proterozoic piercing points: tectonic implications from the Proterozoic to the Cenozoic: Comment
L.A. Woodward
Geology, v. 22, p. 862-863 (1994)

Productivity of pre-vascular continental biota inferred from the $Fe(CO_3)$ OH content of goethite
C.J. Yapp and H. Poths**
Nature, v. 368, p. 49-51 (1994)

Articles in Conference and Symposium Proceedings

Dislocation loops in spinel crystals irradiated successively with deep and shallow ion implants
R.X.Ai, N. Bordes**, E.A. Cooper, K.E. Sickafus, R.C. Ewing and M. Nastasi
Materials Synthesis and Processing Using Ion Beams, Proceedings of the Materials Research Society, v. 316, p. 147-151 (1994).

Spatial and temporal variations in methane distribution at the ground water/surface water interface in headwater catchments
M.A. Baker, C.N. Dahm, H.M. Valett, J.A. Morrice, K.S. Henry, M.E. Campana, and G.J. Wroblicky
Proceedings, Second International Conference on Ground Water Ecology, American Water Resource Association, p. 29-37 (1994)

Post-impact hydrothermal systems: the Manson impact structure
L.J. Crossey and P. McCarville*
Proceedings of the VIIth International Symposium on the Observation of the Continental Crust through Driling, p. 211-214 (1994)

Stratigraphic nomenclature of the Tertiary of western New Mexico and eastern Arizona
W.E. Elston
Mogollon slope, west-central New Mexico (R.M. Chamberlin et al., eds), New Mexico Geological Society, Guidebook 45, p. 267-268 (1994)

Formation, oxidation and alteration of ianthinite
R.J. Finch* and R.C. Ewing
Scientific Basis for Nuclear Waste Management 17, Proceedings of the Materials Research Society, v. 333, p. 625-630 (1994)

Soil-geomorphic studies in the Cajon pass area
J.B.J. Harrison and L.D. McFadden
Geological Investigations of an Active Margin, 1994 Geological Society of America Cordilleran Section Fieldtrip Guidebook, p. 156-160 (1994)

Ground water-surface water exchange in two headwater streams
K.S. Henry, H.M. Valett, J.A. Morrice, C.N. Dahm, G.J. Wroblicky*, M.A. Santisteven and M.E. Campana
Proceedings, Second International Conference on Ground Water Ecology, American Water Resource Association, p. 319-328 (1994)

Formation of secondary uranium minerals in the Koongarra deposit, Australia
H. Isobe, R.C. Ewing and T. Murakami
Scientific Basis for Nuclear Waste Management 17, Procedings of the Materials Research Society, v. 333, p. 653-660 (1994)

Mineralogy of the Bangombé reactor zone, Gabon: report of preliminary results
J. Janeczek and R.C. Ewing
Proceedings of the Third Joint CEC-CEA Oklo Working Group, EUR Series of the Commission of the European Communities, p. 181-208 (1994)

Geochemical study of cores from the Manson impact structure
B.L. Joliff, K.M. Rockow, R.L. Kovotev, L.A. Haskin, P. McCarville* and L.J. Crossey
Proceedings of the VIIth International Symposium on the Observation of the Continental Crust through Drilling, p. 215-218 (1994)

Soil and slip rates along the northern San Jacinto fault
K. Kendrick, L.D. McFadden and D. Morton
Geological Investigations of an Active Margin, 1994, Geological Society of America Cordilleran Section Fieldtrip Guidebook, p. 146-151 (1994)

Proterozoic iron-formations [Chapter 10]
C. Klein and N.J. Beukes
Proterozoic Crustal Evolution (K.C. Condie, ed.), Elsevier Publicatons, p. 383-418 (1993)

Fauna from a small Pennsylvanian exposure near Luna, New Mexico
B.S. Kues
Mogollon slope, west-central New Mexico, (R.M. Chamberlin et al., eds.), New Mexico Geological Society, Guidebook 45, p. 80-82 (1994)

An integrated core and subsurface study of intracaldera sedimentation and diagenesis in the Creede Formation, CO
D. Larsen* and L.J. Crossey
Proceedings of the VIIth International Symposium on the Observation of the Continental Crust through Drilling, p. 29-32 (1994)

Triassic stratigraphy in the Lucero uplift, Cibola, Valencia and Socorro Counties, New Mexico
S.G. Lucas and A.B. Heckert*
Mogollon slope, west-central New Mexico (R.M. Chamberlin et al., eds.), New Mexico Geological Society, Guidebook 45, p. 241-254 (1994)

Permian strata at Horse Mountain
S.G. Lucas and B.S. Kues
Mogollon slope, west-central New Mexico (R.M. Chamberlin et al., eds.), New Mexico Geological Society, Guidebook 45, p. 106-108 (1994)

Results of the five year MIIT in situ corrosion experiment with "Pamela" Glass
W. Lutze, R.C. Ewing and S. Kaser**
Proceedings of a workshop on "In-situ testing of radioactive waste forms and engineered barriers," Studiecentrum voor Kernenergie Centre D'Energie Nucléaire, Priorij, Belgium, p. (1994)

Quaternary stratigraphy of the Providence Mountains piedmont and preliminary age estimates and regional stratigraphic correlations of Quaternary deposits in the eastern Mojave Desert, California
E. McDonald* and L.D. McFadden
Geological Investigations of an Active Margin, 1994 Geological Society of America Cordilleran Section Fieldtrip Guidebook, p. 205-210 (1994)

Soil, tectonic and climatic geomorphologic investigations in the San Augustin Plains area, NM
L.D. McFadden, R.P. Lozinsky, C.M. Menges, J.R. Miller and J. Ritter
Mogollon slope, west-central New Mexico (R.M. Chamberlin, et al., eds.), New Mexico Geological Society, Guidebook 45, p. 12-14. (1994)

Formation and pedogenic isotope studies of soils on beach ridges of Silver Lake playa, Mojave Desert, California
L.D. McFadden, S.G. Wells, W.J. Brown, Y. Enzel, R. Amundsen, Y. Wang and S. Trumbore
Geological Investiations of an Active Margin, 1994 Geological Society of America Cordilleran Section Fieldtrip Guidebook, p. 156-160 (1994)

Windows of opportunity in the NASA Johnson Space Center cosmic dust collection
F.J.M. Rietmeijer** and J.L. Warren
Analysis of Interplanetary Dust, American Institute of Physics, Conference Proceedings, v. 310, p. 255-275 (1994)

A proposal for a petrological classification scheme of carbonaceous chondritic micrometeorites F.J.M. Rietmeijer**
Analysis of Interplanetary Dust, American Institute of Physics, Conference Proceedings, v. 310, p. 231-240 (1994)

A proposition for the classification of carbonaceous chondritic micrometeorites
F.J.M. Rietmeijer**
Workshop on the analysis of interplanetary dust particles, Lunar and Planetary Institute, Technical Report 94-02, p. 44-47 (1994)

Quaternary stratigraphy, tectonic geomorphology, and fluvial evolution of the western Olympic Peninsula, Washington
G.D. Thackery and F.J. Pazzaglia
Guides to Field trips, 1994 Geological Society of America Annual Meeting, Seattle, Washington, p. 2A-1-2A-30 (1994)

Amorphization and dynamic recovery of A_2BO_4 structure types during 1.5 MeV krypton ion-beam irradiation
L.M. Wang**, W.L. Gong and R.C. Ewing
Materials Synthesis and Processing Using Ion Beams, Proceedings of the Materials Research Society, v. 316, p. 247-252 (1994)

Quantitative analysis of displacement cascade damage in ion irradiated $TlBa_2CaCu_2O_7$ superconductor by digital HRTEM
L.M. Wang**, P.P. Newcomer*, R.C. Ewing and B. Morosin
Proceedings of the 13th International Congress on Electron Microscopy, p. 957-958 (1994)

Detailed characterization and preliminary adsorption model for materials for an intermediate-scale reactive-transport experiment
D.B. Ward*, C.R. Bryan* and M.D. Siegel
Proceedings of the 1994 International Conference on High Level Radioactive Waste Management, American Nuclear Society, p. 2048-2062 (1994)

Ion-beam-driven amorphization of $Ca_2La_8(SiO_4)_6O_2$ crystals
W.J. Weber, N.J. Hess and L.M. Wang**
Materials Research Society Symposia Proceedings, v. 321, p. 435-440 (1994)

A brief summary of the late Quaternary history of pluvial Lake Mojave, eastern California
S.G. Wells, W.J. Brown, Y. Enzel, R.Y Anderson and L.D. McFadden
Geological Investigations of an Active Margin, 1994 Geological Society of America Cordilleran Section Fieldtrip Guidebook, p. 182-188 (1994)

Quaternary geology of a polycyclic volcano: Black Tank volcanic center, Cima volcanic field, California
S.G. Wells, L.D. McFadden, J. Geissman, C.T. Olinger, and C. Renault
Geological Investigations of an Active Margin, 1994 Geological Society of America Cordilleran Section Fieldtrip Guidebook, p. 195-200 (1994)

Use of cosmogenic 3He to understand desert pavement formation
S.G. Wells, L.D. McFadden, C.T. Olinger and J. Poths
Geological Investigations of an Active Margin, 1994 Geological Society of America Cordilleran Section Fieldtrip Guidebook, p. 201-205 (1994)

Simulation of stream-groundwater exchange and near-stream flow paths of two first order mountain streams using MODFLOW
G.J. Wroblicky*, M.E. Campana, C.N. Dahm, H.M. Valett, J.A. Morrice, K.S. Henry and M.A. Baker
Proceedings, Second International Conference on Ground Water Ecology, American Water Resource Association, p. 187-196 (1994)

Effects of radiation exposure on SRL 131 composition glass in a stream environment
D.J. Wronkiewicz, C.R. Bradley, L.M. Wang** and J.K. Bates
Materials Research Society Symposia Proceedings, v. 333, p. 259-267 (1994)

Synthesis and characterization of metal silicide/silicon carbide composites by low temperature solid-state reactions
D. Zeng, M.J. Hampden-Smith and L.M. Wang**
Materials Research Society Symposia Proceedings, v. 322, p. 127-131 (1994)

Book Chapters

In situ TEM observation of radiation-induced amorphization of crystals with apatite structure
L.M. Wang**, M. Cameron, W.J. Weber, K.D. Crowley and R.C. Ewing
Hydroxyapatite and Related Materials (P. Brown and B. Constantze, eds.), CRC Press, p. 243-249 (1994)

Pennsylvanian glacioeustasy recorded in a carbonate ramp succession, ancestral Rocky Mountains, New Mexico
T.L. Wiberg and G.A. Smith
Pangea Global Environments and Resources, Canadian Society of Petroleum Geologists, Memoir 17, p. 545-556 (1994)

Geologic Map

Surficial geology of the Delta 7 1/2 minute quadrangle, Harford County, Maryland, and York County, Pennsylvania
F.J. Pazzaglia and E.T. Cleaves
Maryland Geological Survey Report of Investigations, map scale 1:24,000 (1994)

Book Reviews

[Review of] Frank N. Sampaonaro and Paul J. Vanderwood, "War scare on the Rio Grande. Robert Runyon's photographs of the border conflict, 1913-1916," Austin, TX
M.S. Barger**
Views: The Newsletter of the Visual Materials Section of the Society of American Archivists, v. 9, Dec. 1994, p. 8 (1994)

[Review of] Henry Wilhem with Carol Brower, "The permanence and core of color photographs: Tradiitional and digital color mints, color negatives, slides, and motion pictures," Grinnel, Iowa, Preservation Publishing Co.
M.S. Barger **
Infinity and Views, Special Issue (Spring, 1994), p. 5-7

[Review of] Field Guide to the Paleozoic Section of the San Andres Mountains, SEPM Publication 94-35
M. Elrick
Journal of Sedimentary Research, v. 64, p. 583 (1994)

Other Publications

Ancient lakes: a tool for understanding climatic change
B.D. Allen**
Lite Geology, N.M. Bureau of Mines and Mineral Resources, Summer, 1994

Editors' Message
R.M. Chamberlin, B.S. Kues, S.M. Cather, J.M. Barber and W.C. McIntosh
Mogollon slope, west-central New Mexico and east-central Arizona, New Mexico Geological Society, Guidebook 45, p. vii (1994)

Memorial to Vincent Cooper Kelley, 1904-1988
W.E. Elston
Geological Society of America Memorials, v. 24, p. 73-76 (1994)

A special issue on volcanic centers as targets for mineral exploration-Preface
W.E. Elston and G.S. Plumlee
Economic Geology, v. 89, p. 66 (1994)

The new Remuruit chondrite group [editorial]
R.H. Jones**
Meteoritics, v. 29, p. 151 (1994)

Stuart A. Northrop (1904-1994)
B.S. Kues
New Mexico Geology, v. 16, p. 14 (1994)

Preservation of the Kirk Bryan Award to William B. Bull-citation
L.D. McFadden and P.W. Birkeland
Geological Society of America Today, March, 1994, p. 84-85 (1994)

Technical Reports

Investigation into durability of natural adobe plasters, Part I. Initial materials characterization and correlations with oval tradition
M.S. Barger**
Final Report, national Endowment for the Arts Grant #93-4221-0013 (1994)

Kinetics and thermodynamic studies of uranium minerals; assessment of the long-term evolution of spent nuclear fuel
I. Casas, J. Bruno, E. Cera, R.J. Finch* and R.C. Ewing
Svensk Kärnbränslehantering AB (Swedish Nuclear Fuel and Waste Mangement Co.), Technical Report 94-16, 73p.

Petrography, scanning electron microscopy and electron microprobe analysis of samples from the uranium deposits at Oklo and Bangombé, Republic of Gabon
P.O. Eberly*, J. Janeczek and R.C. Ewing
Nuclear Regulatory Commission, Contract NRC-04-92-053, 85 p. (1994)

Committee on Remediation of Buried and Tank Wastes [R.C. Ewing, member] (1994) A letter report ot Mr. Thomas P. Grumbly, Assistant Secretary for Environmental Restoration and Waste Management, Department of Energy on the application of systems-analysis methods and perspectives to the tank-remediation program at the Hanford Reservation, Board on Radioactive Waste Managment, Commission on Geosciences, Environment, and Resources, National Research Council, 6 pages, February 3, 1994.

Committee on Remediation of Buried and Tank Wastes [R.C. Ewing, member] (1994) A letter report to Mr. John E. Baublitz, Acting Deputy Assistant Secretary for Environmental Restoration, Department of Energy, on the surface disposal area at the Idaho National Engineering Laboratory, Board on Radioactive Waste Management, Commission on Geosciences, Environment, and Resources, National Research Council, 2 pages, July 8, 1994.

Uraninite from Cigar Lake: Drill Core 220-FH-18. Final Report of the AECL/SKB Cigar Lake Analog Study
J. Janeczek and R.C. Ewing
AECL-10851, COG-93-147, SKB TR 94-04, p. 93-109

Characterization of materials for a creative transport model validation experiment: interim report on the Caisson Experiment
M.D. Siegel, D.B. Ward*, C.R. Bryan* and W.C. Cheng
Sandia National Laboratories, Report SAND 94-0189, 277 p. (1994)

Abstracts

Genetic algorithm optimizations for scafloor spreading rates and geomagnetic polerity time scales
G.D. Acton and S.P. Huestis
EOS, v. 75, p. 203 (1994)

Century- and millenium-scale stream discharge and lake freshening events in American Southwest during last glacial maximum
B.D. Allen** and R.Y. Anderson
EOS, v. 75, p. 333 (1994)

Abrupt shifts in Stage II climate: evidence for linkage between eastern Pacific and western North America
B.D. Allen**, R.Y. Anderson, J.V. Gardner and W.E. Dean
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A255 (1994)

Processes of vertical accretion in the stone-free zone below desert pavements
K.C. Anderson, S.G. Wells, R.C. Graham and L.D. McFadden
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A87 (1994)

Geologically persistent patterns of sub-Milankovitch-band climatic variability in western North America
R.Y. Anderson
EOS, v. 75, p. 33 (1994)

Alkalic basalt through tholeiitic basalt to basaltic andesite compositons in the intermediate episode of the quaternary Zuni-Bandera volcanic field, NM
J.E. Andrew* and A.M. Kudo
EOS, v. 75, p. 732 (1994)

Temporal, spatial, and chemical pattern of Quaternary basaltic volcanism in the Zuni-Bandera volcanic field, Cibola County, New Mexico
J.E. Andrew* and A.M. Kudo
New Mexico Geology, v. 16, p. 60 (1994)

Proterozoic and Cenozoic deformational history of the northern Sandia Mountains, New Mexico
C.L. Andronicos* and K.E. Karlstrom
New Mexico Geology, v. 16, p. 82 (1994)

Geochronology and paleomagnetism of the Quaternary Potrillo volcanic field, Rio Grande rift, New Mexico
E.Y. Anthony, W.C. McIntosh, J. Poths, W.J.W. Williams*, M. Whitelow and J.W. Geissman
Eighth International Conference on Geochronology, Cosmochronolgy and Isotope Geology, Berkeley (1994)

Re-Os isotopic systematics of rift basalts, Death Valley, CA
Y. Asmerom and R. Walker
EOS, v. 75, p. 741 (1994)

Carbon dioxide and methane dynamics at the ground water/surface water interface
M.A. Baker, H.M. Valett, C.N. Dahm, J.A. Morrice and M.E. Campana
EOS, v. 75, p. 260 (1994)

Materials characterization of natural adobe plasters: new approaches for preservation strategies based on traditional practice
M.S. Barger**
Abstracts, Material Issues in Art and Archaeology IV, Cancun, Mexico, May 16-20, 1994, Materials Research Society, no pagination.

Evolution of the hydrologic model for the Creede ore deposit in view of scientific drilling in the moat of the Creede caldera
P.B. Barton, P.M. Bethke, D.O. Hayba, D. Larsen*, R.O. Rye and T.A. Steven
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A399-400 (1994)

Application of channeling techniques and high resolution transmission electron microscopy to ion-beam damaged zircon
N. Bordes and R.C. Ewing
Fall meeting of the Materials Research Society, Boston, MA, November 30, p. 710 (1994)

Study of the microstructure in $MgAl_2O_4$ spinel after ion irradiation
N. Bordes, R.C. Ewing, E.A. Cooper, K.E. Sickafus
17th ASTM Symposium on Effects of Radiation on Materials, Sun Valley, Idaho, June 20-23, p. 69 (1994)

Ion-beam and electron-beam induced amorphization in berlinite
N. Bordes and R.C. Ewing
Fall meeting of the Materials Research Society, Boston, MA, November 30, p. 708 (1994)

Thermochronologic constraints on Proterozoic lithospheric evolution, southwestern U.S.
S.A. Bowring and K.E. Karlstrom
Geological Society of America, Abstracts with Programs, v. 26, no. 6, p. 20 (1994)

Late Quaternary deformation of fluvial terraces at the Cascadia convergent margin, northwest Washington State
M.T. Brandon and F.J. Pazzaglia
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. 524 (1994)

Metamorphic effects in the matrices of CO_3 chrondrites: compositional and mineralogical variations
A.J. Brearley**
Lunar and Planetary Sciences 25, p. 165-166 (1994)

Chondrule matrix relationships in chondritic meteorites
A.J. Brearley**
Abstract Volume, Chondrules and the Protoplanetary Disk, p. 3-4 (1994)

Metamorphism in the CO3 chondrites: trace element behavior in matrices and rims
A.J. Brearly**, S. Bajt and S.R. Sutton
Lunar and Planetary Sciences 25, p. 167-168 (1994)

Mechanisms of phase transformations involving β-phase and γ-spinel at high pressure
A.J. Brearley** and D.C. Rubie
Terra Abstracts, v. 6, p. 7-8 (1994)

The spinel to modified spinel transformation in Mg_2SiO_4: the effect of temperature
A.J. Brearley** and D.C. Rubie
EOS, v. 75, p. 651 (1994)

The assessment of the long-term evolution of spent nuclear fuel matrix by kinetic and thermodynamic studies of natural uranium minerals
J. Bruno, I. Casas, E. Cera, R.C. Ewing, R.J. Finch* and L.O. Werme
XVIII International Symposium on the Scientific Basis for Nuclear Waste Management, Kyoto, Japan, October 23-27, p. 361-362 (1994)

High resolution transmission electron microscopy of martensitically produced spinel lamellae in olivine
P.C. Burnley and A.J. Brearley**
EOS, v. 75, p. 696 (1994)

Hyporheic zone mixing and residence time distributions
M.E. Campana, G.J. Wroblicky*, J.A. Morrice, C.N. Dahm and H.M. Valett
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A286 (1994)

El Calderon, a polygenetic basaltic cinder cone in the Zuni-Bandera volcanic field, Cibola County, New Mexico: paleomagnetic and geochemical evidence
T.E. Cascadden*, J. Carney, A.W. Laughlin, K. Reid and A.M. Kudo
New Mexico Geology, v. 16, p. 61 (1994)

Quaternary polygenetic basaltic volcanism at El Calderon (EC), Zuni Bandera volcanic field NM: paleomagnetic and geochemical evidence
T.E. Cascadden*, A.M. Kudo, J.W. Geissman, H.J. Jenkins*, J.W. Husler**, J. Carney*, A.W. Laughlin and K. Reid*
EOS, v. 75, p. 732 (1994)

Post-impact fluid flow in complex craters: an example from the Manson impact structure
L.J. Crossey, A.M. Kudo and P. McCarville*
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A403 (1994)

Ground water/surface water interactions in stream ecosystems
C.N. Dahm, H.M. Valett, J. Morrice, M. Baker, M.E. Campana and G. Wroblicky*
EOS, v. 75, p. 37 (1994)

A high-resolution record of climatic change in Elk Lake, Minnesota for the last 1500 years
W.E. Dean, J.P. Bradbury, R.Y. Anderson, L.R. Bader and K. Dietrich-Rurup
U.S. Geological Survey, Open-File Report 94-578, p. 127 (1994)

Application of cathodoluminescence and minor-trace element micro-analysis for deciphering the crystallization history of calcite from shallow crustal regimes
R.F. Denniston*, C.K. Shearer**, G.D. Layne**, and E.R. Gauerke*
EOS, v. 75, p. 371 (1994)

An ion microprobe study of trace element (REE, Sr, Mn) zoning in calcite from shallow crustal regimes
R.F. Denniston*, C.K. Shearer**, G.D. Layne** and D.T. Vaniman
EOS, v. 75, p. 698 (1994)

Precipitation of uraninite in chlorite-bearing veins of the hydrothermal alteration zone (*argile de pile*) of the natural nuclear reactor at Banbombé, Republic of Gabon
P.O. Eberly*, J. Janeczek and R.C. Ewing
XVIII International Symposium on the Scientific Basis for Nuclear Waste Management, Kyoto, Japan, October 23-27, p. 267-268 (1994)

Evaluation of the role of aerosolic dust in the evolution of a soil developed in rhyolitic alluvium atop the Pajarito Plateau, northern New Mexico
P.O. Eberly*, L.D. McFadden, P.M. Watt*, P. Longmire and D. Broxton
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A301 (1994)

Sequence stratigraphy of Middle Devonian ramp-to-basin carbonates of the eastern Great Basin
M. Elrick
Geological Society of America, Abstracts with Programs, v. 26, no. 2, p. 65 (1994)

Millenial-scale paleoclimate cycles in Paleozoic deep water carbonates, western U.S.
M. Elrick
AAPG Abstracts with Programs, v. 3, p. 144 (1994)

High-frequency paleoclimate cycles expressed in Paleozoic deep-water rhythmites, western U.S.
M. Elrick and L. Hinnov
EOS, v. 75, p. 99 (1994)

Crystalline ceramics: future uses as radioactive waste forms - a review and comparison
R. Ewing
American Chemical Society symposium on "Emerging Technologies in Hazardous Waste Management VI," Atlanta, Georgia, September 19-21, pages 641-644 (1994)

Radioactive waste forms: a review and comparison.
R.C. Ewing
Seminar on Radioactive Waste Management Practices and Issues in Developing Countires; International Atomic Energy Agency, Beijing, China, October 10-14, p. 36 (1994)

Amorphization of complex ceramics by heavy-particle irradiations
R.C. Ewing, L.M. Wang**, and W.J. Weber
Fall meeting of the Materials Research Society, Boston, MA, November 30, p. 706 (1994)

Paleomagnetism of the Middle Proterozoic Pikes Peak batholith, southern Front Range, Colorado
A.D. Feig*, J.W. Geissman, S.S. Harlan and R.S. Molina-Garza**
EOS, v. 75, p. 199 (1994)

The prediction of unknown uranyl oxide hydrate structure types: A comparison of calculated and measured XRD powder patterns
R.J. Finch*, F.C. Hawthorne and R.C. Ewing
XVIII International Symposium on the Scientific Basis for Nuclear Waste Management, Kyoto, Japan, October 23-27, p. 87-88 (1994)

The long-term stability of becquerelite
R.J. Finch*, J. Suksi and R.C. Ewing
XVIII International Symposium on the Scientific Basis for Nuclear Waste Management, Kyoto, Japan, October 23-27, p. 85-86 (1994)

Carbonate geochemistry of moat sediments of the Creede caldera, CO
J. Forsman*, D. Larsen* and L.J. Crossey
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A400 (1994)

SIMS analysis of orthopyroxene in diogenites: an attempt to define a fractionation sequence
G.W. Fowler*, J.J. Papike and C.K. Shearer**
Lunar and Planetary Science 25, p. 385-386 (1994)

Paleomagnetic data from Miocene volcanic rocks and intrusions in the Hoover Dam area, Nevada and Arizona, and implications for deformation along the SE extension of the Lake Mead fault system
J.W. Geissman
Geological Society of America, Abstracts with Programs, v. 26, no.7, p. 471-472 (1994)

Paleomagnetic contact and conglomerate tests on the age of magnetizations in the Mississippian Leadville Fm. and karst features, San Juan Mountains, CO
J.W. Geissman and current paleomagnetism class
EOS, v. 75, p. 189 (1994)

Paleomagnetic and rock magnetic investigations in Valles caldera CSOP experiments: implications for thermochemical processes attending caldera formation
J.W. Geissman and H.E. Mullally*
7th International Symposium, Observation of the Continental Crust through Drilling, Santa Fe, p. (1994)

Reservoir sedimentation and sediment sources, Lago Loiza Basin, P.R.
A.C. Gellis*
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A387 (1994)

Land use changes and reservoir sedimentation in the humid tropics, Puerto Rico
A.C. Gellis* and S. McIntyre
Program and Abstracts, 14th Annual American Geophysical Union Hydrology Days, April 5-8, 1994, Fort Collins, Colorado, Report no. 94.2, p. (1994)

A concordant Late Triassic paleomagnetic pole from the Uinta uplift, Utah
A.D. Gomez*, R.S. Molina-Garza** and J.W. Geissman
EOS, v. 75, p. 199 (1994)

The $AM_{21}O_{38}$ - crichtonite structure type as a host phase in crystalline waste form ceramics
W.L. Gong, R.C. Ewing, L.M. Wang** and H.S. Xie
XVIII International Symposium on the Scientific Basis for Nuclear Waste Management, Kyoto, Japan, October 23-27, p. 111-112 (1994)

New Mexico's oldest dinosaur
A.B. Heckert*, S.G. Lucas and A.P. Hunt
New Mexico Geological Society Annual Spring Meeting, Proceedings Volume, p. 53 (1994)

A late Carnian theropod from New Mexico: implications for the early evolution of Theropoda
A.B. Heckert*, S.G. Lucas and A.P. Hunt
Journal of Vertebrate Paleontology, v. 13, supplement, p. 28-29 (1994)

North America's most complete Late Carnian dinosaur: a derived theropod from the Chinle Group in west-central New Mexico
A.B. Heckert*, S.G. Lucas and A.P. Hunt
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A60 (1994)

New 1:24,000 geologic maps of early Proterozoic rocks exposed in the upper Granite Gorge of the Grand Canyon, Arizona
B. Ilg* and K.E. Karlstrom
Geological Society of America, Abstracts with Programs, v. 26, no. 6, p. 20 (1994)

The depletion of tungsten in the bulk silicate Earth, support for heterogeneous accretion
W.L. Jaeger*, H.E. Newsom**, S.A. Maehr*, K.W.W. Sims and P.D. Noll, Jr.
EOS, v. 75, p. 613-614 (1994)

Geochemistry and paleomagnetic constraints on timing of Quaternary basaltic eruptions in the central Zuni-Bandera volcanic field, NM
H.L. Jenkins*, T.E. Cascadden*, A.M. Kudo, J.W. Geissman and J.W. Husler**
EOS, v. 75, p. 732 (1994)

Measurement of the Fe-Mg interdiffusion coefficient in olivine using a SIMS depth profiling technique
R.H. Jones**
Terra Nova, v. 6, abstract supplement 1, p. 27 (1994)

Relict grains in chondrules: evidence for chondrule recycling
R.H. Jones**
Chondrules and the Protoplanetary Disk, LPI Contribution no. 844, Lunar and Planetary Institute, Houston, p. 50 (1994)

Measurement of the Fe-Mg interdiffusion coefficient in olivine using SIMS depth profiling
R.H. Jones**
EOS, v. 75, p. 696 (1994)

Reduced, plagioclase-rich chondrules in the Lancé and Kainsaz CO3 chondrites
R.H. Jones** and A.J. Brearley**
Lunar and Planetary Science Conference 25, p. 641-642 (1994)

Evidence for low-angle detachment faulting in southwestern New Mexico based on reconnaissance structural studies of the Little Hatchet Mountains
K.E. Karlstrom and 10 students
New Mexico Geology, v. 16, p. 82 (1994)

Reconciliation of contrasting models for Proterozoic tectonism in northern New Mexico
K.E. Karlstrom, J. Pedrick* and S.A. Bowring
Geological Society of America, Abstracts with Programs, v. 26, no. 6, p. 22 (1994)

Paleoproterozoic heterogeneous middle crustal flow during 1.71-1.68 Ga contractional deformation, Grand Canyon, Arizona
K.E. Karlstrom, B. Ilg*, J. Hutchinson*, D. Hawkins, S.A. Bowring and M.L. Williams
Geological Society of America, Abstracts with Programs, v. 26, no. 6, p. 22 (1994)

New geologic map of Precambrian rocks of the Tijeras 7.5' quadrangle: implications from the Paleozoic to the Tertiary
E. Kirby* and K.E. Karlstrom
New Mexico Geology, v. 16, p. 83-84 (1994)

Middle Proterozoic tectonism in central New Mexico: implications for deformational provinces in the Southwest
E. Kirby* and K.E. Karlstrom
Geological Society of America, Abstracts with Programs, v. 26, no. 6, p. 23 (1994)

Precambrian iron formations
C. Klein
Geological Association of Canada Meetings, Waterloo, Ontario, Program with Abstracts, v. 19, p. A58 (1994)

Turquoise gem material: natural and various modifications and substitutes
C. Klein and G. Werner
International Mineralogical Association Meetings, Pisa, Italy, Abstract Volume, p. 207 (1994)

Facies relationships and characterization of meter-scale cycles in the Late Devonian Guilmette Formation, eastern Great Basin
T. Lamaskin* and M. Elrick
Geological Society of America, Abstracts with Programs, v. 26, no. 2, p. 65 (1994)

Analysis of sedimentation, hydrology, and diagenesis within an ancient caldera-lake basin: the Oligocene Creede Fm., Colorado, USA
D. Larsen* and L.J. Crossey
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A400 (1994)

Stratigraphy and sedimentology of the Oligocene Creede Formation, Colorado, USA
D. Larsen*, L.J. Crossey, G. Heiken, T. McCormick, J. Hulen, J. Levinthal and P.H. Nelson
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A398 (1994)

Sedimentologic and temporal relations between volcanic and volcaniclastic rocks of the Keres Group, Jemez Mountains, New Mexico
A. Lavine*
EOS, v. 75, p. 732 (1994)

Sedimentologic and temporal relations between volcanic and volcaniclastic rocks of the Keres Groups, Jemez Mountains, New Mexico
A. Lavine*
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A115 (1994)

Large-magnitude extensional deformation in the South Mountains metamorphic core complex, Arizona: evolution with paleomagnetism
R.F. Livaccari**, J.W. Geissman and S.J. Reynolds
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A250-A251 (1994)

Triassic stratigraphy in the Lucero uplift, central New Mexico
S.G. Lucas and A.B. Heckert*
New Mexico Geological Society, Annual Spring Meeting, Proceedings Volume, p. 52 (1994)

Pliocene fossil snake from the Camp Rice Formation, Palomas Basin, southern New Mexico
S.G. Lucas, A.B. Heckert* and P.L. Sealey
New Mexico Geology, v. 16, p. 85 (1994)

Complex vegetation mosaics and 2000 years of landscape change in a highly erodable terrain, Navajo-Hopi Reservation, northeastern Arizona
J.R. McAuliffe and L.D. McFadden
Ninth Annual U.S. Landscape Ecology Symposium, International Association of Landscape Ecology, Program with Abstracts, Tuscon, AZ, p. (1994)

Complex vegetation mosaics as a response to 2000 years of landscape evolution in a highly erodable terrain, upper Jedito Wash watershed, Navajo-Hopi Reservations, Arizona
J.R. McAuliffe and L.D. McFadden
Abstracts, Annual Meeting, Ecological Society of America, p. (1994)

Post-impact hydrothermal alteration of the Manson impact structure, Manson, IA
P. McCarville* and L.J. Crossey
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A397

Geomorphic response of alluvial fans and colian deposits during the Pleistocene-Holocene climatic transition, Mojave Desert, California
F.V. McDonald*, L.D. McFadden and S.G. Wells
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A447 (1994)

Soil-landscape stability and potential contaminant transport, Los Alamos National Laboratory, New Mexico
E.V. McDonald*, S.L. Reneau and P.M. Watt*
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A101 (1994)

A model of vesicular crust formation in desert soils
L.D. McFadden, E.V. McDonald* and S.G. Wells
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A87 (1994)

Rock magnetic and paleomagnetic support for a ca. 1.4 Ga thermotectonic event recorded in Proterozoic rocks in central New Mexico
S.T. Meuret* and J.W. Geissman
EOS, v. 75, p. 189 (1994)

Paleomagnetic support for a ca. 1.4 Ga regional thermotectonic event affecting Proterozoic rocks in central New Mexico
S.T. Meuret* and J.W. Geissman
Geological Society of America, Abstracts with Programs, v. 26, no. , p. (1994)

A topologic classification of uranium oxide hydrates
M.L. Miller**, R.J. Finch* and R.C. Ewing
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A480

New paleomagnetic data from Sonora: implications for the Mesozoic evolution of northern Mexico
R.S. Molina-Garza**, J.W. Geissman and K.E. Karlstrom
EOS, v. 75, p. 594 (1994)

Alluvial characteristics, groundwater-surface water exchange and hydrologic retention in first-order montane streams
J.A. Morrice, H.M. Valett, C.N. Dahm and M. E. Campana
EOS, v. 75, p. 259 (1994)

Solid bitumen and clay minerals in the Oklo natural fission reactors: considerations of fission product containment
B. Nagy, G. Szabó, J. Guczi, J. Janeczek, and R.C. Ewing
XVIII International Symposium on the Scientific Basis for Nuclear Waste Management, Kyoto, Japan, October 23-27, p. 265-266 (1994)

Ion beam modification of Tl-Ba-Ca-Cu-O type high temperature superconductors during irradiation
P.P. Newcomer*, B. Morosin and L.M. Wang**
Materials Research Society Fall Meeting, Boston, p. 707 (1994)

Cascade-size crystallites in ion beam damaged Tl-Ba-Ca-Cu-O high temperature superconductors
P.P. Newcomer*, L.M. Wang**, M.L. Miller**, R.C. Ewing and B. Morosin
6th annual joint meeting of the New Mexico sections of the American Ceramic Society and Materials Research Society, Albuquerque, NM, October 31, p. 5 (1994)

Siderophile elements and metal-silicate fractionation in the solar nebula
H.E. Newsom**
Abstract Volume, Chondrules and the Protoplanetary Disk, p. 27-28 (1994)

Siderophile element constraints on core formation: initial abundances
H.E. Newsom**
EOS, v. 75, p. 605 (1994)

Siderophile depletion patterns in the Earth and Moon: constraints on core formation
H.E. Newsom**
Abstracts, Workshop on the Formation of the Earth's Core, p. 43-44 (1994)

The depletion of W in the Earth's primitive mantle, a stumbling block for high temperature equilibrium core formation?
H.E. Newsom**, P.D. Noll, Jr., S.A. Maehr* and K.W.W. Simms
Lunar and Planetary Science 25, p. (1994)

Emplacement of 1.4 Ga plutons during transpression along early Proterozoic boundaries
M.W. Nyman** and K.E. Karlstrom
Geological Society of America, Abstracts with Programs, v. 26, no. 5, p. A56 (1994)

Tectonic setting of ca. 1.4 Ga "anorogenic" plutons, central Arizona: a record of Mesoproterozoic contraction and reactivation
M.W. Nyman** and K.E. Karlstrom
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A405 (1994)

Volumetric model for estimating melt loss during migmatization: an example from the Manashee Terrane, British Columbia
M.W. Nyman**, D.R.M. Pattison and E.D. Ghent
EOS, v. 75, p. 360 (1994)

Recoil refinements: Implications for the $^{40}Ar/^{39}Ar$ dating technique
T.C. Onstott, M.L. Miller** and R.C. Ewing
Eighth International Conference on Geochronology, Cosmochronology and Isotope Geology, Berkeley, California, June 5-11, p. 238 (1994)

ALH 84001 A "SNC orthopyroxenite": insights from orthopyroxene and comparisons to diogenites
J.J. Papike, G.W. Fowler*, G.D. Layne**, M.N. Spilde** and C.K. Shearer**
Lunar and Planetary Science, v. 25, p. 1043-1044 (1994)

Orthopyroxene as a recorder of Lunar Mg-suite norite petrogenesis: preliminary ion microprobe studies of Apollo 17 fragments
J.J. Papike, G.W. Fowler* and C.K. Shearer**
Lunar and Planetary Science 25, p. 1045-1046 (1994)

Orthopyroxene as a recorder of lunar crust evolution: an ion microprobe investigation of Mg-suite norites
J.J. Papike, G.W. Fowler* and C.K. Shearer**
Meteoritics, v. 29, p. 516-517 (1994)

Orthopyroxene as a recorder of primitive achondrite petrogenesis: major, minor and trace-element systematics of orthopyroxene in Lodran
J.J. Papike, M.N. Spilde**, G.W. Fowler** and C.K. Shearer**
Meteoritics, v. 29, p. 517 (1994)

Deconvolving the evolution of mean topography and uplift or the post-orogenic Appalachians using the offshore sedimentary record
F.J. Pazzaglia and M.T. Brandon
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A240 (1994)

Uplift, denudation, and accretionary wedge processes of the Cascadia margin constrained by Quaternary fluvial terraces of the Clearwater River, Olympic Peninsula, Washington
F.J. Pazzaglia and M.T. Brandon
EOS, v. 75, p. 288-289 (1994)

Field, geochemical and geochonologic evidence for polycyclic volcanism at Lathrop Wells volcanic center, southwestern Nevada
F.V. Perry, B.M. Crowe, S.G. Wells and L.D. McFadden
Abstracts, International Congress on Geochronology, Geochemistry, and Cosmochemistry, Institute of Human Origins, U.C. Berkeley, p. (1994)

Lamellar olivine in the Divnoe achondrite: EPMA and TEM studies
M.I. Petaev and A.J. Brearley**
Lunar and Planetary Sciences 25, p. 1069-1070 (1994)

Exsolution of ferromagnesian olivine in the Divnoe meteorite
M.I. Petaev and A.J. Brearley**
Meteoritics, v. 29, p. 518-519 (1994)

Determination of solid-solid trace-element partition coefficients in exsolved pyroxenes using SIMS techniques
A. Pun* and J.J. Papike
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A418 (1994)

The Pasamonte unequilibrated eucrite: pyroxene REE systematics and major, minor, and trace element zoning
A. Pun* and J.J. Papike
Meteoritics, v. 29, p. 520-521 (1994)

Unequilibrated eucrites Y-74450, Y-793548, Y-82210, and Pasamonte: pyroxene REE systematics and major, minor, and trace element zoning
A. Pun* and J.J. Papike
Papers Presented to the 19th Symposium on Antarctic Meteorites, p. 43-46 (1994)

Solid-solid trace-element partitioning between exsolved pyroxenes in cumulate eucrites
A. Pun* and J.J. Papike
Lunar and Planetary Sciences Conference, v. 25, p. 1111-1112 (1994)

Searching for a principal component mixing model for chondritic interplanetary dust particles: the use of size analyses
F.J.M. Rietmeijer**
Lunar and Planetary Sciences, v. 25, p. 1129-1130 (1994)

Sulfide and layer silicate grain size distributions constrain the unique petrogenesis of a type CM interplanetary dust particle
F.J.M. Rietmeijer**
Lunar and Planetary Science, v. 25, p. 1131-1132 (1994)

Ferrosilite, fayalite and magnesioferrite formation by isothermal annealing of an iron-contaminated Mg-SiO smoke
F.J.M. Rietmeijer** and G. Fu
Lunar and Planetary Sciences, v. 25, p. 493-494 (1994)

Jemez River terraces: preliminary constraints on Quaternary incision, terrace ages, and breaching of the Valles caldera, Jemez Mountains, New Mexico
J.B. Rogers*
New Mexico Geology, v. 16, p. 58-59 (1994)

Remagnetization of the Cambro-Ordovician Bliss Formation in the Fra Cristobal Range and Caballo Mountains, New Mexico
E.M. Romano* and J.W. Geissman
EOS, v. 75, p. 189 (1994)

Magnetic characteristics and relative paleointensity record from sediments in Pleistocene Lake Estancia, New Mexico
H.D. Rowe*, J.W. Geissman, B.D. Allen** and R.Y. Anderson
EOS, v. 75, p. 186 (1994)

Catasrophic fragmentation and reassembly of the parent body of the IVA and stony iron meteorites
E.R.D. Scott, A.J. Brearley**, H. Haack and T.J. McCoy
Meteoritics, v. 29, p. 530-531 (1994)

Melt inclusions as recorders of pre-eruptive geochemical characteristics of the intracaldera Bishop Tuff: an ion and elecron microprobe investigation
M.S. Servilla* and J.J. Papike
Geological Society of America, Abstracts with Programs, v. 26, no. 7, p. A450 (1994)

Numerical simulations predict different eruptive stages of the 720 Ka Bishop Tuff at Long Valley Caldera, California
M.S. Servilla*, K.H. Wohletz and J.J. Papike
EOS, v. 75, p. 704 (1994)

Light lithophile elements (Li, Be, B) in Lunar picritic glasses. Implications for Lunar mantle dynamics and the origin of the Moon
C.K. Shearer**, G.D. Layne** and J.J. Papike
Lunar and Planetary Science 25, p. 1257-1258 (1994)

An ion microprobe study of chalcophile and siderophile elements in Lunar picritic glasses. Constraints on the origin of Lunar basalts and the nature and evolution of the Lunar mantle
C.K. Shearer**, G.D. Layne** and J.J. Papike
EOS, v. 75, p. 749-750 (1994)

The Earth-Moon connection. Clues preserved in Lunar picritic magmas
C.K. Shearer**, J.J. Papike and H.E. Newsom**
Lunar and Planetary Science 25, v. 1259-1260 (1994)

Volcanology and sedimentology of a pyroclastic-flow-apron/alluvial-fan complex flanking rhyolite domes
G.A. Smith
Geological Society of America, Abstracts with Programs, v. 27, no. 7, p. A115 (1994)

What is the Cochiti Formation?
G.A. Smith and A. Lavine*
New Mexico Geology, v. 16, p. 56 (1994)

Geological applications of compositional imaging
M.N. Spilde**
Microbeam Analysis-1994, p. 55-56 (1994)

Detection of a ^{33}S excess in an oldhamite separate from Norton County
M.H. Thiemens, A.J. Brearley**, T. Jackson and G. Bobias
Meteoritics, v. 29, p. 540-541 (1994)

Soils and geomorphology as a key to carbon cycling times in Palo Duro Canyon, central Rio Grande Rift
C.J. Treadwell*
New Mexico Geology, v. 16, p. 58 (1994)

Soils as a key to terrace and colluvial wedge development in the central Rio Grande rift, NM
C.J. Treadwell*
Geological Society of America, Abstracts with Programs, v. 26, p. 66 (1994)

Hydrologic exchange between streams and alluvial aquifers: implications for the functioning of surface/groundwater ecotones
H.M. Valett, C.N. Dahm, J.A. Morrice, M.A. Baker and M.E. Campana
EOS, v. 75, p. 258 (1994)

HRTEM study of radiation damage in complex ceramic materials
L.M. Wang**
6th Annual Joint Meeting of the New Mexico Sections of the American Ceramics Society and Materials Research Society, Albuquerque, p. 5 (1994)

Effects of structure-type and thermodynamic stability on ion-beam induced amorphization, exemplified by $MgAl_2O_4$ and γ-$SiFe_2O_4$
L.M. Wang**, W.L. Gong, N. Bordes, R.C. Ewing and Y. Fei
Fall meeting of the Materials Research Society, Boston, MA, November 30, p. 708 (1994)

HRTEM study of ion beam induced collision cascade damage in $Ca_2La_8(SiO_4)_6O_2$
L.M. Wang** and W.J. Weber
Fifth Conference on Frontiers of Electron Microscopy in Materials Science, Oakland, CA, p. 13 (1994)

Characterization of collision cascade damage in $Ca_2La_8(SiO_4)_6O_2$ by HRTEM
L.M. Wang** and W.J. Weber
Materials Research Society Fall Meeting, Boston, p. 707 (1994)

Carbon-14 dating pedogenic carbonates in desert soils: modeling and application
Y. Wang, R. Amundsen, E. McDonald*, L.D. McFadden, and O. Chadwick
Geological Society of America, Abstracts with Programs, v. 27, no. 7, p. A259 (1994)

Carbonate-enhanced adsorption of Ni (II) onto goethite and sand
D.B. Ward* and M.D. Siegel
Geological Society of America, Abstracts with Programs, v. 27, p. A442 (1994)

The impact of soil properties on uranium migration, Los Alamos National Laboratory
P. Watt*, P. Longmire and L. McFadden
New Mexico Geology, v. 16, p. 59 (1994)

The impact of soil properties on uranium migration, Los Alamos National Laboratory
P.M. Watt*, L.D. McFadden, K. Smith* and P. Longmire
Geological Society of America, Abstracts with Programs, v. 27, no. 7, p. A469 (1994)

Radiation effects issues related to U.S. DOE site remediation and nuclear waste storage
W.J. Weber and R.C. Ewing
XVIII International Symposium on the Scientific Basis for Nuclear Waste Management, Kyoto, Japan, October 23-27, p. 317-318 (1994)

Temperature and dose dependence of metal colloid production in alpha-irradiated CaF_2 single crystals
W.J. Weber, G.J. Exarhos and L.M. Wang**
Materials Research Society Fall Meeting, Boston, p. 705 (1994)

Cosmogenic 3He surface exposure ages of stone pavements: implications for the development and tectonic deformation of abandoned geomorphic surfaces in arid alluvial basins
S.G. Wells, K. Anderson, J. Poths and L.D. McFadden
EOS, v. 75, p. (1994)

Surface exposure dating of desert pavement landscapes
S.G. Wells, J. Poths, C.T. Olinger and L.D. McFadden
Geological Society of America, Abstracts with Programs, v. 27, no. 7, p. A86-87 (1994)

0694

Temperature dependence of amorphization for zirconolite and perovskite irradiated with 1 MeV krypton ions
T.J. White, R.C. Ewing, L.M. Wang**, C. Montross and J.S. Forrester
XVIII International Symposium on the Scientific Basis for Nuclear Waste Management, Kyoto, Japan, October 23-27, p. 323-324 (1994)

Late Proterozoic faulting in Moose Creek area, Little Belt Mountains, Montana
L.A. Woodward
Geological Society of America, Abstracts with Programs, v. 27, no. 6, p. 69 (1994)

Carbon isotopes in continental weathering environments and variations in atmospheric Pco_2 during the Phanerozoic
C.J. Yapp and H. Poths*
Geological Society of america, Abstracts with Programs, v. 26, no. 7, p. A352 (1994)

3. EXTERNALLY FUNDED RESEARCH GRANTS AND CONTRACTS, July 1, 1994-June 30, 1995

Nature of the paleomagnetic field from an analysis of marine magnetic anomalies 1-3R
G. Acton and H. Schouten
National Science Foundation
$78,470; 1/1/91 to 7/30/94

Computer upgrade for the Department of Earth and Planetary Sciences at the University of New Mexico
G.D. Acton et al.
National Science Foundation (3-29291)
$65,000; 8/1/93 to 1/31/96

High resolution stratigraphy: application to hydroclimatic reconstruction in southwestern United States
R.Y. Anderson
National Science Foundation (3-13033)
$152,870; 6/1/93 to 6/30/96

Science coordinating meeting for Western North America segment of pole-equator-pole transect for past global changes
R.Y. Anderson
National Science Foundation (3-42631)
$36,250; 12/1/94-11/30/95

U-series isotope systematics of continental rift basalts
Y. Asmerom
National Science Foundation (3-43631)
$33,646; 2/1/95 to 3/31/96

Upgrading to a low abundance sensitivity multicollector TIMS
Y. Asmerom
National Science Foundation (3-43591)
$180,000; 3/15/95 to 2/28/97

Mechanisms of the transformations between the α, β, and δ polymorphs of $MgSiO_4$ and $(MgFe)_2SiO_4$
A.J. Brearley** (IOM)
National Science Foundation
$55,700; 8/1/93 to 7/31/95

Yucca Mountain project
M.E. Campana
Sandia National Labs - Dept. of Energy (3-26151)
$196,086; 10/1/92 to 7/31/95

Surface hydrology of Sandia National Laboratories and environs
M.E. Campana
Sandia National Laboratories (3-29981)
$130,414; 12/21/93 to 11/30/95

Stream hyporheic zones: hydrology, biogeochemistry, and links to surface waters and plant riperian communities
M.E. Campana and C.N. Dahm (Biology Dept.)
National Science Foundation
$637,909; 3/1/91 to 2/28/95

Geologic support for Sandia National Lab activities for the Yucca Mountain site characterization project
J. Connolly** (IOM)
Sandia
$39,198; 6/1/92 to 5/31/95

Sedimentation and diagenesis of the Creede Fm., CO: subsurface evaluation and correlation with outcrop studies
L.J. Crossey
National Science Foundation (3-24321)
$86,985; 1/1/92 to 12/31/94

Impact structures at the Manson impact structure: diagenesis and post-impact thermal history
L.J. Crossey
Dept. of Energy/Basic Energy Science (3-25661)
$86,081; 8/15/92 to 2/14/95

Early cementation of cyclic coastal clastic sequences: Point Lookout Sandstone, San Juan Basin, NM and CO
L.J. Crossey
American Chemical Society - Petroleum Research Fund (3-26701)
$50,000; 1/1/93 to 8/31/95

Cyclostratigraphy and dolomitization of Middle Devonian carbonate deposits, eastern Great Basin
M. Elrick
American Chemical Society Petroleum Research Fund (3-25011)
$18,000; 6/1/92 to 8/31/94

Millenial-scale paleoclimatic cycles expressed in Paleozoic basinal marine sequences
M. Elrick
National Science Foundation (3-25651)
$17,952; 7/15/92 to 6/30/95

Short-term paleoclimate fluctuations expressed in Paleozoic deep-water rhythmites
M. Elrick
National Science Foundation (3-42021)
$93,529; 8/15/94 to 7/31/97

The Proterozoic Bushveld Catastrophe, South Africa
W.E. Elston
National Science Foundation (3-24351)
$53,200; 1/1/92 to 12/31/95

Did the Bushveld-Vredefort Complexes, South Africa, result from the largest known multiple-impact event on Earth?
W.E. Elston
The Barringer Crater Company
$5,000; 1/1/92 - no termination date

Characterization of alteration products and processes in natural UO_2
R.C. Ewing
Svensk Karnbranslehantering AB, Sweden
$153,000; 9/1/92 to 8/31/94

Characterization of alteration products and processes in natural UO_2
R.C. Ewing
Svensk Kärnbränslehantering AB, Sweden (3-10385)
$79,780; 10/1/94 to 12/31/95

Radiation effects in ceramics
R.C. Ewing
Los Alamos National Lab (3-27411)
$44,311; 4/12/93 to 9/30/94

Particle-induced amorphization of crystalline silicates, complex oxides, and phosphates
R.C. Ewing
Office of Basic Energy Sciences, DOE (3-13481)
$249,561; 8/1/93 to 7/31/95

Paleomagnetic, rock magnetic, and stable isotope investigation of late Paleozoic remagnetization of Precambrian basement and immediately overlying strata, central and southern Rocky Mountains, including a $3,000 supplement for undergraduate support
J.W. Geissman and J.R. Bowman (Univ. of Utah)
American Chemical Society/Petroleum Research Fund (3-24341)
$43,000; 1/1/92 to 8/31/94

Collaborative research: Modern chronologic and geochemical techniques applied to a young volcanic field in an active continental rift, Potrillo Volcanic Field, NM
J.W. Geissman and others
National Science Foundation (3-24361)
$20,710 (UNM component); 1/15/92 to 7/31/94

Collaborative research: tests of large-magnitude extensional intracontinental strain, Death Valley, Ca.
J.W. Geissman
National Science Foundation (3-24511)
$20,000 (UNM share); 2/15/92 to 7/31/95

Paleomagnetic assessment of footwall deformation, South Mountains metamorphic core complex, southern Arizona
J.W. Geissman
National Science Foundation (3-24921)
$60,539; 4/25/92 to 9/30/95

Late Mesozoic history of the western Luning Fencemaker Belt
J.W. Geissman
National Science Foundation/Rice University (3-24781)
$11,308; 1/15/92 to 9/30/94

Upgrading of equipment in the paleomagnetism and rock magnetism laboratory, UNM
J.W. Geissman
National Science Foundation (3-27501)
$14,477; 5/4/93 to 12/31/95

Studies of large-magnitude intracontinental extensional tectonism in the Basin and Range, California and Nevada
J.W. Geissman (with B.P. Wernicke and R.K. Dokka)
National Science Foundation
$23,764 (UNM component); 2/15/94 to 7/31/96

Yucca Mountain Nuclear Waste repository study
J. Husler**
Los Alamos National Lab
$13,300; Jan-Dec. 1994

Determination of the Fe-Mg interdiffusion coefficient in olivine - a comparison of electron microprobe and SIMS analytical techniques
R. Jones** (IOM)
National Science Foundation
$18,000; 7/1/92 to 12/31/94

Evaluating early and mid-Proterozoic tectonic evolution of southwestern North America
K.E. Karlstrom
National Science Foundation (3-24231)
$154,700; 11/25/91 - 12/31/94

Collaborative research: evaluating tectonic boundaries: continuous transect of a Proterozoic orogen in the Grand Canyon
K. Karlstrom and M.L. Williams
National Science Foundation (3-25221)
$104,923; 6/3/92 to 12/31/94

Middle Proterozoic tectonic regimes in the Southwest: anorogeny or an orogeny (?)
K.E. Karlstrom
National Science Foundation (3-29191)
$109,456; 7/15/93 to 12/31/96

Undergraduate Earth Sciences Research at the University of New Mexico
K.E. Karlstrom and J.W. Geissman
National Science Foundation (3-40451)
$97,016; 2/22/94 to 9/30/96

Workshop on lithospheric structure and evolution of cratonic western U.S., Wyoming to Mexico: an integrated geological and geophysical investigation
K.E. Karlstrom
National Science Foundation (3-31391)
$18,680; 3/15/95 to 4/30/96

Geochemistry, petrology and geologic setting of the Precambrian Carajos and Urucim I formations, Brazil
C. Klein
National Science Foundation (3-27371)
$35,174; 3/15/93 to 8/31/94

Geochemistry, petrology and geologic setting of the Precambrian Carajas and Urucum iron-formations, Brazil
C. Klein
National Science Foundation (3-27372)
$89,900; 6/1/94 to 5/31/96

UNM/Sandia Science colloquium program
A. Kudo
Sandia Labs DOE (3-30407)
$21,000; 10/1/90 to 9/30/94

Geologic investigations of El Malpais National Monument
A.M. Kudo and T. Cascadden*
National Park Service (3-23925)
$27,869; 8/26/92 to 12/31/95

Footwall deformation and regional crustal structure of "deep"-type metamorphic core complexes, western Arizona and southeastern California: evaluation with paleomagnetism
R. Livaccari** and J.W. Geissman
National Science Foundation (3-41431)
$110,000; 7/1/94 to 6/30/96

Paleomagnetic and soil studies of Pliocene to Quaternary volcanic rocks for the Yucca Mountain site characterization program
L.D. McFadden and J.W. Geissman (3-29141)
Los Alamos National Laboratory
$97,150; 7/23/93 to 1/13/95

Paleomagnetic and soil studies of Pliocene to Quaternary volcanic rocks for the Yucca Mountain site characterization project
L.D. McFadden and J.W. Geissman
Los Alamos National Laboratory/DOE (3-29142)
$21, 250; 2/1/95 to 9/30/95

Soil-geomorphic and soil chemistry/mineralogy investigations on the Pajarito Plateau, Los Alamos National Laboratory area, New Mexico
L.D. McFadden
Los Alamos National Laboratory
$50,182; 4/1/94 to 1/13/95

Late Quaternary eolian deposits and landscape evolution in the area of the Petrified Forest National Park
L.D. McFadden
Petrified Forest Natural History Museum Association (3-43511)
$12,690; 11/21/94 to 12/1/95

Characterization of mexoporons oxides and sulfides
M.L. Miller**
Sandia National Labs/DOE (3-44151)
$4,970; 5/2/95 to 9/30/95

The crystal chemistry and structural analysis of uranium oxide hydrates
M.L. Miller**
DOE/Basic Energy Sciences (3-43801)
$100,000; 5/15/95 to 5/14/96

Paleomagnetism of northern Mexico, with emphasis on Upper Triassic - Lower Jurassic and Eocambrian-lower Paleozoic strata: further evaluation of the Mohave-Sonora megashear hypothesis
R.S. Molina-Garza** and J.W. Geissman
National Science Foundation (3-40111)
$30,759; 12/15/93 to 12/31/95

The formation of the continental crust: evidence from siderophile and chalcophile trace elements in volcanic ores
H.E. Newsom** (IOM)
National Science Foundation
$90,000; 6/15/93 to 11/30/95

Research Experiences for Undergraduates
H.E. Newsom** (IOM)
National Science Foundation
$3,000; 6/15/93 to 11/30/95

Advanced methods for the determination of moderately siderophile elements by mass spectometry
H.E. Newsom ** (IOM)
Los Alamos National Lab (Institute of Geophysics and Planetary Physics)
$23,000; 10/1/93 - 9/30/94

Advanced methods for the determination of moderately siderophile elements by mass spectometry (renewal)
H.E. Newsom ** (IOM)
$23,000; 10/1/94 - 9/30/95

Institutional allowance for post-doctoral research fellowship
M. Nyman**
National Science Foundation (3-55660)
$5,000; 8/1/93 to 8/1/95

Direct observation of a young igneous system: Katmai, Alaska
J.J. Papike (IOM)
National Science Foundation
$42,320; 7/1/90 to 8/31/94

Proposal to upgrade an electron microprobe X-ray analysis system
J.J. Papike, A.J. Brearly** and M.N. Spilde** (IOM)
National Science Foundation
$40,000; 3/1/92 to 8/31/94

Trace element studies of pyroxenes in rocks of the HED Association
J.J. Papike and A. Pun*
NASA
$22,000; 8/1/93 to 8/1/94

Support of UNM/SNL ion microprobe facility
J.J. Papike, C.K. Shearer** and G.D. Layne** (IOM)
National Science Foundation
$58,391; 7/15/93 to 8/30/94

Microbeam studies of planetary materials
J.J. Papike (IOM)
NASA
$221,967; 12/15/93 to 12/14/94

Microbeam studies of planetary materials
J.J. Papike (IOM)
NASA
$216,895; 12/15/94 to 12/15/95

Support of UNM/SNL ion microprobe facility
J.J. Papike (IOM)
National Science Foundation
$60,000; 7/15/94 to 12/15/95

Simulating silicic eruptions at Long Valley, California as a method to understand processes of continental crust formation
J.J. Papike (IOM)
IGPP-LANL
$17,000; 9/30/94 to 8/31/95

Petrological analysis of astrophysical dust analog evolution
F. Rietmeijer**
NASA (3-26711)
$106,776; 3/1/93 to 2/28/96

Mineralogy of fine-grained primitive extraterrestrial materials
F. Rietmeijer**
NASA (3-16173)
$160,679; 4/1/93 to 3/31/96

Forecasting the integrity of waste sites: a mineralogical approach to understanding fluid flow
C.K. Shearer** (IOM)
Waste Education and Research Consortium (WERC)
$58,130; 2/20/94 to 2/19/95

Volcanic breccias: evaluation of fragment and deposit origins and distribution within small-volume composite volcanoes
G.A. Smith
National Science Foundation
$75,450; 12/18/91 to 2/28/95

Research Experience for Undergraduates, supplement to "volcanic breccias..." grant
G.A. Smith
National Science Foundation
$3,500; 1/93 to 2/95

The relationship of textures and depositonal structures in pyroclastic-flow deposits to paleomagnetically determined emplacement temperatures
G.A. Smith and J.W. Geissman
National Science Foundation (3-40471)
$94,400; 1/1/94 to 6/30/96

Outcrop and subsurface study of rift-basin facies geometry and reservoir heterogeneity
G.A. Smith
American Chemical Society, Petroleum Research Fund (3-43251)
$50,000; 3/1/95 to 8/31/97

Paleofloral and stratigraphic analysis and Eocene-Oligocene climate change in Oregon
G.A. Smith
National Science Foundation (3-43551)
$30,288; 4/1/95 to 3/31/97

Stream/groundwater ecotones: hydrology, biogeochemistry and ecology
H.M. Valett (Biology) and M.E. Campana
National Science Foundation
$610,000; 2/1/95 to 12/31/97

Ion irradiation effects in $Ca_2La_8(SiO_4)_6O_2$
L.M. Wang**
Battelle Pacific Northwest Laboratories (3-24611)
$135,000; 12/23/91 to 9/30/95

Analytical support service, vitreous ceramic program
L.M. Wang**
Battelle/DOE (3-43121)
$23,000; 1/20/95 to 10/30/95

Microstructure changes of TI-BA superconductor under ion beam radiation
L.M. Wang**
Sandia National Labs/DOE (3-44211)
$24,959; 4/1/95 to 10/31/95

Laboratory Studies for the Yucca Mountain project
D.B. Ward*
Sandia National Lab/DOE (3-22411)
$231,000; 3/7/91 to 10/31/94

Ancient atmospheric Pco_2 paleoclimates and the stable isotope geochemistry of low temperature iron oxides
C.J. Yapp (3-25301)
National Science Foundation
$224,758; 7/1/92 to 12/31/962

4. RESEARCH PROJECTS IN PROGRESS

Roger Anderson

Manuscripts in press

Filling the Delaware Basin: Hydrologic and climatic controls on the Permian Castile evaporite
R.Y. Anderson and W.E. Dean
in Scholle and Peryt (eds), The Permian of the Northern Continents: Facies, Faunas, and Paleogeography: Springer-Verlag.

Seasonal sedimentation: Framework for reconstructing environmental and climatic change
R.Y. Anderson
in A.E.S. Kemp, Paleoclimatology and Paleoceanography of Laminated Sediments, Special Publication of the Geological Society of London.

Yemane Asmerom

Grant Proposals:

Sr Isotope Record of Equatorial paleoclimate
Y. Asmerom
National Science Foundation
$159,786; Worked on partially in 1994; Submitted in 1995; pending.

CO-PI

CD Proposal: Lithospheric structure and evolution of cratonic western U.S.
K. Karlstrom and Y. Asmerom
National Science Foundation
$19,900; pending.

Contribution to collaborative proposals

Structural and Geochemical Domains in New Mexico
M. Wilks & L. Goodwin (NMT) CO-PI
National Science Foundation
$19,000 (my portion), pending.

Unsuccessful proposals

Hydrologic and Paleoclimatic reconstruction from Sr Isotope Data, Estancia Basin
Y. Asmerom
$35,000.

Other research activity (unfunded)

Tropical paleoclimate reconstruction from speleothem isotopic data, Barbados.
Re-Os isotope systematics of continental rift basalts
Pb isotope systematics in river water sediments and ancient rocks

Susan Barger

Manuscripts in press

Materials Characterization of Natural Adobe Plasters: New Approaches for Preservation Strategies Based on Traditional Practice.
M. Susan Barger
Materials Research Society Symposium Proceedings Volume (?), Materials Issues in Art and Archaeology IV, in press.

Manuscripts in preparation

Technique for Embedding Coated Papers for Electron Microscopy
Claire A. Rutiser and M. Susan Barger

Damage Rate Determination for Organic Samples in Photo Electron Spectroscopy
Claire A. Rutiser and M. Susan Barger

Examination of the Effects of Re-Sizing Aged Papers Using X-Ray Photo Electron Spectroscopy
Terry Trosper Schaeffer and M. Susan Barger

Proposals written and submitted

Arid Americas Research and Design Center, Start-up Funding:

Pending:	Internal Proposal for UNM Legislative Agenda ($100,000) Educational Foundation of America, ($90,000 over three years) Compton Foundation, Inc., ($90,000 over three years)
Not Funded:	Joyce-Mertz Gilmore Foundation, ($90,000 over three years) Rockefeller Brothers Fund, ($90,000 over three years) W. Alton Jones Foundation, ($90,000 over three years)

Arid Americas Research and Design Center, First Annual Conference:

Pending:	Sarkey's Foundation, ($10,000)
Not Funded:	Center for Community Studies, Sol y Sombra, Santa Fe, ($10,000) Levinson Foundation, ($5,000) Samuel H. Kress Conservation Publication Fellowship, ($18,000)

Adrian Brearley

Abstracts in press

Light lithophile element (Li, Be and B) abundances in microchondrules in CH chondrites: Insights into volatile behavior during chondrule formation.
A.J. Brearley** and G.D. Layne
LPS XXVI (in press).

Distribution of moderately volatile trace elements in fine-grained chondrule rims of metamorphosed CO3 chondrites.
A.J. Brearley, S. Bajt, and S.R. Sutton
LPS, XXVI (in press).

Pyroxene microstructures in the equilibrated eucrite Juvinas.
N.H. Hanowski, R.H. Jones and A.J. Brearley
LPS, XXVI (in press).

Papers submitted or in review

Origin and history of impact melt rocks from the EL chondrite parent body.
T.J. McCoy, K. Keil, D.D. Bogard, D.H. Garrison, I. Casanova, M.M. Lindstrom, A.J. Brearley**, K. Kehm, R.H. Nichols, and C.M. Hohenberg
Geochim. et Cosmochim. Acta (1995, in press).

Aqueous alteration and brecciation in Bells, an unusual, saponite-bearing CM carbonaceous chondrites.
A.J. Brearley**
Geochim. Cosmochim. Acta (1995, in press).

Synthesis of fluorophlogopite single crystals: Applications to experimental studies.
T. Hammouda, M. Pichavant, P. Barber, and A.J. Brearley**
European Journal of Mineralogy (1995, in review).

Distribution of moderately volatile trace elements in chondrule rims in the unequilibrated CO3 chondrite, ALH A77307.
A.J. Brearley, S. Bajt and S.R. Sutton
Geochim. Cosmochim. Acta (1995, submitted).

Papers in preparation

Kinetics of partial melting of muscovite + quartz and rates of multicomponent diffusion in H_2O-saturated granitic liquid at 1 kbar.
D.C. Rubie and A.J. Brearley**

The effect of cooling rate on the protoenstatite to orthoenstatite inversion: and experimental and transmission electron microscope study.
A.J. Brearley** and R.H. Jones

Synthesis of almandine garner and characterization by ^{57}Fe Mossbauer and single crystal FTIR spectroscopy, powder X-ray refinement and transmission electron microscopy: the role of defects.
C.A. Geiger, A.J. Brearley**, A. Amthauer, C.R. Ross II

Michael Campana

Proposals submitted

Riparian ecosystem restoration at Bosque del Apache National Wildlife Refuge
H.M. Valett, C. Crawford, M. Molles, M.E. Campana
National Science Foundation
$196,892; March 1, 1995 - February 28, 1999 (pending).

Lecturing in hydrology and earth science at University College of Belize, Belize City
M.E. Campana
Fulbright Scholar Program
$15,000 (approximate); January 1, 1996 - May 31, 1996 (pending).

Stream/ground water ecotones: hydrology, biogeochemistry and ecology
H.M. Valett, M.E. Campana
National Science Foundation
$668,000; January 1, 1995 - December 31, 1997 (funded at $610,000, effective February 1, 1995.

Manuscripts in press

Parent lithology, groundwater-surface water exchange and nitrate retention in headwater streams
H.M. Valett**, J.A. Morrice*, C.N. Dahm, M.E. Campana
Limnology and Oceanography.

Manuscripts in review

Alluvial characteristics, groundwater-surface water exchange and hydrologic retention in headwater streams
J.A. Morrice*, H.M. Valett*, C.N. Dahm, M.E. Campana
Journal of Hydrology.

Manuscripts in preparation

A deuterium-calibrated numerical model of the regional groundwater flow system, Nevada Test Site and vicinity
M.E. Campana, W.R. Sadler, N.L. Ingraham, R.L. Jacobson
Journal of Hydrology.

Delineation of a carbonate-alluvial ground water flow system using a mixing-cell model and the spatial distribution of deuterium
M.E. Campana, J. Roth
Proceedings, Karst Waters and Environmental Impacts Conference, Antalya, Turkey, September 1995.

Laura Crossey

Manuscripts in review

Diagenesis in a Cyclic Siliciclastic Regressive Sequence: the Point Lookout Sandstone, San Juan Basin, New Mexico and Colorado
J. Loomis*, and L.J. Crossey
In Siliciclastic Diagenesis and Fluid Flow: Concepts and Applications, L.J. Crossey, B. Loucks, and Totten, M., eds., Society for Sedimentary Geology Special Publication, in prep.

Manuscripts in press

Sedimentation and diagenesis in the Creede Formation: A basin-scale perspective
D. Larsen*, and L.J. Crossey
In Results of Scientific Studies of the Creede Continental Scientific Drilling Program, United States Geological Survey Open-File Report, ed. Phil M. Bethke, in press.

Post-Impact Hydrothermal Alteration of the Manson Impact Structure, Manson, Iowa
P. McCarville, and L.J. Crossey
In The Manson Impact Structure, C. Koeberl and R. Anderson, eds., Geological Society of America Special Paper, in press.

Manuscript in preparation

Siliciclastic Diagenesis and Fluid Flow: Concepts and Applications
L.J. Crossey, B. Loucks, and M. Totten, eds., Society for Sedimentary Geology Special Publication, in prep.

Maya Elrick

Manuscripts submitted:

Devonian transgressive-regressive cycles and biostratigraphy, northern Antelope Range, Nevada: Establishment of reference horizons for global cycles
J.G. Johnson, G. Klapper, and M. Elrick
Palaios

Cyclostratigraphy of Middle Devonian carbonates of the eastern Great Basin
M. Elrick
Journal of Sedimentary Research

Manuscripts in preparation

Sequence stratigraphy and platform dynamics of Middle Devonian ramp-to-basin carbonates, eastern Great Basin
M. Elrick
Geological Society of America Bulletin

Wolfgang Elston

Unsponsored Research

Volcanic and tectonic evolution, southwestern New Mexico
Association of mineral deposits and volcanic centers

Rodney C. Ewing

Proposals submitted:

The Crystal Chemistry and Structural Analysis of Uranium Oxide Hydrates
(M.L. Miller, Principal Investigator; R.C. Ewing, Co-Investigator)
$424,749; January 1, 1995 to December 31, 1997

Unsponsored Research

Pegmatite mineralogy and genesis; preparation of catalogue for Harding Pegmatite specimens and archival materials.
Corrosion and hydration of natural and synthetic glasses.
The use of natural systems in the performance assessment of nuclear waste repositories.

Manuscripts in Press

N. Bordes, R.C. Ewing, E.A. Cooper, K.E. Sickafus (in press) Structural damage in spinel after ion irradiation. *Journal of Nuclear Materials.*

R.C. Ewing, W.J. Weber and F.W. Clinard, Jr. (in press) Radiation effects in nuclear waste forms. *Progress in Nuclear Energy: An International Review Journal.*

R.C. Ewing, W. Lutze and W.J. Weber (in press) Zircon: A host-phase for the disposal of weapons plutonium. *Journal of Materials Research*, vol. 10, no. 2.

J. Janeczek and R.C. Ewing (in press) Mechanisms of Lead Release from Uraninite in the Natural Fission Reactors in Gabon. *Geochimica et Cosmochimica Acta.*

T.C. Onstott, M.L. Miller**, R.C. Ewing, G.W. Arnold and D.S. Walsh (in press) Recoil refinements: Implications for the $^{40}Ar/^{39}Ar$ dating technique. *Geochimica et Cosmochimica Acta.*

G.R. Lumpkin and R.C. Ewing (in press) Geochemical alteration of pyrochlore group minerals: Pyrochlore subgroup. *American Mineralogist.*

N. Bordes, L.M. Wang**, R.C. Ewing and K.E. Sickafus (in press) Ion-beam induced disordering and onset of amorphization in spinel by defect accumulation. *Journal of Materials Research.*

John Geissman

Papers in press

Evolution of the Potrillo volcanic field, Rio Grande rift, southern New Mexico, U.S.A. Part I. Geochemistry, 3He surface exposure dating, and paleomagnetism.
E.Y. Anthony, W. Chen*, W.J.W. Williams*, J. Poths, M.J. Whitelaw, J.W. Geissman, and M.A. Oimette*.
Journal of Geophysical Research.

Paleomagnetism of the Dockum Group (Late Triassic), northwest Texas: Implications for the Triassic-Jurassic cusp of the North American APWP.
R. Molina, J.W. Geissman, and R. Van der Voo
Tectonics.

Paleomagnetism and geochronology of gabbro sills at Mariscal Mountain anticline, Big Bend National Park, Texas: Implications for the timing of Laramide tectonism in the southern Cordilleran orogenic belt.
S.S. Harlan, J.W. Geissman, C.S. Henry, and T.C. Onstott.

Large-magnitude extensional deformation in the South Mountains metamorphic core complex: Evaluation with paleomagnetism.
R.F. Livaccari, J.W. Geissman, and S.J. Reynolds
for Bulletin, Geological Society of America.

El Calderon cinder cones and related basalt flows
T.E. Cascadden, J.W. Geissman, A.M. Kudo, and A.W. Laughlin
New Mexico Bureau of Mines and Mineral Resources Bulletin, El Malpais National Monument.

Short-lived eruption of heterogeneous magma in the central Zuni-Bandera volcanic field (Cerro Candelaria, Twin Craters, Lost Woman Crater, and La Tetera): Paleomagnetism and geochemical data
T.E. Cascadden, J.W. Geissman, and A.M. Kudo
New Mexico Bureau of Mines and Mineral Resources Bulletin, El Malpais National Monument.

Proposals in review

Pre-Proposal: Geochemical and temporal evolution of a giant continental igneous-hydrothermal system: The Butte, Montana, ore deposit with Mark Reed (Oregon), John Dilles (Oregon State), Larry Snee (US Geological Survey).
National Science Foundation, Continental Dynamics
$500,000; three years.

Acquisition of a Micro-Mag magnetic hsyteresis instrument in support of rock magnetic and aleomagnetic investigations
John Wm. Geissmand Roberto S. Molina-Garza
National Science Foundation, Instrumentation and Facilities Program
$60,000, August 1, 1995 to July 31, 1997.

Paleomagnetic study of lower Mesozoic rocks in northern Mexico: A key to the evolution of western equatorial Pangea and the accretion of Mexico
Roberto S. Molina-Garza and John Wm. Geissman
National Science Foundation, Tectonics Program
$109,445, May 31, 1995, to April 30, 1998.

Manuscripts in Review

Paleomagnetism and magnetostratigraphy of Triassic strata in the Sangre de Cristo Mountains and Tucumcari basin, New Mexico,
R.S. Molina-Garza**, J.W. Geissman, S.G. Lucas, and R. Van der Voo
Geophysical Journal Int.

A paleomagnetic and 40Ar/39Ar geochronologic study of Late Cretaceous remagnetization of Proterozoic mafic dikes, southern Highland Range, Southwestern Montana.
S.S. Harlan, J.W. Geissman, L.W. Snee, and R.L. Reynolds
Bulletin, Geological Society of America.

Mesozoic structure of the Timpahute Range, southern Nevada.
W.J. Taylor, J. Bartley, J.W. Geissman, and G. Overtoom
Bulletin, Geological Society of America.

Paleomagnetic identification of ca. 1.4 Ga regional metamorphism in central New Mexico
S. THE. Meuret and J.W. Geissman
New Mexico Geological Society, Fall, 1995 Guidebook.

Evolution of an Eocene inta-arc half-graben, central Idaho, U.S.A.
S.U. Janecke, B. Hammond, L. Snee, and J.W. Geissman
Journal of Geophysical Research.

Manuscripts in Preparation

Scanning transmission electron microscopic investigation of the carriers of magnetizations in Banded Series rock of the Stillwater Complex, Montana
Weixin Xu*, J.W. Geissman, D.R. Peacor, and R. Van der Voo
Journal of Geophysical Research.

Precambrian paleointensity of the geomagnetic field: Examples from the late Archean Stillwater Complex and MesoProterozoic Laramie Anorthosite Complex
C.J. Hale, J.W. Geissman, and S.S. Harlan.

On the paleomagnetic signature of crystalline crust in extensional terranes.
J.W. Geissman
Tectonics.

Paleomagnetic data from the Hoover Dam area document approximately 45 degrees of counterclockwise rotation related to slip along the Lake Mead Fault System.
J.W. Geissman
Geological Society of America Bulletin.

Applications of Paleomagnetism in the Basin and Range province, western U.S.A., and relevance to models for crustal extension.
J.W. Geissman
Reviews of Geophysics (invited).

Paleomagnetism of the Hamblin-Cleopatra Volcano and related rocks, Lake Mead area, southern Nevada, Revisited.
T. Wawryzniec*, J.W. Geissman, J.E. Faulds, S.S. Harlan, and R.E. Anderson
Tectonics.

An example of interacting magnetite grains carrying a MesoProterozoic magnetization, Laramie Anorthsite Complex, Wyoming.
J.W. Geissman and S.S. Harlan.

Paleomagnetism of the Latest Archean Stillwater Complex, Beartooth Mountains, southern Montana.
J.W. Geissman
Precambrian Research.

Paleomagnetism and geochronology of Proterozoic mafic dikes, southern Tobacco Root Mountains, southwestern Montana.
S.S. Harlan, J.W. Geissman, L.W. Snee
Journal of Geophysical Research.

Tectonic significance of widespread late Paleozoic remagnetization of the western North America miogeocline and platform.
J.W. Geissman, J.K. Snow, and S.L. Gillett
Geology.

The paleomagnetism and rock magnetism of Quaternary volcanic rocks, Valles Caldera VC-2A Drilling Experiment, Sulfur Springs, Jemez Mountains.
J.W. Geissman
Jour. Volcanology and Geotherm. Research.

Paleomagnetism and rock magnetism of late Miocene intrusions, Paiute Ridge, Nevada.
C.D. Ratcliff, J.W. Geissman, F.V. Perry, B.M. Crowe, and P. Zeitler
for Journal of Geophysical Research.

Partial late Paleozoic remagnetization of the Combro-Ordovician Ignacio Formation, southwest San Juan Mountains, Colorado.
J.W. Geissman
for Geophysical Research Letters.

Paleomagnetism of mafic dikes in the Roberts Mountains and Cortez Range, Nevada: Implications for structural history of the northern Nevada rift.
J.W. Geissman, G.A. Acton, and M. Schneider*.

Late Paleozoic magnetizations from Archean and Proterozoic crystalline rocks, Rocky Mountains, and implications for Late Paleozoic remagnetization processes.
J.W. Geissman and S.H. Harlan
Earth and Planetary Science Letters.

The rock magnetic record of silicic magma emplacement, Obidian Domes, California.
J.W. Geissman, J.C., Eichelberger, S.S. Harlan, and C. McCabe
Jour. Geophys. Res.

Paleomagnetic and thermochronologic evidence for footwall tilt during extensional core complex development, Mineral Mountains, central Utah.
D.S. Coleman, J.W. Geissman, J. D.Walker, J.M. Bartley, and K.V. Hodges
Tectonics.

Laramide (?) age of remagnetization of Permian and Triassic strata, central and north-central New Mexico.
R.S. Molina-Garza**, J.W. Geissman, and R. Van der Voo.

Paleomagnetic results from Cenozoic volcanic rocks in the Walker Lane area, west-central Nevada, and their bearing on mechanics of Basin and Range extension.
J.T. Callian*, J.W. Geissman, J.S. Oldow, and R.F. Hardyman.

Further paleomagnetic results from Mesozoic plutons of the Walker Lane area, west-central Nevada, and tectonic implications.
J.W. Geissman, J.T. Callian* and J.S. Oldow
Tectonophysics.

Paleomagnetism of the Jurassic Humboldt Lopolith, west-central Nevada: Results from extrusive equivalent metavolcanic rocks.
M.R. Hudson and J.W. Geissman
Geol. Soc. Amer. Bull.

Paleomagnetic and rock magnetic data from plagioclase -- olivine cumulate rocks of the Banded Series, Stillwater Complex, Montana, and their bearing on the age of regional serpentinization and nature of platinum-group element mineralization.
J. Saxton and J.W. Geissman
Econ. Geol.

Unsuccessful proposals for grants:

Evaluation of facies-controlled acquisition of secondary natural remanence in Triassic red beds, west Texas, North American craton
R.S. Molina-Garza and John Wm. Geissman
National Science Foundation, Tectonics
$102,320, Jan. 1, 1995 to Dec. 31, 1997.

Non-sponsored Research:

"Generic" paleomagnetic and rock magnetic investigations of: Cenozoic volcanic rocks (Arizona, Nevada, California, New Mexico)
Lower Paleozoic plutons (New Mexico, Colorado)
Mesozoic sedimentary rocks (New Mexico, Colorado, West Texas, Nevada)
Paleozoic sedimentary rocks (Nevada, New Mexico, Colorado, Utah)
Meteorite ejecta blankets (West Germany)

Cenozoic intrusions (Utah, Nevada, New Mexico)
Mesozoic intrusions (Nevada, Colorado, California)

Stephen P. Huestis

Manuscripts in press

Exploring complex-base logarithms
S.P. Huestis
Mathematics Magazine, in press.

The use of linear programming in construction of extremal solutions to linear inverse problems
S.P. Huestis
SIAM Review, in press.

A Fourier boundary integral method for solving Laplace's equation in two dimensions
S.P. Huestis
Communications in Numerical Methods in Engineering, in press.

Manuscript in Review

A Fourier method for the construction of certain extremal solutions of the inverse Dirichlet problem in two dimensions
S.P. Huestis
Submitted to Inverse Problems.

Unsponsored research

Inverse boundary value problems for Laplace's equation in irregular two dimensional regions
Geomagnetic time scale and seafloor spreading rates, with G. Acton.

Rhian Jones

Abstracts in press

A chondrule origin for dusty, relict olivine grains.
R.H. Jones**, and L.R. Danielson*
Lunar and Planetary Science Conference XXVI (1995).

Experimental reduction of olivine: Constraints on formation of dusty relict olivine in chondrules.
L.R. Danielson* and R.H. Jones**
Lunar and Planetary Science Conference XXVI (1995).

Manuscripts in review

Relict grains in chondrules: Evidence for chondrule recycling.
R.H. Jones**
Submitted to "Chondrules and the Protoplanetary Disk."

Manuscripts in preparation

FeO-rich, porphyritic pyroxene chondrules in unequilibrated ordinary chondrites.
R.H. Jones**
To be submitted to Geochimica et Cosmochimica Acta.

Unsuccessful proposals submitted

Determination of the Fe-Mg interdiffusion coefficient in olivine using SIMS analytical techniques.
R.H. Jones
Submitted to National Science Foundation
Funds requested $165,395; Requested starting date Jan 1, 1995.

Karl E. Karlstrom

Manuscript in press (* = graduate student co-author; ** = undergraduate student co-author)

Tectonic setting of the Sandia pluton: an orogenic 1.4 Ga granite in New Mexico
E. Kirby*, K.E. Karlstrom, and C. Andronicos**
Tectonics, in press, February 1995.

Manuscripts in review (* = graduate student co-author; ** undergraduate student co-author)

Structural and thermal setting during emplacement of the Sandia pluton: New Mexico Geological Society
E. Kirby*, K.E. Karlstrom, and C. Andronicos**
New Mexico Geological Society 46th Annual Field Conference: in prep.

The reconstruction of a middle Proterozoic orogenic belt in north-central New Mexico, U.S.A.
C.G. Daniel*, K.E. Karlstrom, M.L. Williams, and J. Pedrick*
New Mexico Geological Society 46th Annual Field Conference, in prep.

Geology of the Monte Largo Hills area, New Mexico: Structural and metamorphic study of the eastern Aureole of the Sandia pluton
M. Timmons** and K.E. Karlstrom
New Mexico Geological Society 46th Annual Field Conference: in prep.

Manuscripts in preparation (* = graduate student co-author; ** = undergraduate student co-author)

Paleoproterozoic rocks of the Upper and Middle Granite Gorges, Grand Canyon, Arizona: New stratigraphic nomenclature, structural geometry, and insights into middle crustal processes
B. Ilg*, K.E. Karlstrom, D. Hawkins, and M.L. Williams
GSA Bulletin, in prep.

Thermal evolution of Proterozoic middle crust during and following 1.4 Ga pluton emplacement, Manzano Mountains, New Mexico: Pluton-enhanced 4 kb metamorphism, rapid decompression, and vetrograde history
A.G. Thompson*, K.E. Karlstrom, and B.D. Dallmeyer
Journal of Geology, in prep.

Punctuated mid-crustal tectonism around the 1.42 Ga Sandia pluton, central New Mexico, U.S.A., Regional Aureole Metamorphism, foliation reactivation, and mid-crust flow
C.L. Andronicos**, K.E. Karlstrom, M.W. Nyman, and E. Kirby*
Journal of Metamorphic Geology, in prep.

$^{40}Ar/^{39}Ar$ evidence for a Mesoproterozoic thermal event in the Southwest: lithospheric delamination and erosion model for 1.4 Ga tectonism
K.E. Karlstrom, D. Dallmeyer, and C. Daniel*
Geochemica Cosmochemica Acta, in prep.

Nature of the middle crust during orogenesis: constraints on thermal, mechanical, and geodynamic processes inferred from Proterozoic rocks of the Southwest
K.E. Karlstrom, and M.L. Williams
Geology, in prep.

Horizontal isograds, looping P-T paths, and the thermal evolution of the middle crust: the Proterozoic orogen of the Southwest
M.L. Williams and K.E. Karlstrom
Geology, in prep.

Syn-contractional crustal anatexis and deformation during emplacement of the 1435 Ma Electra Lake gabbro, Needle Mountains, Colorado
D.A. Gonzales*, K.E. Karlstrom, and G. Siek
Geology, in prep.

Proposals pending (submitted Dec. 1, 1994)

Collaborative Research: Nature of the middle crust during orogenesis: thermal, mechanical, and geodynamic properties inferred from Proterozoic rocks of the Southwest ($110,583 requested for 2 years, NSF Tectonics panel)

Continental Dynamics preproposal: Lithospheric structure and evolution of cratonic western U.S., Wyoming to Mexico: an integrated geological/geophysical investigation ($1,950,000 requested - NSF C.D. panel)

Workshop Request: Lithospheric structure and evolution of cratonic western U.S., Wyoming to Mexico: an integrated geological and geophysical investigation: ($19,900 requested for April 95 workshop - NSF CD panel)

Penrose Conference support: Nature of the middle crust during orogenesis: thermal, mechanical, and geodynamic properties ($8,000 requested for April 96 Penrose conference - NSF Tectonics panel)

Pluton-related regional platform uplift and thermal regimes during the 1.4 Ga tectonic event in southwestern North America (with Matt Nyman) ($65,772 requested - NSF Tectonics panel)

Cornelis Klein

CD-ROM

"Mineralogy Tutorials"
C. Klein and S.M. Stoller Co.
John Wiley and Sons, New York, publication date June 1995.

Refereed reference section

Gems and Gem Minerals
C. Klein
MacMillan Encyclopedia of Earth Sciences, (typed manuscript, 26 pages), accepted for publication in 1995/1996.

Contributions to McGraw Hill Encyclopedia

Chabazite
C. Klein
McGraw Hill Encyclopedia of Science Technology, 8th ed., in press.

Turquoise
C. Klein
McGraw Hill Encyclopedia of Science Technology, 8th ed., in press.

Opal
P.J. Darrash and C. Klein
McGraw Hill Encyclopedia of Science Technology, 8th ed., in press.

Carnotite
M. Deliens and C. Klein
McGraw Hill Encyclopedia of Science Technology, 8th ed., in press.

Manuscripts in preparation

Petrology and geochemistry of selected Proterozoic banded iron-formations of the Quadrilátero Ferrífero, Minas Gerais, Brazil
C. Klein and E.A. Ladeira, in prep.

Geology and geochemistry of banded iron-formations (BIF) and metacherts at the Morro Velho and Raposos Gold Deposits, Minas Gerais, Quadrilátero Ferrífero, Brazil
C. Klein and E.A. Ladeira, in prep.

Petrology and geochemistry of high-grade metamorphic archean banded iron-formations of the Guanhães region, Minas Gerais, Brazil
C. Klein, E.A. Ladeira, and J.H. Grossi Sad, in prep.

Albert M. Kudo

Manuscript in preparation

Petrogenesis of El Pico de Orizaba, Mexico
Post-impact fluid flow, Manson Impact Crater, Manson Iowa, with L.J. Crossey

Barry S. Kues

Manuscripts in press

Paleontology of the Upper Cretaceous Cabullona Group, northeastern Sonora
S.G. Lucas, B.S. Kues and C.M. Gonzalez-Leon
Studies on the Mesozoic of Sonora and adjacent areas, Geological Society of America, Special Paper 301

Stuart Alvord Northrop: a brief biography and appreciation
B.S. Kues
Forward to "Minerals of New Mexico, 3rd edition," UNM Press

Manuscripts in review

Decapod crustaceans from the Semilla Sandstone Member, Mancos Shale (Upper Cretaceous), north-central New Mexico
E.K. Toolson and B.S. Kues
Journal of Paleontology

Manuscripts in preparation

Marine fauna of the Early Permian (Wolfcampian) upper Hueco Formation, southern Robledo Mountains, New Mexico
B.S. Kues
New Mexico Museum of Natural History, Bulletin

New bivalve taxa from the Tucumcari Formation (Cretaceous, Albian), and the biostratigraphic significance of the basal Tucumcari fauna
B.S. Kues
Journal of Paleontology

Late Cretaceous decapod crustaceans from central New Mexico
E.K. Toolson and B.S. Kues
Journal of Paleontology

New species of early Wolfcampian (Permian) gastropods from central New Mexico
B.S. Kues
Journal of Paleontology

Catalogue and bibliography of New Mexico invertebrate and plant fossils
B.S. Kues
New Mexico Museum of Natural History, Bulletin

New species of Middle Pennsylvanian gastropods from New Mexico and west Texas
B.S. Kues
Journal of Paleontology

A Late Cretaceous mosasaur from northern New Mexico
S.G. Lucas, A. Heckert and B.S. Kues
N.M. Geological Society, Guidebook 46

The Geology of New Mexico
B.S. Kues and S.G. Lucas
UNM Press

Graham Layne

Manuscripts in review

Comparison of microanalytical methods for estimation of H_2O contents of silicic volcanic glasses
J.D. Devine, J.E. Gardner, H.P. Brack, G.D. Layne**, and M.J. Rutherford
submitted to American Mineralogist.

Crystallization and mixing dynamics in arc magma chambers from SIMS analysis of Sr, Ba, and Mg zoning of volcanic plagioclase
B.S. Singer, G.D. Layne**, and M.A. Dungan
submitted to Science.

Trace element and textural zoning in volcanic plagioclase: Clues to the dynamics of calc-alkaline magmas
B.A. Singer, M.A. Dungan, and G.D. Layne**
submitted to American Mineralogist.

Richard Livaccari

Paper in Press

Large-magnitude extensional deformation in the South Mountains metamorphic core complex, Arizona: Evaluation with paleomagnetism
R.F. Livaccari, J.W. Geissman, and S.J. Reynolds
Geological Society of America Bulletin, 1995, in press.

Les D. McFadden

Manuscripts in press

Spatial and temporal variation in terrace riser catena in the Transverse Ranges, southern California
J.B.J. Harrison, K.A. Kendrick, L.D. McFadden and R.J. Weldon III
Catena, in press.

Geomorphic responses to climatic changes of different scales in the Holocene, southwestern Colorado Plateau, Arizona: A soil-geomorphic and ecologic perspective
L.D. McFadden and J.R. McAuliffe
in Geomorphic Response to Climatic Change (C. Kochel and J. Miller eds.)
John F. Wiley, Symposium Volume, International Association of Geomorphology, in press.

Cosmogenic 3He exposure dating of stone pavements: Implications for landscape evolution in deserts
S.G. Wells, L.D. McFadden, J. Poths, and C.T. Olinger
Geology, in press.

The relative influences of climate change, desert dust, and lithologic control on soil-geomorphic processes on alluvial fans, Mojave Desert, California: summary of results
E.V. McDonald, L.D. McFadden, and S.G. Wells
San Bernardino County Museum Association Special Publication

Manuscripts submitted or in review

An isotopic study of soils in sequences of alluvial deposits, Providence Mountains, California
Y. Wang, E. McDonald, R. Amundson, L. McFadden and O. Chadwick
Geological Society of America Bulletin

Manuscripts in preparation

Late Quaternary archeology and evolution of soils and landscapes in the area of the Bolack Land Exchange, northern San Juan Basin, New Mexico
L.D. McFadden, P. Hogan and J.M. Elyea
Geoarcheology of The Holocene

The influence of dust and lithology on the coevolution of desert pavements and vesicular A horizons of alluvial fans
E.V. McDonald, L.D. McFadden and S.G. Wells
Geological Society of America Bulletin, in prep.

Soil development in the northern part of the San Timoteo Badlands, San Bernardino and Riverside Counties, California
K.J. Kendrick, L.D. McFadden and D.M. Morton
Quaternary Research, in prep.

The formation of soils on alluvial fans: results of recent geomorphic, geochemical, and numerical modeling studies and implications for studies of paleosols in ancient fan sediment
L.D. McFadden, C. Treadwell, E.V. McDonald, S.G. Wells, and J.B.J. Harrison
Geology, for SEPM Special Publication, in prep.

The impact of Pleistocene-Holocene climatic transition and lithologic control on alluvial-fan deposition along a desert piedmont, Mojave Desert, California
E.V. McDonald, L.D. McFadden, and S.G. Wells
Quaternary Research, in prep.

Application of a soil-water balance model to evaluate the influence of climate change on soil-water movement in calcic soils
E.V. McDonald, F.B. Pierson, G.N. Flerchinger and L.D. McFadden
Catena or Soil Science, in prep.

Proposals in preparation

Use of Cosmogenic Surface Age dating in geomorphic studies, to BES/DOE

Mark Miller

Submitted proposal to DOE/BES "The Crystal Chemistry and Structural Analysis of Uranium Oxide Hydrates"
Just funded. $100,000; 1 year, May 15, 1995 - May 14, 1996.

Roberto Molina-Garza

Paleomagnetism of the Dockum Group (Upper Triassic), Northwest Texas: Further evidence for the J-1 cusp of the North American APWP and implications for Colorado Plateau rotation amd rate of Triassic APW
R.S. Molina-Garza, J.W. Geissman, and R. Van der Voo
Tectonics, in review.

Magnetic fabric and rock magnetic study of the Xaltianguis intrusive, southern Mexico: implications for the emplacement mode
J. Urrutia-Fucugauchi and R.S. Molina-Garza
Geofisica Internacional, in press.

0716

Horton Newsom

Articles in press

Composition of the Solar System, Planets, Meteorites, and Major Terrestrial Reservoirs.
H.E. Newsom
AGU Handbook of Physical Constants (T.J. Ahrens ed.), in press (1994).

Origin of Earth.
H.E. Newsom
In MacMillan Encyclopedia of Earth Sciences (E.J. Dasch ed.), in press (1994).

Articles submitted

The role of hydrothermal fluids in the production of subduction zone magmas: Evidence from siderophile and chalcophile trace elements and boron.
P.D. Noll, Jr., H.E. Newsom, W.P. Leeman, and J. Ryan
Geochim Cosmochim. Acta, submitted (1994).

Siderophile elements in planetary building blocks: evidence from primitive meteorites.
H.E. Newsom
Geochim, Cosmochim, Acta, submitted (1994).

The Origin of Dark Clasts in the Khor Temiki Aubrite.
H.E. Newsom, T. Ntaflos, and K. Keil
Meteoritics, submitted (1994).

Proposals submitted and pending

NASA Planetary Materials, Geochemical clues to planetary origins and evolution, H. Newsom P.I., $241,991 requested.

National Science Foundation, Siderophile elements and the origin of the continental crust, H. Newsom P.I., $195,679 requested.

NASA Exobiology Program, Impact crater lakes and hydrothermal systems: constraints on prebiotic evolution. H. Newsom P.I., $ 60,579 requested.

Matthew Nyman

Grants submitted

To National Science Foundation: Pluton-related regional platform uplift and thermal regimes during the 1.4 Ga tectonic event in Southwestern North America.

Other Research

Investigation of tectonic setting and emplacement mechanisms of 1.4 Ga plutons in central Arizona. Sponsored by National Science Foundation Postdoctoral Fellowship, 1993-1995.

James J. Papike

Manuscripts in press

V.S. McConnell, C.K. Shearer,** J.C. Eichelberger, M.J. Keskinen, P.W. Layer and J.J. Papike (1995) Rhyolite Intrusions in the Intracaldera Bishop Tuff, Long Valley, California. Jour. of Volcanol. and Geotherm. Res., in press.

Manuscripts submitted or in review

A. Pun,* and J.J. Papike (1995) Ion Microprobe Investigation of Exsolved Pyroxenes: Determination of Minor and Trace-Element Partition Coefficients. G.C.A. (in review).

J.J. Papike,, M.N. Spilde,** G.W. Fowler,** G.D. Layne,** and C.K. Shearer** (1995) The Lodran Primitive Achondrite: Petrogenetic Insights from Electron and Ion Microprobe Analysis of Olivine and Orthopyroxene. G.C.A. (in review).

G.W. Fowler,** C.K. Shearer, ** and J.J. Papike (1995) Diogenites as Asteroidal Cumulates: Insights from Orthopyroxene Trace Element Chemistry. G.C.A. 58, (in review).

Manuscripts in preparation

A. Pun,* and J.J. Papike (1996) Unequilibrated Eucrites: Pyroxene REE Systematics and Major, Minor, and Trace Element Zoning. G.C.A., (to be submitted).

J.J. Papike, M.N. Spilde,** G.W. Fowler,** and I.S. McCallum (1996) SIMS Studies of Planetary Cumulates: Orthopyroxenes from the Stillwater Complex, Montana. American Mineralogist, (to be submitted).

J.J. Papike, G.W. Fowler,** C.K. Shearer,** and I.S. McCallum (1996) SIMS Studies of Planetary Cumulates: Orthopyroxenes from Diogenites, Asteroid 4 Vesta and the Stillwater Complex, Montana. Meteoritics, (to be submitted).

J.J. Papike, (1996) Pyroxene as a Recorder of Cumulate Formational Processes; Asteroids, Moon, Earth: Reading the Record with the Ion Microprobe. M.S.A. Presidential Address. American Mineralogist, (to be submitted).

Frank J. Pazzaglia

Manuscript in press

Uplift, denudation, and accretionary wedge processes of the Cascadia margin constrained by Quaternary fluvial stratigraphy, Olympic Peninsula, Washington
F.J. Pazzaglia and M.T. Brandon
Tectonics, in press.

Manuscripts in review

Deconvolving the evolution of mean topography and uplift for the post-orogenic Appalachians using the offshore sedimentary record
F.J. Pazzaglia and M.T. Brandon
Geology

Late Cenozoic palynology of the middle Atlantic Coastal Plain: implications for the age of fluvial deposits at the head of Chesapeake Bay and a new technique for establishing relative age control
F.J. Pazzaglia, A. Traverse and R. Robinson
Sedimentary Geology

Unsuccessful proposals

Neotectonics, terrace genesis, and accretionary wedge dynamics along with the Cascadia Margin, Olympic Peninsula, Washington
F.J. Pazzaglia
National Science Foundation
$75,620; two years.

0718

Frans Rietmeijer

Manuscripts in press

A transmission electron microscope study of experimentally shocked pregraphitic carbon.
F.J.M. Rietmeijer
Carbon

Arguments for bromine contamination of stratospheric micrometeorites: Reply to a discussion by Bohsung et al.
F.J.M. Rietmeijer
J. Geophys. Res.

Post-entry and volcanic contaminant abundances of zinc, copper, selenium, germanium and gallium in stratospheric micrometeorites.
F.J.M. Rietmeijer
Meteoritics, vol. 30.

Magnesium loss from unmelted stratospheric interplanetary dust particles during atmospheric entry.
F.J.M. Rietmeijer
Lunar Planet. Sci., vol. 26.

An analytical electron microscope [AEM] study of hydrous alteration of amorphous magnesiosilica samokes.
F.J.M. Rietmeijer
Lunar Planet. Sci., vol. 26.

On the possibility of phyllosilicate alteration in the KOSI-2 comet simulation experiment.
F.J.M. Rietmeijer and K. Thiel
Lunar Planet. Sci., vol. 26.

Manuscripts submitted

Ultrafast quenching: The example of a micrometeorite.
F.J.M. Rietmeijer
Contrib. Mineral. Petrol.

Manuscripts in preparation

Type CM micrometeorites in the lower stratosphere during October, 1989 and August, 1991.
Rietmeijer F.J.M.
Meteoritics

Unsuccessful Grant Proposals

Balloon-borne collection and electron microbeam analyses of stratospheric dust.
F.J.M Rietmeijer (Principal Investigator); Resubmitted.
National Science Foundation, Volcanology and Atmospheric Sciences Programs.

Unsupported Research

Transmission Electron Microscope characterization of hydrogen-bearing carbon condensates, in cooperation with Prof. Armando Blanco (University of Lecce, Lecce, Italy) and Dr. Luigi Colangeli (Osservatorio Astronomico di Capodimonte, Naples, Italy.

Transmission Electron Microscope analyses of airborne industrial dusts in Silesa, in cooperation with Prof. Janusz Janeczek, The Silesian University, Poland.

Gary A. Smith

Manuscripts in press

Intra-arc basins
G.A. Smith and C.A. Landis
Tectonics of Sedimentary Basins, R.V. Ingersoll and C. Busby, editors
London, Blackwell and Sons.

What factors control the composition of andesitic sand?
G.A. Smith and J.E. Lotosky*
Journal of Sedimentary Research

Paleosol genesis in the Pliocene-Pleistocene St. David Formation, southeastern Arizona
J.L. Slate, G.A. Smith, Y. Wang, and T.E. Cerling
Journal of Sedimentary Research

Manuscripts submitted or in review

Roadlog for Day One: Santa Fe - Espanola - Ghost Ranch
G.A. Smith
New Mexico Geological Society Guidebook, 1995 Fall Field Conference

Paleogeographic, volcanologic, and tectonic significance of the upper Abiquiu Formation at Arroyo del Cobre, New Mexico
G.A. Smith
New Mexico Geological Society Guidebook, 1995 Fall Field Conference

Geology of the Squawback Ridge quadrangle, Deschutes and Jefferson Counties, Oregon
D.E. Stensland, M.L. Ferns, G.A. Smith
Oregon Department of Geology and Mineral Industries Geologic Map Series, scale 1:24,000

Geology of the Steelhead Falls quadrangle, Deschutes and Jefferson Counties, Oregon
D.E. Stensland, M.L. Ferns, G.A. Smith
Oregon Department of Geology and Mineral Industries Geologic Map Series, scale 1:24,000

Manuscripts in preparation

Contrasting modes of tephra preservation in the Skull Ridge Member of the Tesuque Formation, Espanola Basin, New Mexico
M.L. Rhoads*, G.A. Smith
New Mexico Geological Society Guidebook, 1995 Fall Field Conference

Formation of the Pliocene Borrego pediment in the western Sangre de Cristo Mountains
G.A. Smith
New Mexico Geological Society Guidebook, 1995 Fall Field Conference

Sedimentology and physical volcanology of a Miocene composite pyroclastic-flow apron/alluvial fan, Jemez Mountains, New Mexico
G.A. Smith
to be submitted to Bulletin of Volcanology

Geology of the Opal City quadrangle, Deschutes and Jefferson Counties, Oregon
D.E. Stensland, G.A. Smith, M.L. Ferns
Oregon Department of Geology and Mineral Industries Geologic Map Series, scale 1:24,000

Geology of the Gray Butte quadrangle, Deschutes and Jefferson Counties, Oregon
D.E. Stensland, G.A. Smith, M.L. Ferns
Oregon Department of Geology and Mineral Industries Geologic Map Series, scale 1:24,000

Unsuccessful proposals for grants or contracts submitted

Reactive hydrothermal flow in volcanic settings: Field and computational studies Fraser Goff (LANL), Gregory Valentine (LANL), Gary A. Smith
Institute of Geophysics and Planetary Physics
January 1995 - December 1995; $23,550.00 requested

Sedimentologic record of lake-level fluctuations at glacial Lake Missoula and relationship to out-burst floods in the Channeled Scabland
Gary A. Smith and William J. Fritz (Georgia St. Univ.)
National Science Foundation
May 1995 - April 1997; $16,975.00 requested

Ashes of the Tesuque Formation, New Mexico: The distal record of a major continental volcanic field and ash preservation in a fluvial environment.
Gary A. Smith and John A. Wolff (UT-Arlington)
National Science Foundation
January 1994 - December 1995; $70,195.00 requested

Unsupported research projects

Paleogeographic, volcanologic, and tectonic significance of the upper Abiquiu Formation at Arroyo del Cobre, New Mexico

Michael Spilde

Works in progress

SIMS studies of planetary cumulates: Orthopyroxene from the Stillwater Complex, Montana.
J.J. Papike, M.N. Spilde**, G.W. Fowler**, and I.S. McCallum
American Mineralogist, In preparation.

Lumin Wang

Manuscripts in press

The $AM_{21}O_{38}$ - Crichtonite structure type as a host phase in crystalline waste form ceramics
W.L. Gong, R.C. Ewing, L.M. Wang** and H.S. Xie
Proceedings of XVIII International Symposium on the "Scientific Basis for Nuclear Waste Management" (Kyoto, Japan, October 23-27, 1994), in press.

Temperature dependence of amorphization for zirconolite and perovskite irradiated with 1 MeV krypton ions
T.J. White, R.C. Ewing, L.M. Wang**, C. Montross and J.S. Forrester
XVIII International Symposium on the "Scientific Basis for Nuclear Waste Management" (Kyoto, Japan, October 23-27, 1994), in press.

Temperature and dose dependence of metal colloid production in alpha-irradiated CaF_2 single crystals
W.J. Weber, G.J. Exarhos and L.M. Wang**
Materials Research Society Symposia Proceedings, vol. 373 (1995), in press.

Amorphization of complex ceramics by heavy-particle irradiations
R.C. Ewing, L.M. Wang**, and W.J. Weber
Materials Research Society Symposia Proceedings, vol. 373 (1995), in press.

Characterization of collision cascade damage in $Ca_2La_4(SiO_4)_6O_2$ by HRTEM
L.M. Wang** and W.J. Weber
Materials Research Society Symposia Proceedings, vol. 373 (1995), in press.

Ion beam modification of Tl-Ba-Ca-Cu-O type high temperature superconductors during irradiation
P.P. Newcomer*, B. Morosin and L.M. Wang**
Materials Research Society Symposia Proceedings, vol. 373 (1995), in press.

Effects of structure-type and thermodynamic stability on ion-beam induced amorphization, exemplified by $MgAl_2O_4$ and g-$SiFe_2O_4$
L.M. Wang**, W.L. Gong, N. Bordes, R.C. Ewing and Y. Fei
Materials Research Society Symposia Proceedings, vol. 373 (1995), in press.

Lee Woodward

In Press:

Geologic maps and cross sections of the Boss Tweed mine, Pony mining district, Madison County, Montana
L.A. Woodward, Mark H. Nunlist, Kenneth D. Adams, and Ted K. Kendall
Montana Bureau of Mines and Geology, Open-File Report
5 maps, 10 cross sections, and 8-page text, in press.

Metallic mineral deposits of the Judith Mountains, central Montana
L.A. Woodward
Montana Bureau of Mines and Geology, Memoir 67, in press.

Possible sources of metals in veins hosted by Spokane and Greyson formations (Middle Proterozoic) in the Argo copper belt, Big Belt uplift, Montana
I.M. Lange, L.A. Woodward, and H.R. Krause
Montana Bureau of Mines and Geology, Special Publication, in press.

The Golden Messenger mine, York District, Montana: Geologic and isotopic constraints
I.M. Lange, H.R. Krause, and L.A. Woodward
Economic Geology, in press.

Crayton Yapp

Manuscript in review

Stable hydrogen isotopes in iron oxides - III. "High temperature" nonstoichiometric hydrogen in goethite.
C.J. Yapp and H. Poths
Geochimica et Cosmochimica Acta
(submitted in 1994)

5. ACTIVITIES IN PROFESSIONAL SOCIETIES

Bruce Allen

Conferences

Large and abrupt changes in continental climate in western North America during the last glacial maximum.
R.Y. Anderson and B.D. Allen

Invited talk, Alfred Wegener Conference on Climate Dynamics Recorded in Long Continental High-Resolution Time Series Since the Last Interglacial, Potsdam, Germany, 1994.

Roger Anderson

Conferences

Invited speaker, Alfred Wegener Conference on Climate Dynamics Recorded in Long Continental High-Resolution Time Series Since the Last Interglacial, Potsdam, Germany, 1994.

Titles: Possible effects of the solar wind and the geomagnetic field on decade- to century-scale climate variability
R.Y. Anderson

Large and abrupt changes in continental climate in western North America during the last glacial maximum
R.Y. Anderson and B.D. Allen

Susan Barger

Presented poster at Materials Issues in Art and Archaeology IV, Cancun, Mexico, May 16-20, 1994.

Additional professional meetings attended:

Materials Issues in Art and Archaeology IV, Cancun, Mexico, May 16-20, 1994.
Western Area Art Conservator's Annual Meeting, Asilomar, California, September 25-27, 1994.

Associate Editor, Journal of Imaging Science and Technology

Abstractor, Art and Archaeology Technical Abstracts

Adrian Brearley

Talks presented

Presented talk, "Metamorphic effects in the matrices of CO3 chondrites: compositional and mineralogical variations. LPS XXV 165-166. 25th Lunar and Planetary Science Conference, Houston, Texas, 14-18 March, 1994.

Presented poster, "Metamorphism in the CO3 chondrites: trace element behavior in matrices and rims. LPS XXV 165-166. 25th Lunar and Planetary Science Conference, Houston, Texas, 14-18 March, 1994.

Co-authored talk. "Reduced plagioclase-rich chondrules in the Lance and Kainsaz CO3 chondrites." LPS XXV, 641-642. 25th Lunar and Planetary Science Conference, Houston, Texas, 14-18 March, 1993.

Co-authored talk. "Lamellar olivine in the Divnoe achondrite: EPMA and TEM studies." LPS XXV 1069-1070. 25th Lunar and Planetary Science Conference, Houston Texas, 14-18 March, 1993.

Presented talk, "Mechanisms of phase transformations involving β-phase and γ-spinel at high pressure. Terra Abstracts Vol. 6, 7-8. 4th Annual Experimental Petrology, Mineralogy and Geochemistry Symposium, University College, London, 13-15th April, 1994.

Presented talk, "Chondrule-matrix relationships in chondritic meteorites." Conference on Chondrules and the Protoplanetary Disk, Albuquerque, New Mexico, 13-15 Oct. 1994.

Presented talk, "The spinel to modified spinel transformation in Mg_2SiO_4: the effect of temperature." Fall AGU meeting, San Francisco, California, December 5-9, 1994.

Presented poster, "High resolution transmission electron microscopy of martensitically produced spinel lamellae in olivine" Fall AGU meeting, San Francisco, California, December 5-9, 1994.

Professional meeting attended

24th Lunar and Planetary Science Conference, Houston, Texas. March 14-18, 1994.
4th Annual Experimental Petrology, Mineralogy and Geochemistry Symposium, University College, London, 13- 15th April, 1994.
Conference on Chondrules and the Protoplanetary Disk, Albuquerque, New Mexico, 13-15 October 1994.
American Geophysical Union Fall Meeting, San Francisco, CA. December 5-9, 1994.

Michael Campana

Member, U.S. National Committee, International Association of Hydrogeologists

Member, Technical Committee, Second International Conference on Ground Water Ecology

Chair, Biogeochemistry session, Second International Conference on Ground Water Ecology, Atlanta, GA, March 27-30, 1994.

Chair, Hydrogeology session, GSA Annual Meeting, Seattle, WA, October 26, 1994.

Presented talk, "Hyporheic zone mixing and residence time distributions," GSA Annual Meeting, Seattle, WA, October 26, 1994.

Presented talk, "Fluid mean residence times in the hyporheic zone," Second International Conference on Ground Water Ecology, Atlanta, GA, March 29, 1994.

Laura Crossey

Meetings attended/talks presented

Lunar and Planetary Science Conference, March 14-18, 1994, Houston, TX.
VIIth International Symposium on the Observation of the Continental Crust through Drilling, April 25-30, 1994, Santa Fe, NM.
American Association of Petroleum Geologist/Society for Sedimentary Geology, Annual Meeting, June 12-15, 1994, Denver, CO.
Geological Society of America, October 24-27, 1994, Seattle, WA.

Society committees

American Association of Petroleum Geologists, Membership Committee (since 1989)
Association for Women Geoscientists (lecturer) (since 1989)
Clay Minerals Society, Ad Hoc Committee on Legal Issues (since 1991)
Society for Sedimentary Geology, Academic Liaison (since 1991)
Society for Sedimentary Geology, Membership Committee (since 1990)
Society for Sedimentary Geology, Chairman, Clastic Diagenesis Research Group (1994-1995)

Editorial Boards

Geology (Journal): appointed for 1993-1995

Maya Elrick

GSA Regional Meeting, March, 1994; presented paper

AAPG Annual Meeting, June, 1994, Denver; chaired special session and presented paper

Chairperson of the SEPM Rocky Mountain Section MS-Ph.D. Scholarship committee

Attended New Mexico Geological Society annual meeting, April, 1994; Socorro, Nm

Attended Permian Basin Section SEPM Field Trip; San Andres Mtns. April 22-24, 1994

Wolfgang E. Elston

Member, American Geological Institute Minorities Participation Committee. Mentor to six Minority students. Resigned, March 1994.

Member, Working Group on Explosive Volcanism, International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI)

Member, Working Group on Volcanic Data Files, IAVCEI

Member, Commission 17 (Moon and Planets), International Astronomical Union

Rodney C. Ewing

Mineralogical Society of America

Roebling Medal Committee for 1995
Benefactors Committee for 1995

asked to stand for election to the MSA Council in 1995

Materials Research Society

External Affairs Committee, IUMRS subcommittee, 1993 - 1995
Public Affairs Committee, 1995
Publications Committee, *MRS Bulletin* subcommittee, 1995
Awards Committee, 1993 - 1995
MRS Outstanding Young Investigator Medal Selection Committee (chair), 1993 - 1994
Review Board for *Journal of Materials Research*, 1994-1996

Program committee (co-chair with Takashi Murakami) for the *Scientific Basis for Nuclear Waste Managment XVIII* symposium sponsored by MRS, IUMRS and MRS-Japan in 1994, Kyoto, Japan.

International Union of Materials Research Societies

Secretary (one of four officers) of the International Union of Materials Research Societies, 1993-1994.
Vice-president (president-elect) of the International Union of Materials
Research Societies, elected in 1994 for a two year term, 1995-1996

Co-organizer of the symposium, "Environmental Materials: Issues & Developments" for the IV International Conference on Advanced Materials, Aug. 27 to Sept. 1, 1995, Cancún, Mexico

Journal of Nuclear Materials

Advisory Editorial Board, 1994 - 1996

Journal of Materials Research

Advisory Review Board, 1994 - 1996

Invited Presentations

"Radiation-Induced Amorphization in Complex Ceramics": Gordon Conference on Particle-Solid Interactions, Plymouth, New Hampshire, August 2, 1994 (poster presentation).

"Crystalline Ceramics: Future Uses as Radioactive Waste Forms: A Review and Comparison": symposium on Emerging Technologies in Hazardous Waste Management VI sponsored by the American Chemical Society, I&EC Division, Atlanta, Georgia, September 20, 1994.

"Radioactive Waste Forms: A Review and Comparison": seminar on Radioactive Waste Management Practices and Issues in Developing Countries sponsored by the International Atomic Energy Agency, Beijing, China, October 13, 1994.

"The Development of Ceramic Nuclear Waste Forms": seminar presented at the Beijing Institute for Nuclear Engineering, Beijing, China, October 17, 1994.

"Amorphization of Complex Ceramics by Heavy-Particle Irradiations": symposium on the Microstructure of Irradiated Materials, Materials Research Society, Boston, MA, November 30, 1994.

John Geissman

Talks Given

"Paleomagnetic contact and conglomerate tests on the age of magentizations in the Mississippian Leadvill Fm., and karst features, San Juan Mountains, Colorado", December, 1994, American Geophysical Union annual meeting, co-authored with members of the Fall EPS 508 Paleomagnetism course

"Paleomagnetic data from Miocene volcanic rocks and intrusions in the Hoover Dam area, Nevada and Arizona, and implications for deformation along the SE extension of the Lake Mead Fault system", October, 1994, Geological Society of America Annual Meeting

Editor in Training (position starts 1 January, 1995), Bulletin, Geological Society of America
Associate Editor, Bulletin, Geological Society of America
Associate Editor, Journal of Geophysical Research
Nominated for Fellow, Geological Society of America
Convenor, Session on Paleomagnetic Applications to Structure and Plate Tectonic Problems, December AGU Meeting
Associate Editor, Geology
Session Coordinator, Santa Fe Rock Magnetism Conference
President, Geophysics Division, Geological Society of America
Member, American Geophysical Union "Committee of 50"
Member, American Geophysical Union Public Information Committee
University of New Mexico representative, DOSECC, Inc.
Member, Panel, Instrumentation and Facilities Program, Division of Earth Sciences, National Science Foundation
Member, Board of Directors, DOSECC, Inc.
Geoscience "consultant", Albuquerque Petroglyphs, U.S. Park Service

John Husler

Member of the Geostandards International Working Group. Participated in interlab analysis of new international rock standards SY-4 Syenite, PM-S Microgabbro and WS-E Dolorite.

Rhian Jones

Presented talk, "Reduced, plagioclase-rich chondrules in the Lancé and Kainsaz CO3 chondrites." 25th Lunar and Planetary Science Conference. Houston, TX. March, 1994.

Presented talk, "Measurement of the Fe-Mg interdiffusion coefficient in olivine using a SIMS depth profiling technique." Fifth International Symposium on Experimental Mineralogy, Petrology and Geochemistry. London, U.K. April, 1994.

Presented talk, "Relict grains in chondrules: Evidence for chondrule recycling." Conference on Chondrules and the Protoplanetary Disk. Albuquerque, NM. October, 1994.

Presented poster, "Measurement of the Fe-Mg interdiffusion coefficient in olivine using SIMS depth profiling." American Geophysical Union Fall Meeting. San Francisco, CA. December, 1994.

Chaired session, "Carbonaceous chondrites, enstatite chondrites, and Kaidun." 25th Lunar and Planetary Science Conference. Houston, TX. March, 1994.

Chaired sessions, "From CAI to planets, timescales" and "Chondrule precursors," Conference on Chondrules and the Protoplanetary Disk. Albuquerque, NM. October, 1994.

Associate Editor of the international journal "Meteoritics."

Chair of local organizing committee and member of program committee, "Conference on Chondrules and the Protoplanetary Disk," Albuquerque, NM. October 13-15, 1994.

Member of Planetary Materials & Geochemistry, Management Operations Working Group (NASA).

Abstractor of "Meteoritics" for Mineralogical Abstracts.

Member of Mineralogical Society of Great Britain, Mineralogical Society of America, Meteoritical Society, American Geophysical Union.

Karl E. Karlstrom

Talks presented

Proterozoic Middle Continental Crust of the Southwest: its role in lithospheric evolution: Iliad workshop of IRIS consortium, Taos New Mexico.

Reconciliation of contrasting models for Proterozoic tectonism in northern New Mexico, GSA meeting, Durango, Colorado.

Paleoproterozoic heterogeneous middle crustal flow during 1.71-1.68 Ga contractional deformation, Grand Canyon, Arizona, GSA meeting, Durango Colorado.

Fieldtrips

Organized and led the third annual POMP fieldtrip (Proterozoic Orogenesis and Metallogenesis Project) to northern New Mexico - 55 participants.

Other

Nominated for Structural Geology and Tectonics Division of GSA, second vice-chairman - election won by Terry Paulis)

Cornelis Klein

Associate Editor, Precambrian Research, a journal of Elsevier Science Publishers, Amsterdam.

Member of the Hawley Medal Committee, Mineralogical Association of Canada, 1993-1994.

Albert M. Kudo

Poster presentation with L.J. Crossey and P. McCarville at Annual Meeting of the Geological Society of America, Oct. 26, 1994

Barry S. Kues

New Mexico Geological Society, Managing Editor
New Mexico Geological Society, annual field conference, Sept. 28-Oct 1.

Richard Livaccari

Talk:

Large-magnitude extensional deformation in the South Mountains metamorphic core complex, Arizona: Evaluation with paleomagnetism, Geological Society of America Meeting

Les D. McFadden

Talks given

Late Quaternary eolian landscapes and soils of the south central Colorado Plateau
L.D. McFadden and J.R. McAuliffe
American Geophysical Union 1994 Fall Meeting, San Francisco.

A model of vesicular crust formation in desert soils
L. McFadden, E. McDonald, and S. Wells
Abstracts with Programs, Geological Society of America Annual Meeting, Seattle, Washington.

Field trip organization

Geological society of America Cordilleran Section Field Trip: Quaternary stratigraphy and dating methods: understanding geologic processes and landscape evolution in southern California, March 17-20. (Field Trip co-leader).

Theme Session Organization

Geological Society of America Annual Meetings Session T65-Planetary Geology Division: Perspectives on Desert Surface Processes (co-organizer and convener).

Professional Meetings Attended

1994 Annual Meeting, Geological Society of America, Seattle, Washington, October 25-28.

American Geophysical Union 1994 Fall Meeting, San Francisco, California, December 5-9.

Editorial Board, Catena

Mark Miller

Attended GSA/MSA meeting Seattle WA
Presented Poster Session "A Topology-based Classification of the Uranium Oxide Hydrates"

Roberto Molina-Garza

American Geophysical Union-Fall Meeting, Dec. 1994. Read the paper: New paleomagnetic data from Sonora: Implications for the Mesozoic evolution of northern Mexico.

Horton Newsom

Meetings Attended

Lunar and Planetary Science Conference, Houston, TX, March 13-18, 1994.
Workshop on the Formation of the Earth's core, Mainz, Germany, April 17-20, 1994.
Chondrules and the Protoplanetary Disk, Albuquerque NM, Oct. 13-15, 1994.
American Geophysical Union Annual Fall Meeting, San Francisco, CA, Dec. 6-10, 1994.

Professional papers read

Talk entitled: The Depletion of W in the Earth's Primitive Mantle, A Stumbling Block for High Temperature Equilibrium Core Formation? Presented at the Twenty Fifth Lunar and Planetary Science Conference, Houston TX, 1994.

Talk entitled: Siderophile depletion patterns in the Earth and Moon: Constraints on core formation. Presented at Workshop on the Formation of the Earth's core, Mainz, Germany, April 17-20, 1994.

Talk entitled: Siderophile elements and metal-silicate fractionation in the solar nebula. Presented at Chondrules and the Protoplanetary Disk, Oct. 13-15, 1994.

Talk entitled: Siderophile element constraints on core formation: initial abundances. Presented at the American Geophysical Union Annual Fall Meeting, San Francisco, CA, 1993.

Offices held

Associate Editor, Geochimica et Cosmochimica Acta, Journal of the Geochemical Society and the Meteoritical Society.

Matthew Nyman

Meetings attended

Annual meeting of Rocky Mountain section of the Geological Society of America, Durango, CO, May, 1994.
Spring meeting of the American Geophysical Union, Baltimore, MD, May, 1994.
Annual meeting of Geological Society of America, Seattle, WA, October, 1994.

James J. Papike

Meetings Attended

Attended Institute for Geophysics and Planetary Physics (IGPP), meeting at Los Alamos National Laboratories, Feb. 17-18.
Presented a talk at 25th Lunar and Planetary Science Conference, Houston, TX, March 13-17.
Attended Institute for Geophysics and Planetary Physics (IGPP), meeting at Los Alamos National Laboratories, May 19-20.
Attended Mineralogical Society of America Council Meeting (as Vice-President), Baltimore, MD, May 21-23.
Attended and presented paper at 57th Meteoritical Society Meeting, Prague, Czech Republic, July 21- 31.
Attended Chicxulub Scientific Drilling Planning Meeting, Los Alamos, Sept. 15-16.
Attended Workshop on "Chondrules and the Protoplanetary Disc" Albuquerque, NM, October 13-15.
Attended Mineralogical Society of America Council Mtg., Seattle, WA, October 23 (as President)
Attended Geological Society of America Mtg., Seattle, WA, October 24-27.

National Committees and Offices in Societies

Member, Advisory Committee for the Institute of Geophysics and Planetary Physics, LANL and University of California.
President, Mineralogical Society of America (1994-1995).
Chair, Mineralogical Society of America, Planetary Materials Interest Group.

Frans Rietmeijer

Professional Papers Read.

Searching for a principal component mixing model for chondritic interplanetary dust particles: The use of size analyses, 25th Lunar and Planetary Science Conference.

Ferrosilite, fayalite and magnesioferrite formation by isothermal annealing of an iron-contaminated Mg-SiO smoke, 25th Lunar and Planetary Science Conference.

Professional Meetings Attended

25th Lunar and Planetary Science Conference, Houston, Texas, March 15-19.

Gary Smith

Presented talk, "What is the Cochiti Formation?" at the Annual Meeting of the New Mexico Geological Society, Socorro, NM, April 8, 1994

Presented poster, "Volcanology and sedimentology of a pyroclastic-flow-apron/alluvial-fan complex" at the Geological Society of America Annual Meeting, Seattle, WA, October 24, 1994.

Associate Editor, Journal of Sedimentary Research (SEPM, The Society for Sedimentary Geology)

Publications Committee, SEPM, The Society for Sedimentary Geology

Michael Spilde

Presented an invited talk: "Elemental mapping on the SEM/Microprobe," 1994 Annual Meeting of American Association of Petroleum Geologists and Society for Sedimentary Geology, Denver, CO. June 12, 1994.

Presented talk: "Geological applications of compositional imaging." 28th Annual Meeting of the Microbeam Analysis Society, New Orleans, LA. August 1, 1994.

Lumin Wang

Talks presented

Presented a talk, "HRTEM study of ion beam induced collision cascade damage in $Ca_2La_8(SiO_4)_6O_2$", at the 5 th Conference on Frontiers of Electron Microscopy in Materials Science, Oakland, CA, June 23, 1994.

Presented a poster, "Quantitative analysis of displacement cascade damage in ion irradiated complex ceramic materials by digital HRTEM", at the 13 th International Congress on Electron Microscopy, Paris France, July 22, 1994.

Presented a talk, "HRTEM study of radiation damage in complex ceramic materials", at the 6 th annual joint meeting of the New Mexico sections of the American Ceramic Society and Materials Research Society, Albuquerque, NM, October 31, 1994.

Presented a talk, "Characterization of collision cascade damage in $Ca_2La_8(SiO_4)_6O_2$ by HRTEM", at Materials Research Society 1994 Fall Meeting, Boston, MA, November 30, 1994.

Presented a poster, "Effects of structure-type and thermodynamic stability on ion-beam induced amorphization, exemplified by $MgAl_2O_4$ and g-$SiFe_2O_4$", at Materials Research Society 1994 Fall Meeting, Boston, MA, November 30, 1994.

Session Chair:

Electron microscopy session, the 6 th annual joint meeting of the New Mexico sections of the American Ceramic Society and Materials Research Society, Albuquerque, NM, October 31, 1994.

Microstructure of irradiated ceramics session, Materials Research Society 1994 Fall Meeting, Boston, MA, November 30, 1994.

Others:

Continue to serve as the vice president for the New Mexico Section of the Materials Research Society and helped in organizing the 6 th annual joint meeting of the New Mexico sections of the American Ceramic Society and Materials Research Society, Albuquerque, NM, October 31, 1994.

Lee Woodward

Attended Geological Society of America meeting in Durango, Colorado, May 1994, and presented poster paper.

Crayton Yapp

Talks presented

Carbon isotopes in continental weathering environments and variations in atmospheric P_{CO_2} during the Phanerozoic.
1994 national meeting of the Geological Society of America, Seattle, Washington, October 24-27, 1994.

6. OTHER PROFESSIONAL ACTIVITIES

Bruce Allen

Lectures

Lake Estancia: Fingerpost to regional/global climate cycles during the last 40 k.
B.D. Allen
Invited talk, New Mexico Institute of Mining and Technology, Department of Geoscience Lecture Series, 1994.

Climatic changes in Estancia Valley over the past 20,000 years
B.D. Allen
Invited talk, Torrance County Archeological Society, 1994.

Roger Anderson

Invited participant, NOAA Paleoclimate Workshop on Reconstructing Global Climate Change Over the Past Two Millennia From Anaerobic Sediments of the Eastern Pacific Oceans. San Francisco, CA, 23-26 April, 1994.

Service

National Science Foundation, Review Panel on Geologic Records of Global Change, Washington D.C., March, 1994; Sept., 1994.

National Science Foundation, Steering Committee for Earth System History (ESH), Washington D.C., June, 1994; December, 1994.

Yemane Asmerom

Invited talks

University of Iowa
New Mexico Tech

Susan Barger

Science Advisory Board, GALAXY Classroom, Galaxy Institute for Education, Hughes Aircraft Corporation, Los Angeles, CA.

Proposals reviewed

National Endowment for the Humanities, Historical Preservation Division: 1
History of Technology and Science Division: 1

Smithsonian Institution, Division of Fellowships and Grants: 1
Smithsonian Press: 1

National Historical and Public Records Commission, National Archives, 1

Manuscripts reviewed

Daguerreian Annual: 4

Consultancies

Museum of New Mexico, History Museum, Palace of the Governors, Planning and volunteer training in preparation for the move of the Photographic archives and History Library.

Work with Recursos of Santa Fe to organize a meeting on Managing Science for Art Museums and Archives. Meeting planned for Spring 1995, canceled because of funding problems.

Adrian Brearley

Associate Editor, American Mineralogist (1994-1997)

Member, NASA Lunar and Planetary Geosciences Review Panel, Planetary Materials and Geochemistry program (1992-1994).

Group Chief, Petrology and Mineralogy Group, NASA Lunar and Planetary Geosciences Review Panel, Planetary Materials and Geochemistry program (1994).

Acted as abstractor for Mineralogical Abstracts, abstracted papers form Analytical Chemistry.

Reviewed scientific papers submitted to American Mineralogist (1), Meteoritics (2), Journal of Geophysical Research (1), Geochimica et Cosmochimica Acta (1).

Reviewed 2 proposals submitted to the National Science Foundation Petrology and Geochemistry Program.

Reviewed 13 proposal submitted to NASA Planetary Materials and Geochemistry and Planetary Geology programs.

Michael Campana

Talks

Invited talk, "Stream ecosystem and hydrologic interactions in montane watersheds," Dept. of Environmental Sciences, Policy and Management, University of California-Berkeley, February 18, 1994.

Invited talk, "The hyporheic zone: the interface between stream ecology and catchment hydrology," Los Alamos National Laboratory, April 7, 1994.

Invited talk, "Hydrologic system - stream ecosystem interactions," Instituto de Geofisica, Universidad Nacional Autonoma de Mexico, November 17, 1994.

Invited talk, "Adventures in the hyporheic zone: confessions of a hydrogeologist," Albuquerque Geological Society, November 9, 1994.

Member, U.S. Environmental Protection Agency's Strategic Workgroup on Ground Water Ecology.

Manuscripts reviewed

Water Resources Bulletin (2)
Applied Hydrogeology (1)
Hydrological Processes (1)
Water Resources Research (2)
Proceedings, XVIII International Symposium on the Scientific Basis for Nuclear Waste Management (2)
Proceedings, Second International Conference on Ground Water Ecology (6)

Proposals reviewed

National Science Foundation (4)
U.S.-Israel Binational Science Foundation (1)
Reviewed hydrogeologist profile, SIGI PLUS career guidance system, Educational Testing Service
Consultant, Westinghouse/IT Corporation, WIPP Project

Laura Crossey

Off-campus talks

Filmed for a KNME production "Surviving Graduate School," aired in March 1994.
Guest lecture, University of Texas at Dallas; Dallas, TX, November 11, 1994.

Manuscripts reviewed

Geology (3)
Geochimica et Cosmochimica Acta (1)

Proposals

American Chemical Society/Petroleum Research Fund (1)
Department of Energy, Basic Energy Sciences (1)
National Science Foundation (4)
Wyoming Epscore Program (1)

Maya Elrick

Journal reviews

Journal of Sedimentary Petrology (2)

Proposal reviews

NSF (5)
SEPM student scholarships (15)

Invited talks

University of Texas-El Paso, Nov. 1994
University of Missouri, Oct., 1994

Wolfgang E. Elston

Proposal Reviews

Reviewed three proposals for the National Science Foundation

Manuscript Reviews

Reviewed and edited 12 manuscripts for Economic Geology, Special Issue on Volcanic Centers as Guides to Mineral Exploration

Reviewed articles for Chemical Geology, Journal of Sedimentary Petrology. Transactions of the Geological Society of South Africa.

Rodney C. Ewing

Reviewed manuscripts, texts and proposals for the following (# in parenthesis):

Journal of Non-Crystalline Solids (1)
Canadian Mineralogist (1)
Physics & Chemistry of Minerals (1)
Neues Jahrburch Miner. Abh. (1)
Radiochemica Acta (1)
Journal of Nuclear Materials (5)
Scientific Basis for Nuclear Waste Management XVIII (16)
Microstructure of Irradiated Materials, MRS proceedings (2)

National Research Council, Commission on Geosciences, Environment & Resources (1)
International Science Foundation (1)
National Science Foundation, Division of Materials Research (1)
National Science Foundation, Petrology and Geochemistry (1)
Office of Basic Energy Sciences, Division of Geosciences (2)

Served as reviewer for promotion decisions at:

Argonne National Laboratory
Battelle - Pacific Northwest Laboratories

Served as a committee member for:

National Academy of Sciences and National Research Council Committee on the "Waste Isolation Pilot Plant" (Professor Charles Fairhurst, chair).

National Academy of Sciences and National Research Council Committee on the "Remediation of Buried and Tank Wastes" (Dr. R. Budnitz, chair).

National Advisory Council on Environmental Policy and Technology for the Environmental Protection Agency (subcommittee on WIPP), 1993-1995.

Served as a session chair:

Natural Analogue Working Group Meeting, Santa Fe, Sept. 12, 1994
DOE WIPP Stakeholders Meeting, Albuquerque, Sept. 26,, 1994
Emerging Technologies in Hazardous Waste Management VI sponsored by the American Chemical Society, I&EC Division, Atlanta, Georgia, September 20, 1994
Scientific Basis for Nuclear Waste Management XVIII, Oct. 25 and 28, 1994.

John Geissman

Professional talks

Department of Earth and Planetary Sciences, Brown-Bag Series: "Cenozoic rotational history of the Hoover Dam area, southern Nevada"

Reviews of manuscripts and proposals

Reviewed proposals for National Science Foundation (11), American Chemical Society (5), Department of Energy (1), U.S. Geological Survey (1), The Third World Academy of Sciences (3), Lithoprobe, Canada (2). [Note, these do not include proposals associated with NSF Panel Member responsibilities]

Reviewed manuscripts for Journal of Geophysical Research (2), Geological Society of America Bulletin (3), Earth and Planetary Science Letters (2), Geophysical Research Letters (2), Tectonics (3), Canadian Journal of Earth Science (2), Geophysical International (1), Annales Tectonicae (1), Geology (7), Tectonophysics (2), Ocean Drilling Program (1). [note, these do not include manuscripts associated with Associate Editor duties].

Consultancies

Volcanism Project, Los Alamos National Laboratory, November, 1990-
Adjunct or associate-type positions at other institutions
Member of thesis committee for Mr. Greg Overtoom, Univ. of Utah
Member of dissertation committee for Mr. John Byrd, Univ. of Utah

Other

Technician, UNM Paleomagnetism and Rock Magnetism Laboratory

Stephen Huestis

Reviews

Two papers for Inverse Problems
One paper for Geophysical Journal International

Rhian Jones

Presented talk, "Diffusion in olivine," Inorganic Chemistry Seminar, UNM. March 28, 1994.

Reviewed 1 manuscript for "American Mineralogist," 2 for "Meteoritics," 1 for "Planetary and Space Science," and 1 for "Earth and Planetary Science Letters."

Reviewed 4 proposals for NASA, Planetary Materials and Geochemistry and 2 for NASA, Origins of Solar Systems.

Karl E. Karlstrom

Off-campus invited talks and invited meetings

Member of the New Mexico Geologic Mapping Advisory Board

Illiad workshop - Invited to give a talk at the IRIS consortium workshop - sponsored by NSF - Continental Dynamics Program.

SSCD workshop - Attended Southern Sierras Continental Dynamics workshop as observer for NSF Continental Dynamics Panel.

Invited to join IGCP project 376 - Pre-Pangea analysis of middle Proterozoic and Paleozoic interaction of Laurentia and Gondwana."

Editorships

Associate Editor - Precambrian Research - 6 articles reviewed

Proposals reviewed

Montana State University research grants - (1)
American Chemical Society - Petroleum Research Fund - (1)

Manuscripts reviewed

Earth & Planetary Science Letters - (1)
Tectonics - (1)
Tectonophysics - (1)

Served as a panel member for:

NSF Tectonics panel: Attended two 3-day meetings and read about 260 proposals (130 per meeting) as member of the advisory panel for the Tectonics Program, Earth Science Division.

NSF Continental Dynamics panel: Attended two 2-day meetings (separate trips from Tectonics panel) and read about 50 proposals (25 per meeting).

Adjunct professor

Northern Arizona University

Consultancies

Consultant to New Mexico Bureau of Mines on several mapping projects sponsored by the USGS mapping project: Tijeras Quadrangle Sandia Crest Quadrangle Placitas Quadrangle.

Cornelis Klein

Adjunct Curator, New Mexico Museum of Natural History, Albuquerque, NM.

Assisted Larry Barker, KOAT TV, Action 7 news, with a seven part investigative program entitled "Turquoise Trail: fraud and fakes."

Provided extensive interviews to two of the writers of the February, 1995 issue of New Mexico Magazine. Susan Arrett wrote on the geology of turquoise; Richard McCord on the authenticity and fraud in turquoise.

Albert M. Kudo

Reviewed a manuscript for Geophysical Research Letters
Reviewed a grant proposal for NSF
Reviewed several manuscripts for Physical Geology and Oceanography texts for book publishers (Prentice-Hall, Worth, W.C. Brown, and West)
Served as one of the evaluators of the best student paper presentation at the NMGS annual spring meeting, Socorro, NM
Taught a short course on Volcanoes of New Mexico for the Elderhostel, October 10-15
Master Chairman of Physical Sciences for the Northwest Regional Science Fair (duties are year-round with the major time taken during the Science Fair during Spring Break)

Barry S. Kues

Adjunct curator, N.M. Museum of Natural History
Research Associate, N.M. Bureau of Mines and Mineral Resources
Reviewed draft of new geological map of New Mexico for NMBM&MR

Graham Layne

Seminars attended

Isotopic Characteristics of MVT Ore Deposits
NM Institute of Mining and Technology, Socorro, NM
March 24, 1994.

How to Count Things: The Quantitative Behaviour of Instrumental Detection Systems
Institute of Meteoritics
February 14, 1994.

Manuscripts reviewed

Economic Geology (1)
American Mineralogist (1)

Proposals reviewed

NSF-EAR (3)
FCAR-Quebec (1)

Les D. McFadden

Off-campus talks

"Soil-geomorphic studies, applications to research in Quaternary and Archeological Investigations," presented at Ghost Ranch Conference Center, NM, August 8, 1994.

Peer reviews of articles and proposals

Reviewed 1 paper for Quaternary Research
Reviewed 2 papers for Geoderma
Reviewed 1 paper for Physical Geography
Reviewed 4 papers for Catena
Reviewed 1 paper for Geomorphology
Reviewed 1 paper for the Geological Society of America Bulletin
Reviewed 1 proposals for NASA
Reviewed 2 proposals for the National Science Foundation

Consultancies

Los Alamos National Laboratories/Department of Energy: Field studies in volcanic fields, Mojave Desert and Great Basin in support of the Yucca Mountain Program to evaluate the proposed high-grade nuclear waste repository.

Los Alamos National Laboratories: Technical studies in support of the Los Alamos National Laboratory Environmental Restoration Program.

Horton Newsom

Reviewed scientific papers submitted for publication in Geochimica et Cosmochimica Acta (2 papers), Meteoritics (3), Journal of Geophysical Research Planets (1), GSA Special Paper on the Manson Impact Crater (1).

Reviewed grant proposals submitted to NASA (1) and the National Science Foundation (2).

NASA committee meeting: Curation and Analysis Planning Team for Extraterrestrial Materials (CAPTEM), Houston, TX, March 18-20, 1994.

NASA committee meeting: Curation and Analysis Planning Team for Extraterrestrial Materials (CAPTEM), Houston, TX, June 15-17, 1994.

NASA committee meeting: Curation and Analysis Planning Team for Extraterrestrial Materials (CAPTEM), Albuquerque NM, Oct. 16-17, 1994.

James J. Papike

Reviewed 25 Proposals, 20 Manuscripts

Frank J. Pazzaglia

Member of the planning committee for the National Science Foundation, Earth System History, PEP-I national workshop, January 19-21, 1995, Albuquerque, NM.

Frans Rietmeijer

Peer review Scientific Papers

Contributions to Mineralogy and Petrology (1)
Geochimica et Cosmochimica Acta (2)

Proposal Reviews

National Aeronautics and Space Administration, Planetary Instrument Definition and Development Program (11).
National Aeronautics and Space Administration, Lunar and Planetary Geosciences Program (4).
National Aeronautics and Space Administration, Origins of Solar Systems Program (1).

Panel Membership

NASA Planetary Instrument Definition and Development Program.
NASA Johnson Space Center Cosmic Dust Review Panel.
Co-Chairman session "Interplanetary Dust Particles and Micrometeorites," 25th Lunar and Planetary Science Conference, Houston, Texas, March 15-19.

Hosted Prof. Armando Blanco (University of Lecce, Lecce, Italy), Drs. Luigi Colangeli, Vittorio Menella, Alessandra Rotundi (Osservatorio Astronomico di Capodimonte, Naples, Italy) and

Dr. John Stephens (Las Alamos National Laboratory, Los Alamos, New Mexico) for discussions of mineralogical and microchemical analyses, and instruction in analytical electron microscope analysis, of vapor condensed carbon nanoparticles, July 23-27.

Gary Smith

Adjunct Curator of Geology, New Mexico Museum of Natural History and Science

Presented talk: Climatic influences on continental sedimentation during late-stage filling of an extensional basin, Department of Geosciences, New Mexico Institute of Technology, Socorro, NM, April 1994
Reviewed manuscripts for Journal of Sedimentary Research (8), Geological Society of America Bulletin (2), Geological Society of London Special Publications (1), Proceedings of the International Symposium on the Scientific Basis for Nuclear Waste Management (1), Journal of Geology (1), Geologisch Rundschau (1).

Reviewed proposals for National Science Foundation (4), American Chemical Society - Petroleum Research Fund (1), New Zealand Institute of Geological and Nuclear Sciences (1).

Michael Spilde

Reviewed manuscript submitted to Economic Geology (1).

Lumin Wang

Manuscripts reviewed

Applied Physics Letters (2)
Journal of Electron Microscopy (1)
Microstructure of Irradiated Materials, MRS proceedings (2)

Crayton J. Yapp

Presented two invited talks at the University of Alberta, Edmonton, Alberta, Canada, March 14-16, 1994.
Presented invited talk at the University of California-Davis, Davis, California, April 19-21, 1994.
External examiner for Ph.D. comprehensive examination at the University of California-Davis, April 20, 1994.
Reviewed NSF proposals - 4
Reviewed PRF proposal - 1
Manuscripts reviewed:
Geochimica et Cosmochimica Acta - 3
Journal of the Geological Society - 1

7. NON-TEACHING UNIVERSITY SERVICE

Yemane Asmerom

Committees:

Facilities committee, MEMS

Other: Brown Bag Seminar co-organizer

Host to 401 Seminar visitors:

Larry Edwards — Minnesota, Spring, 1994
Charles Harper — Harvard, Fall, 1994

Susan Barger

Special Project planning, initiating programming, and funding for the Arid Americas Research and Design Center, an Interdisciplinary Center in the School of Architecture and Planning.

Hosted Jan Garmany after Departmental Weekly Seminar in April 1994.

Adrian Brearley

Host to visitors

Dr. Carl and Jackie Allen, NASA Johnson Space Center, Houston, March 4, 1994.
Dr. Jack Murphy, Denver Museum of Natural History, March 4, 1994.
Dick Spaulding, Sandia National Laboratories, March 30, 1994.

Departmental service

Curator of the Meteorite Museum and Collection, Institute of Meteoritics engaged in cataloging, acquiring and loaning of meteorites. Supervised full inventory of meteorite collection and updated computer database.

Member, Dept. of Earth and Planetary Sciences and Institute of Meteoritics Facilities Committee

Member, Local Organizing Committee, Conference on Chondrules and the Protoplanetary Disk and Institute of Meteoritics 50th Anniversary Celebrations.

Participated in Institute of Meteoritics Open House, October 15, 1994.

Michael Campana

University

Steering Committee, Master of Water Resources Administration Program
Interdisciplinary Water Curriculum Committee, Master of Water Resources Administration Program

Departmental

Undergraduate committee

Laura Crossey

Department

Alumni Relations Committee
Scholarship Committee
Sigma Gamma Epsilon (National Honorary Geological Society) - Faculty Advisor
Graduate Committee
Undergraduate Committee
Undergraduate Geology Club - Faculty Advisor
Department Representative to the Minority Engineering, Math, and Science Program

Special duties

Undergraduate advisor
Editor, Departmental Newsletter

College

Junior Promotion and Tenure Committee
Minority Engineering, Math, and Science Coordinating Committee

Maya Elrick

Departmental committees

Scholarship, undergraduate, microscope, vehicle maintenance

University committees

Undergraduate curriculum, College of Arts and Sciences

Wolfgang E. Elston

Department

Coordinator, UNM-LANL Volcanology Program
Chaired meetings of the UNM-LANL Volcanology Faculty

Conducted correspondence, especially with potential graduate students
(with G.A. Smith) Raised $2,000 in scholarship funds for E&PS 451L (Field Studies in Volcanology)
Distributed flyers and announcements (in Spanish) throughout Latin America (resulting in 20 inquiries from potential graduate students to date).
(with G. Heiken) Investigated potential sources of financial aid for Latin American graduate students.

Rodney C. Ewing

Department

Honors Advisor
Collections Committee: (member)
Facilities Committee: (member)
Undergraduate Committee: (member)
Radiation Safety Permit Holder for: XRD Laboratory, AEM Laboratory, Mineral Collections, and XRF Laboratory
Supervision of:
Harding Pegmatite
X-ray Diffraction Laboratory (with M. Miller)
Analytical Electron Microscopy Laboratory (with L.M. Wang)

Host and sponsor of adjunct faculty, visiting scholars, and post-doctoral fellows:

Dr. Janusz Janeczek, Uniwersytet Slaski, Poland, as a Fulbright Fellow.
Dr. Susan Barger, Adjunct Associate Professor at UNM
Dr. Nicole Bordes, Post-Doctoral Fellow
Dr. Tim White, University of South Australia, Fulbright Fellow
Dr. Weiliang Gong, visiting scholar, Institute of Geochemistry, Academia Sinica

Host to guest lecturers:

Dr. Jean Luc Debrun, CNRS Orléans, France

John Geissman

University service and activities

Member (replacement), Faculty Senate, 1993-1995
Academic Freedom and Tenure Committee, 1994-
College of Arts and Sciences Sabbatical Evaluation Committee
College of Arts and Sciences Graduate Committee

Departmental service

Geology Department Graduate Committee; Co-Chair,
Geology Department Assistant Chair; Fall, 1992-
Geology Department Computer Use Committee
Geology Department Facilities Committee

Special Projects

Administrative Positions
Chair, Graduate Committee

Other Service

UNM One-On-One Program

Stephen Huestis

Department committees:

Undergraduate
Computer (Chair)
Library Liaison

Rhian Jones

Departmental service

Manager of Experimental Petrology Laboratory
Assistant Curator of Meteorite Collection.
Member of Chemical Hygiene Committee, Department of Earth and Planetary Sciences.
Co-editor of IOM Annual Report, 1993-1994.
Chair of organizing committee, 50th Anniversary of the Institute of Meteoritics.
Attended 1 College of Arts and Sciences Chairs and Directors meetings as IOM representative.

Karl E. Karlstrom

University service
Member Research Policy Committee (RPC)
Chair - Interdisciplinary subcommittee of RPC
Nominated for UNM Faculty senate (not elected)

Departmental service

Graduate Committee
Chair of Metamorphic Petrology search committee
Supervisor of rock preparation lab
Host for Carol Simpson (NSF-program director and 401 speaker)

Cornelis Klein

Member of the Undergraduate Committee
Member of Collections Committee
Member of the Search Committee for a metamorphic petrologist
Undergraduate advisor, until August 2, 1994

Albert M. Kudo

University service

Member of the Research Allocation Committee
Faculty representative to the Advisory Council for Leisure Services
Handled the Sandia-UNM Colloquium Funding and Requests

College service

Coordinator for the UNM-Science Colloquium Funds
Served on the Dean's Task Force for Restructuring the Science and Mathematics Curriculum for Pre-service Elementary Education Students (Jointly endorsed by both Deans of the College of Arts & Sciences and the College of Education). Task Force still meeting and in discussion in 1995

Departmental Service

Handled with the help of Alice Quattrochi, Barry Kues, and Cindy Jaramillo the publication of the Departmental Brochure
Chair of the Scholarship Committee
Microscope Committee
Speakers Committee
Specialty member for Petrology of the Undergraduate Curriculum Revision for the Undergraduate Committee

Barry S. Kues

Department

Chair of Department

University

Member of Long-Range Planning Committee (through June, 1994)
Member of committee to plan new Science-Technology Building

Graham Layne

University service and activities

Manager, UNM/SNL Ion Microprobe Facility, Advanced Materials Laboratory

Departmental service

Senior Research Associate Representative to Faculty Meetings, Spring 1994.
Postdoctoral Fellow Supervised: Anne P. Charland, University of Montreal.

Les D. McFadden

Associate Chairman, Department of Geology
Member, Search Committee, chairman of UNM Geography Department
Compiler, American Quaternary Association Directory of Quaternary Scientists, State of New Mexico
Hosted or co-hosted visits to department by Dr. Peter Knuepfter, State University of New York, Binghamton, Dr. Jill

Banfield, University of Wisconsin, and Dr. Paul Haesaerts, Royal Belgium Institute of Natural Sciences; Geology 401 Seminar Speakers.
Gave Departmental Brownbag Series Talk
Presentation to MEMS (Minority Engineering, Math and Science) Summer Bridge Program

Mark Miller

Department Computer Committee Member
Designed Departmental local Area Network
Department Liaison to CIRT
Manager X-ray Diffraction Laboratory

Horton Newsom

Directed the Neutron Activation Analysis Laboratory, Institute of Meteoritics.
Hosted the visits to the Department of Geology and the Institute of Meteoritics of:
Dr. Carl Allen, Johnson Space Center, Friday Mar. 4, 1994.
Member, New Mexico Space Grant Faculty Advisory Board.

James J. Papike

University

A&S Committee to review Maxwell Museum
UNM Director of the UNM/SNL Ion Microprobe Facility, Advanced Materials Laboratory
Director, Institute of Meteoritics
Member, Faculty Senate Research Allocations Committee

Departmental

Chaired Facilities Committee
Member of Graduate Committee
Hosted visit of Dr. William Roggenthen, South Dakota School of Mines and Technology on February 14, 1994.

Hosted visit of Dr. Alex Navrotsky, Princeton University on February 23-27, 1994.
Hosted visit of Dr. Brad Jolliff, Washington University, St. Louis, MO, on April 25, 1994.

Frans Rietmeijer

Temporary Supervisor of the Analytical Electron Microscope Laboratory, May 27 - June 3.

Gary Smith

University Undergraduate Committee
Department of Earth and Planetary Sciences Collections Committee (Chair)
Department of Earth and Planetary Sciences Graduate Committee (Co-Chair)

Michael Spilde

Served on the Department of Earth and Planetary Sciences Computer Committee.
Served as Manager of the Electron Microprobe and Scanning Electron Microscope Labs.
Performed microprobe analyses for 1 department and 3 out-of-department faculty/research staff personnel.
Performed microprobe analyses for 3 out-of-department graduate students.
Performed microprobe analyses for 4 NM Tech faculty and graduate students.
Performed microprobe analyses for SE Missouri State Univ. faculty member.
Performed SEM analyses for 2 local businesses and 2 individuals.
Conducted Microprobe & SEM lab tours and demonstrations for several elementary and high school classes.

Lumin Wang

Responsible for the operation and expansion of the Analytical Transmission Electron Microscopy Laboratory (TEM Lab.) in the department which is open to the entire campus, supervised, trained and collaborated with many users from several UNM departments as well as from other institutes.

Directly supervised delivery, installation and testing of the new high resolution transmission electron microscope and attached equipment. Organized the open house for the new laboratory. (January to April, 1994).

Responsible for hiring, training and supervising the new research technologist in the TEM Lab.

Lee Woodward

Undergraduate Curriculum Committee
Various thesis committees

Crayton J. Yapp

Department service

Standing committees: Facilities committee, Scholarship committee
Caswell Silver Foundation Board of Directors
Supervisor of stable isotope laboratory
Hosted Dr. Blair Jones - 401 speaker

8. SCHOLASTIC HONORS AND FELLOWSHIPS

Michael Campana

Awarded trip to Beijing, China, to present paper at XVIII Pacific Science Congress, June 5-12, 1995, by UNM Research Advisory Committee/Associate Provost for Research

Wolfgang Elston

Reappointed Research Professor of Earth and Planetary Sciences, July 1, 1994.
Relisted in Who's Who in the West.

Rodney C. Ewing

Elected to two year term as vice-president (president-elect) to the International Union of Materials Research Societies, 1995 - 1996.
Asked by the Mineralogical Society of America to stand for election to council.
Who's Who in America, 49th edition

John Husler

Recipient, Caswell Silver Meritorious Service Award

Les D. McFadden

Promoted to Full Professor
Elected as Fellow of the Geological Society of America
Renewed Membership of Editorial Board of Catena

James J. Papike

Elected President Mineralogical Society of America.

Michael Spilde

One day Short Course on "Image Analysis on the PC" presented by Microscopy society of America, New Orleans, LA. July 31, 1994.

9. SABBATICALS AND TRAVEL

Yemane Asmerom

University of Maryland to do collaborative research at Rich Walker's lab.

Susan Barger

Work with Instituto National de Archaelogica y Historia (INAH) for planning laboratory requirements for adobe preservation activities, Chihuahua, Mexico, January 6 - February 4, 1994.
Materials Research Society meeting, Cancun, Mexico, May 16-29, 1994 (see above).
Western Area Art Conservator's Annual Meeting, Asilomar, California, September 25-27, 1994 (see above).
Attended Annual Meeting of the Daguerreian Society, Boston, MA, November 2-4, 1994.

Adrian Brearley

Lunar and Planetary Institute. Presented seminar entitled "Thermal histories of the ordinary chondrites: did they accrete hot or cold?" January 20-21, 1994.
25th Lunar and Planetary Science Conference, Houston, TX. March 14-19, 1994.
4th Annual Experimental Petrology, Mineralogy and Geochemistry Symposium, University College, London, England. Presented 1 talk. April 13-15th.
Bayerisches Geoinstitut, Bayreuth, Germany. Visit to carry out high pressure experiments on multianvil press. April 20 - May 2, 1994.
Department of Geology, University of Manchester, England. Visit to view ion microprobe facility. May 3, 1994.
Lunar and Planetary Institute, Houston, TX. Lunar and Planetary Geosciences Review Panel Groups Chiefs Meeting. May 16-18, 1994.
Lunar and Planetary Institute, Houston, TX. Lunar and Planetary Geosciences Review panel. Reviewing proposals. June 22-28, 1994.
American Geophysical Union Fall Meeting, San Francisco, CA, December 5-10, 1994.

Michael Campana

Berkeley, CA, to present talk at UC-Berkeley, February 17-20, 1994.
Atlanta, GA, to attend Second International Conference on Ground Water Ecology, March 26-31, 1994.
Los Alamos, NM, to present talk at LANL, April 7, 1994.
Seattle, WA, to attend GSA Annual Meeting, October 22-27, 1994.
Mexico, D.F., to visit Instituto de Geofisica, UNAM, to present lecture and discuss joint research projects, faculty-student exchanges, etc., November 15-20, 1994.
Various trips to field sites throughout the year: SNL, Zuni Mountains, Jemez Mountains, Sangre de Cristo Mountains.

Wolfgang Elston

England, Switzerland, May 20 - July 5, 1994

Gave lecture on "The Proterozoic Bushveld Catastrophe, South Africa, The Open University, Milton Keynes, England, June 25, 1994.

Rodney C. Ewing

Jan. 24-26	Oklo meeting	Paris, France
Jan. 27-29	Oklo sample mtg.	Strasbourg, France
Feb. 24-25	BTW/NAS	Irvine, CA
March 18-22	Penrose Conference	San Diego, CA

April 6-7	WIPP/NAS	Santa Fe, NM
April 18-19	BWID/DOE	Salt Lake City, NV
April 25 - 26	Vitrification/DOE	Salt Lake City, NV
May 14-14	Prog. Mtg./MRS-Kyoto	Lafayette, CA
May 24-28	E-MRS	Strasbourg, France
May 30 - June 14	University of Aarhus	Aarhus, Denmark
June 16 - 17	WIPP/NAS	Washington, D.C.
Aug. 1 - 6	Gordon Conference	Plymouth, NH
Aug. 9-11	BTW/NAS	Woods Hole, MA
Sept. 12 - 16	NAWG	Santa Fe, NM
Sept. 19 - 20	ACS	Atlanta, GA
Oct. 1	Mineralogy Field Trip	Harding pegmatite
Oct. 10-21	IAEA	Beijing, China
Oct. 22 - 29	MRS XVIII	Kyoto, Japan
Nov. 17 - 18	WIPP/NAS	Carlsbad, NM
Nov.28 - Dec. 2	MRS (rad. effects)	Boston, MA
Dec. 17 - 22	IUMRS	Hingshu, Taiwan

John Geissman

Summer teaching

University of Michigan Camp Davis, Geological Sciences 440, Advanced Field Geology, June 29-July 12.

Travel

January 5, western New Mexico, field sampling
February 19 -February 25, laboratory research, Institute for Rock Magnetism, University of Minnesota.
March 12-19, northern Sonora, Mexico, field sampling
March 23-27, Death Valley area, field sampling
April 11-14, Chicago, NSF Panel Meeting
April 23, Santa Fe, DOSECC Board of Directors Meeting
May 18, Santa Fe, Testifying at a New Mexico Mining Law Hearing
May 22-June 14, New Mexico, southern Colorado, UNM Introductory and Advanced Field Geology courses
June 24-26, Santa Fe, Rock Magnetism Conference
June 29-July 12, Wyoming, University of Michigan, Field Camp
July 13-17, eastern Utah, field sampling
August 1-4, central Colorado, field sampling
August 5-7, Boulder, Colorado, Geological Society of America, Joint Technical Program Committee
August 11-17, laboratory research, Institute for Rock Magnetism, University of Minnesota
August 24-25, Boulder, Colorado, Geological Society of America, Bulletin Editor's meeting
September 17-18, Portland, Oregon, visit to John Costa's GSA Bulletin editorial office
September 30, southern New Mexico, field sampling
October 1-4, west-central Colorado, Paleomagnetism class field trip
October 13, western New Mexico, field sampling
October 19-21, Boulder, Colorado, NSF panel meeting
October 22-27, Seattle, Washington, Geological Society of America annual Meeting
November 6-7, northern New Mexico, field sampling
December 4-8, San Francisco, AGU Meeting

Rhian Jones

NASA Planetary Materials and Geochemistry, Management Operations Working Group. Houston, TX. March 13, 1994.
25th Lunar and Planetary Science Conference. Houston, Texas. March 14-18, 1994.
Fifth International Symposium on Experimental Mineralogy, Petrology and Geochemistry. London, U.K. April 13-15, 1994.
American Geophysical Union Fall Meeting, San Francisco, CA. December 5-9, 1994.

Karl E. Karlstrom

Feb 16-18 - NSF CD panel in Washington D.C.
March 5 - Fieldtrip with Metamorphic candidate
March 12 - Fieldtrip with metamorphic candidate
March 15-18 - NSF Tectonics panel - Washington D.C.
March 26 - Fieldtrip with metamorphic candidate
March 31 - Fieldtrip with metamorphic candidate
April 7 - Fieldtrip with metamorphic candidate and Stephen Marshk, U. Illinois
April 8 - New Mexico Geological Society meeting, Socorro, NM
April 19 - Los Alamos Geological Society presentation
May 4-8 - Attended GSA regional meeting, Durango Colorado and post-meeting fieldtrip
May 13 - Fieldtrip with Link Hollister and Princeton students
May 14-22 - Research trip to Grand Canyon
June 2-3 - Fieldtrip to Picuris Mtns. with Mike Williams and U. Mass Students
June 7-29 - E&PS 420 - Advanced field course
July 1-Aug 10 - Research in northern Arizona
Aug 26-28 - SSCD workshop, Mammouth Lakes, California
Sept 3 - Fieldtrip to northern Sandia mountains E&PS 417
Sept 13-16 - NSF Tectonics Panel, Washington D.C.
Sept 28 - NMG Mogollon Slope fieldtrip
Oct 6-9 - POMP fieldtrip - Taos, Picuris and Sandia Mountains
Oct 11-14 - NSF Continental Dynamics Panel, Washington D.C.
Nov. 4-6 - Illiad workshop, Taos New Mexico
Nov 19-22 - Research in Grand Canyon
Dec 3 - Manzano Mountains fieldtrip with E&PS 417

Cornelis Klein

Attended the Geological and Mineralogical Societies of Canada Annual meetings in May 1994 in Waterloo, Ontario and presented an invited paper on "Precambrian iron-formations."

Attended the International Mineralogical Association meeting in Pisa, Italy in early September, 1994 and gave an abstract on "turquoise and its imitations."

Albert Kudo

To Socorro, NM, to attend the Annual Meeting of the NMGS, April
Numerous trips to Grants, NM, and the El Malpais National Monument and Vicinity for field work with students
To Sante Fe, to present the progress report of the Task Force to Restructure the Science and Mathematics Curriculum for Pre-service Elementary Education Majors to a legislative committee on Education, July
To Absaroka Range, northwestern Wyoming, to check some mapping and collect some samples, July 12-20
To Seattle, Washington, to attend the Geological Society of America Annual Meeting, October 24-27
To San Francisco, California, to attend the American Geophysical Union Annual Meeting, December 5-9
To Los Angeles, Dec 13, 14, to participate in a focus group on art and design for a new "Physical Geology" book by Prentice-Hall.

Barry S. Kues

Feb. 25-26, Cerro de Cristo Rey, NM, paleo. research
Mar. 13, Springer area, NM, paleo research
May 15, Sacramento Mountains, NM, paleo research
May 28, Carthage area, Socorro Co., paleo research
June 21, Jemez Springs area, paleo research
June 23-24, Robledo Mountains, NM, paleo research
Aug. 7, San Jon area, paleo research
Sept. 28-Oct. 1 - N.M. Geological Society field conference, west-central N.M.
Oct. 22, Robledo Mountains, paleo research

Les D. McFadden

March 17-20, Co-leader of GSA Cordilleran Field Trip, Southern California
April 7, Fieldwork, Sevilleta area, NM, with graduate student
May 17, Lead Soils Short Course for Los Alamos National Laboratory Environmental Restoration Program, Los Alamos area, NM
August 8, Presentation of Lecture to Archeology Program participants at Ghost Ranch, NM
September 18, Fieldwork, Jemez Mountains, NM, with graduate students and faculty colleagues
October 22-27, Participation in Geological Society of America Annual Meetings, Seattle, WA
November 18, Fieldtrip, Petrified National Forest National Monument, AZ, with graduate student and colleagues
December 7, 9, Participation in American Geophysical Union Fall Meetings, San Francisco, CA

Frans Rietmeijer

25th Lunar and Planetary Science Conference, Houston (TX), March, 13-16.
NASA Planetary Instrument Definition and Development Review Panel, Washington (D.C.), December 11-13.

Gary Smith

Attended New Mexico Geological Society Annual Meeting, Socorro, NM, April 8, 1994
Hosted sabattical visit of Dr. Michael Cummings, Portland State University, January-April 1994.
Field research near Abiquiu, New Mexico, May 14-18 1994
Field research in the southeastern Jemez Mountains, May 26-June 19, 1994
Organized field trip for Dr. Peter Flemings, Pennsylvania State University, Energy Exploration Education Distinguished Lecturer, September 17, 1994.
Attended Geological Society of American Annual Meeting, Seattle, WA, October 24-27, 1994
Attended conference, "Albuquerque's Water Future", sponsored by New Mexico Water Resources Research Institute, Albuquerque, NM, November 3-4, 1994.

Michael Spilde

Traveled to Denver, Colorado for the 1994 Annual Meeting of American Association of Petroleum Geologists and Society for Sedimentary Geology, June 12, 1994.
Traveled to New Orleans, Louisiana for the Annual Meeting of the Microbeam Analysis Society and Microscopy Society of America, July 31-August 5, 1994.

Lumin Wang

Chicago, Il to conduct experiments at Argonne National Laboratory, Jan. 30 - Feb. 4.
Pleasanton, CA to attend Digital Microscopy School at Gatan Inc., Feb. 22 - 25.
Chicago, Il to conduct experiments at Argonne National Laboratory, May 26 - June 3.
Berkeley to attend the 5th conference on Frontiers of electron microscopy and the TEM image processing and simulation workshop, June 20 - July 1.
Paris, France to attend the 13th International Congress on Electron Microscopy, July 17 - 24.
Chicago, IL to conduct experiments at Argonne National Laboratory, Sept. 25 - 30.
Boston, MA to attend the 1994 Materials Research Society Fall Meeting, Nov. 27 - Dec. 2.

Lee A. Woodward

Travel to Montana, Wyoming, Colorado, Arizona, and California for research purposes.

Crayton Yapp

Edmonton, Alberta, Canada, March 14-16, 1994.
Davis, California, April 19-21, 1994.
Seattle, Washington, October 24-27, 1994.

10. PUBLIC SERVICE

Yemane Asmerom

Started initiative to improve the children's section of the Public Library - Main Branch, which is now completed.

Susan Barger

Assisted Chama Valley School, Tierra Amarilla Elementary School in finding support for an extra phone line to assure their continued participation in the GALAXY Classroom Program after the Demonstration Phase of the project.

Adrian Brearley

Devised, organized and set up meteorite display for Albuquerque Gem and Mineral Club Show, March 4-6, 1993.
Identified numerous suspect meteorites and provided information on meteorites for members of the public from both within and outside New Mexico.
Organized and setup exhibit for the Intergalactic Reception, City of Albuquerque Summerfest, August 27, 1994.

Michael Campana

Provided water resources and related information to the general public.
Oral presentation, "Rocks, Rills and Rivers," Tijeras Canyon History Festival, April 23, 1994.

Laura Crossey

School Restructuring Council, Montezuma Elementary (parent representative)
Jefferson Middle School Science Exhibition: Earth & Planetary Sciences
Coach, Albuquerque Youth Soccer Organization (Div. VI)
Coach, Duke City Soccer League

Maya Elrick

Judge of Science Fair, April 14th, 1994; S.Y. Jackson Elementary School.

Wolfgang Elston

Information

Responded to numerous requests for information on mineral resources, geology, environmental problems, earthquakes, volcanic eruptions, and other geological hazards, etc.; identified rocks, minerals, and fossils for the public.
Completed transfer of library on lunar and planetary geology to UNM Centennial Library, including sets of images from various NASA missions (Lunar Orbiter; Apollo; Mariner Mars 4, 6, 7, 9, etc.)

Rodney C. Ewing

Amnesty International

John Geissman

Geoscience Advisor, Albuquerque Petroglyphs National Monument committee, including talk on the magnetic properties of the Albuquerque Volcanoes lava flows and a field trip to educate National Monument workers on how to recognize lava flow surfaces and flow contacts, both during 1994.
Geologic field excursion leader, miscellaneous Girl Scout and Elementary school groups
Reviewer, Jackson Elementary School, Science Fair
Talk on the Geology of New Mexico, Height's Optimists Club

John Husler

Lab tours for high school students (4)
Menaul School Science Fair Judge
East San Jose Elementary Science Fair Judge
NW Regional Science Fair Judge
Volunteer music for Presbyterian Food Bank, Special Olympics, Montebello Retirement Home;
Lab Chemistry demonstrations (2)

Rhian Jones

Coordinated tours of Meteorite Museum for visiting elementary, middle, high school and UNM students.

Identified numerous suspect meteorites for members of the public.
Assisted with IOM exhibit at Albuquerque Gem and Mineral Club Show, March 5-6, 1994.
Organized IOM exhibit at the Albuquerque Intergalactic Reception, City of Albuquerque Summerfest, August 27, 1994.

Karl E. Karlstrom

Talk at Los Alamos Geological Society - April 1994
Geology presentations at Bandelier Elementary School (2nd/5th grades)
Coordinated "Math Superstars" - Bandelier Elementary School - 2nd grade, Monday afternoons 1:30-2:00 p.m.
Judge for Bandelier school science fair (April 12)

Cornelis Klein

Member of the Albuquerque Rotary Club
Member of the Program/Speakers Committee of the Albuquerque Rotary Club

Albert Kudo

Member of the Advisory Board for the Northwest Regional Science Fair (meets periodically throughout the year various topics including fund raising, etc.)
Gave presentation of basic geology to grade 2/3 combo at Tomasita Elementary School
Identified minerals and rocks and reviewed a paper on basic road side geology written by a non-scientist

Barry S. Kues

Identified rocks and fossils, and answered geological questions for the public.

Les D. McFadden

Responded to numerous requests for advice and assistance from the public concerning issues related to soils and geology.

0752

Horton Newsom

Provided tours and information for members of the general public and public school students.
Attended and assisted with Institute of Meteoritics exhibit at the Albuquerque Intergalactic Reception, Aug. 27, 1994.
Spoke to the Albuquerque Gem and Mineral Society, July 25, 1994, "Impact craters around the world."
Spoke to the Albuquerque Exchange Club, Aug. 24, 1994, "Exploration of Mars."
Spoke to the Albuquerque Chapter of the National Space Society, Oct. 28, 1994, "Exploration of Mars."

James J. Papike

Presented talk to Geology Department, New Mexico State, Las Cruces, February 23, 1994.
Presented talk to Geology Department, New Mexico Tech. November 17, 1994.

Gary Smith

Department of Earth and Planetary Sciences curatorial duties: specimen acquisition and cataloging, specimen identification for the public, providing specimens to Albuquerque Public Schools teachers, constructed UNM Geology Museum exhibits at the Tucson Gem and Mineral Show and the Albuquerque Gem and Mineral Show.

Michael Spilde

Served on Board of Directors of the Albuquerque Gem and Mineral Club, 1994.
Served as Co-Vice President of Programs, Albuquerque Gem and Mineral Club, 1994.
Served as Displays and Programs Chairman for the 26th Annual Mineral Show, Albuquerque Gem and Mineral Club, March 1994.
Presented talk on "Gold Mining in the Northwest Territories, Canada" at Albuquerque Gem and Mineral Club, January 1994.
Judged at the NM Regional Science Fair, Albuquerque, March 1994.

Lee Woodward

Reviewed manuscripts for various journals.

Crayton Yapp

Identified minerals for public
Member, Hoffmantown Neighborhood Association
Interview with S. Robinson published in Quantum

****

IV. GEOLOGY MUSEUM AND COLLECTIONS

****

GEOLOGY MUSEUM AND COLLECTIONS

Approximately 4000 people visited the Geology Museum during the 1994-1995 academic year. Most of the visitors (2244) were school children, many of whom were guided by graduate-student volunteers. A new exhibit featuring outstanding fossil specimens collected largely outside of New Mexico was added to the Museum in October 1994.

The Museum received several donations of mineral specimens during the year. Eugene Meieran of Phoenix donated 20 specimens, mostly from localities in eastern Europe. Robert Griego and Loren Sheldrick, of albuquerque, donated a collection of "Herkimer diamond" quartz crystals from New York. Max Long of Wickenburg, Arizona, donated a large turquoise specimen. The UNM Geology Museum and Collections Fund, administered by the UNM Foundation, is about half-way toward endowment; revenues from this fund will be used in the future to acquire new specimens.

For the third consecutive year the Geology Museum was invited to exhibit minerals at the prestigious Tucson Gem and Mineral Show. Twelve outstanding specimens from the Museum were exhibited at the main Tucson Convention Center show for four days in February 1995. Included in the exhibit were two, approximately 245 ct. topaz gem stones, which were donated to the Museum in the mid 1980's and had been stored in a vault on campus. The value of Brazilian topaz gems has dropped considerably since the time these stones were donated, no longer necessitating such extreme security. Following the Tucson show, the faceted topaz specimens were placed on exhibit in the Geology Museum. The Museum also filled two exhibit cases at the Albuquerque Gem and Mineral show in March 1995.

MUSEUM LOG

JULY 1, 1994 -- JUNE 30, 1995

DATE	ORGANIZATION	GRADE	# OF STUDENTS	# OF NON STUDENTS
/05/94	Bright Beginnings	1st-5th	30	5
/13/94	Bright Beginnings	1st-5th	30	5
/13/94	My True Colors	1st-5th	15	2
	JULY, 94 TOTAL		75	12
/02/94	Bright Beginnings	pre-1st	30	5
/10/94	Montessori School	K - 5th	20	3
/31/94	ABQ. Academy	8th	45	3
	AUGUST, 93 TOTAL		95	11
/1/94	ABQ. Academy	8th	45	3
/2/94	ABQ. Academy	8th	45	3
/2/94	Monte Vista Elem.	4th	22	2
/12/94	Hope Christian	4th-5th	11	3
/14/94	Cub Scouts	3rd	6	1
/16/94	Madison	6th-8th	7	2
/22/94	Bandilier	4th	24	6
/29/94	Monte Vista	Kinder.	34	8
	SEPTEMBER 94 TOTAL		194	28
10/03/94	Monte Vista	2nd	21	3
10/04/94	Chelwood	4th	25	5
10/06/94	Wilson	6th - 8th	50	10
10/06/94	Monte Vista	4th	20	2
	OCTOBER, 1994 TOTAL		116	20
11/03/94	Moriority	8th	25	2
11/04/94	Gov. Bent	3rd	22	5
11/10/94	Ignacio H.S. Colo.	9th - 12th	30	5
11/11/94	Georgia O'Keefe	1st	40	10
11/15/94	St. Mary's	5th	38	6
11/18/94	Barcelona	4th	40	12
11/18/94	Bandalier	2nd	24	4
	NOVEMBER, 1993 TOTAL		219	44
12/01/94	UNM Alpha Chi Omega			15
	DECEMBER, 1994 TOTAL			15
DATE	ORGANIZATION	GRADE	# OF STUDENTS	# OF NON STUDENTS
1/30/95	Monte Vista Elem.	Kinder.	32	8
	JANUARY, 1995 TOTAL		32	8
2/1/95	Dennis Chavez	3rd - 5th	36	5
2/2/95	Sombre Del Monte	4th	28	5
2/2/95	Monte Vista	5th	20	2
2/3/95	Carroll	1st - 5th	20	5
2/8/95	Marie Hughes	3rd	50	10
2/10/95	Eugene Field	3rd - 4th	9	1
2/15/95	H. Humphrey	5th	6	2
	FEBRUARY, 1995 TOTAL		169	30

3/2/95	Inez Elementary	4th	25	7
3/3/95	Sandia Base	3rd	25	5
3/14/95	Marmon Elementary	5th	30	5
3/17/95	San Antonito	4th	20	5
3/22/95	Mark Twain	5th	12	2
3/24/95	Santo Domingo	3rd	65	10
3/28/95	St. Therese	3rd	28	5
3/30/95	Marie Hughes	4th	30	10
3/31/95	Sandia Base	2nd	20	10
3/31/95	Stapleton	3rd	15	5
	MARCH, 1995 TOTAL		270	64
DATE	ORGANIZATION	GRADE	# OF STUDENTS	# OF NON STUDENTS
4/5/95	John Baker	5th	28	6
4/6/95	Longfellow	4th	25	6
4/17/95	Mary Anne Binford	3rd	60	4
4/17/95	Zuni High School	9th-12th	60	10
4/18/95	Lavaland	4th	90	10
4/19/95	Onate	Kinder.	120	25
4/20/95	R. Gabaldon	6th	40	25
4/21/95	S.Y.Jackson	2nd	16	10
4/21/95	Kirtland	Kinder.	35	4
4/24/95	E.G. Ross	1st	23	10
4/25/95	Lowell	4th	25	5
4/27/95	Hubert Humphrey	4th	25	6
4/28/95	Mountain View	3rd	35	3
4/28/95	Our Lady Fatima	3rd	25	8
4/28/95	Bellhaven	4th	20	5
	APRIL, 1995 TOTAL		627	137
5/2/95	Roosevelt	1st	40	10
5/3/95	Kirtland	1st-5th	60	6
5/3/95	Los Padillas	3rd-5th	35	5
5/5/95	Sanders	3rd-5th	60	15
5/16/95	Montezuma	4th	22	5
5/17/95	Lew Wallace	3rd	20	5
5/19/95	Joyful Child	Pre-school	15	5
5/23/95	Navajo	4th	15	5
5/25/95	Mary Anne Binford	3rd	20	5
5/26/95	St. Therese	6th-8th	70	10
5/31/95	Anath Community	3rd-5th	40	10
	MAY, 1995 TOTAL		397	81
6/5/95	Manzano Day School	4th & 5th	20	2
6/7/95	Clovis Girl Scouts	5th - 8th	9	2
6/22/95	Membres	3rd - 4th	9	6
6/28/95	Girl Scouts #634	8th	7	2
	JUNE, 1995 TOTAL		45	12
	GRAND TOTAL		2,254	446

0757

****

V. GRADUATE PROGRAMS AND STUDENT SCHOLARSHIPS

****

SUMMARY OF GRADUATE PROGRAM

Introduction

The Department of Earth and Planetary Sciences regards the education and training of graduate students, as modern geoscientists, as important and integral teaching and research functions. Through classroom, laboratory, and field experiences, graduate students acquire the mentoring, expertise, and skills required to become successful professional geoscientists in a spectrum of employment opportunities, including industry, environmental and geological consulting companies, governmental organizations, and academia. Individualized teaching opportunities in a broad range of undergraduate courses (from introductory physical geology laboratory sections to advanced field geology), participation in graduate level seminars, and the opportunity to present the results of their graduate research at professional geoscience meetings and in numerous publications all further enhance interpersonal skills and abilities of graduate students to discuss their knowledge of and research in geoscience in a range of settings and situations.

During the Fall 1994, term, a total of 63 students (34 M.S., 29 Ph.D.) were working towards graduate degrees in the Department, including 17 new students (Table 1). The number of full-time students in residence in the Fall was 55, with the remainder being those who have full-time jobs outside the University or who are finishing theses or dissertations off-campus. Of the M.S. students in Fall 1994, 38% were women, and of Ph.D. students 31% were women. During Spring 1994, with some students receiving their degrees, the graduate population numbered 34 M.S. and 26 Ph.D. students.

Graduate Admissions

Thirty-one applicants to the graduate program for Fall 1994 and Spring 1995 were offered admission out of 106 total applicants; of these, 20 new students actually enrolled - 11 in the M.S. program and 9 in the Ph.D. program. The stated disciplinary interests of this group were: Geomorphology = 5; Hydrology = 3; *Structure/tectonics* = 3; *Planetary Geology* = 3; *Volcanology* = 3; Geochemistry = 1; Mineralogy = 1; Vertebrate Paleontology = 1. In addition, 6 new students will be entering the graduate program in Fall 1995; 3 in the M.S. and 3 in the Ph.D. program.

Information on graduate admissions for the past 3 semesters is given in Table 2. For several years, the Department has maintained an aggressive recruitment effort involving funding visits to UNM by top applicants, offers of one-time $1,000 scholarships in addition to TA- or RA-ships, and offers of multi-year TA-ships to top potential students. Competition for excellent prospective students in the geosciences remains keen across the country. The national visibility and excellence of the faculty and their programs, high admissions standards, and recruitment efforts have successfully attracted many excellent students to the Department this year as in the past, but the relatively low assistantship salaries at UNM have somewhat hindered this effort, although the salary situation has been improving.

Support for Graduate Students

Over the past decade, the Department has considerably increased its ability to provide support for students enrolled in its graduate program. In 1994-95 nearly all active graduate students in residence were supported to some extent, mainly through teaching and research assistantships and by fellowships from various sources (Table 3). During the Fall semester, the equivalent of 15 students were on full time TA-ships and 23 on full time RA-ships (actually some students are awarded half-time appointments). During the Spring semester, 14 full-time equivalent TA-ships and 19.5 RA-ships were in effect. Table 4 indicates the sources and approximate amounts of support that were provided to graduate students during the past year; such support totalled nearly $400,000. Of this, about 59% was derived f rom the Department (chiefly from faculty grants and contracts and departmental fellowships), 38% from University sources (mainly TA-ships and several graduate fellowships), and 3% from external sources (e.g., awards from professional organizations, based on proposals submitted by students in completion with students nation-wide). Of the entering new students in 1994-95, 16 of 20 were fully supported. Such support is not only essential in providing graduate students the means to pursue their studies, but also is instrumental in attracting excellent students into our program.

Outcomes

Study in the Department's graduate programs prepares students for a wide variety of careers in the geosciences and related fields. Below are listed the positions obtained by Ph.D. and M.S. students who graduated in 1993-94 and 1994-95:

Ph.D.

Grant Meyer	Visiting Associate Professor, Department of GeologyMiddleburg College, VT
Tom Williamson	Curator of vertebrate Paleontology, NM Museum of Natural History
Bruce Allen	Post-Doc., Department of Earth and Planetary Sciences, University of New Mexico
Mark Gonzalez	Assistant Professor, University of Denver, Colorado
Dan Erskine	Jacob Engineering, Albuquerque
Robert Finch	Post-Doc., Department of Geological Sciences, University of Manitoba, Canada
Adrian Hunt	Part-time faculty, University of Colorado, Denver, Colorado
Philip Noll, Jr.	Isotope and Nuclear Chemistry Division, Los Alamos National Lab
Dan Larsen	Assistant Professor, Department of Geological Sciences, University of Memphis, TN
Richard Livaccari	Post-Doc., Department of Earth and Planetary Sciences, University of New Mexico
Eric McDonald	Earth and Environmental Sciences Division, Los Alamos National Lab
David Ward	Sandia National Labs
Tom Bullard	Geomatrix Consultants

M.S.

Catherine Ratcliff	Assistant Editor, Geological Society of America
Peter McCarville	Technician, Los Alamos National Labs
Grant Fowler	Research Associate, Institute of Meteoritics, University of New Mexico
Armand Groffman	Earth and Planetary Sciences, Ph.D. Program, University of New Mexico, Albuquerque
Christina Ruzicka	Housewife, Colorado Springs, Colorado
Todd LaMaskin	Searching for employment
Rhawn Denniston	University of Iowa, Ph.D. Program
Eric Kirby	M.I.T., Ph.D. Program
John Apple	Law School, University of New Mexico, Albuquerque
Suzanne Meuret	Searching for employment
Greg Wroblicky	

TABLE 1. Master's and Doctoral Students, Fall, 1994, - Spring, 1995.

M.S. students

Aby, Scott
Andrew, Joseph
Appel, John
Bird, Jerry
Bowman, Laurie
Brainard, James
Carpenter, Sharman
Denniston, Rhawn
Dunaway, Carter
Ellwein, Amy
Garcia, Antonio
Gay, Kyle
Goodspeed, Thomas
Gray, Robert
Heckert, Andrew
Hohweiler, Skip
Hurley, Janet
Hutchison, Jimmie
Karner, James
Kirby, Eric
Kuhle, Andrika
LaMaskin, Todd
Lavine, Alexis
Maehr, Stephanie
McKeown, Kevin
Melker, Marc
Meuret, Suzanne
Minchak, Sharon
Mullally, Hope
Newcomer, Paula
Read, Adam
Rogers, John
Romano, Eileen
Rowe, Harry
Shaffran, Karen
Trigilio-Formento, Merri-Lisa
Wroblicky, Greg

Doctoral Students

Almaguer-Tapia, Raul
Bergfeld, Deb
Bryan, Charles
Bullard, Thomas
Callian, Jim
Cascadden, Tracey
Eberly, Paul
Gellis, Allen
Gresham, Allen
Groffman, Armand
Grubensky, Mike
Hanowski, Nicholaus
Hayden, Steven
Heywood, Charles
Ilg, Brad
Keating, Gordan
Loomis, Jennifer
Ma, Ancheng
Meldrum, Al
Morgan, Gary
Pedrick, Jane
Pun, Aurora
Servilla, Mark
Thompson, Amy
Treadwell, Carol
Wang, Shixin
Ward, David
Watt, Paula
Wawyrzniec, Tim
White, Christine

TABLE 2. Department of Earth and Planetary Sciences - Summary of Graduate Student Admissions, Fall 1994, Spring 1995, and Fall, 1995.

	Fall 1994	Spring 1995	Fall 1995
Total Applicants	100	6	66
Number Admitted	27	4	22
% of Total Applicants Admitted	27%	67%	33%
Number Actually Enrolled	17	3	6
Average Grade-point Average	3.51 (UG) 3.71 (G)	3.54 (UG) 3.81 (U)	3.54 (UG) 3.88 (G)
GRE score - Verbal (percentile)	80	90	90
GRE score - Quantitative (percentile)	69	76	83
GRE score - Analytical (percentile)	73	82	89
GRE score - Geology (percentile)	68	77	72

TABLE 3. Graduate Students Supported by Teaching Assistantships (TA), Research Assistantships (RA), and Fellowships (F) during the 1994-1995 Academic Year. (1/2 TA or RA refers to half-time support).

M.S. Students	Fall, 1994	Spring, 1995
Aby, Scott	1/2 TA	1/2 TA
Andrew, Joseph	RA	RA
Bird, Jerry	1/2 TA + 1/2 RA	RA
Bowman, Laurie	RA	RA
Carpenter, Sharman	1/2 RA	-
Denniston, Rhawn	RA	-
Dunaway, Carter	TA	TA
Ellwein, Amy	TA	TA
Garcia, Antonio	TA (MEMS)	TA (MEMS)
Heckert, Andy	TA	TA
Hurley, Janet	-	1/2 TA
James, Karner	RA	RA
Kirby, Eric	TA	-
Kuhle, Andrika	Work-study	1/2 TA + 1/4 RA
Lavine, Alexis	1/2 TA + 1/2 RA	1/2 TA + 1/2 RA
Maehr, Stephanie	RA	RA
Melker, Marc	1/2 TA + 1/2 RA	1/2 TA + 1/2 RA
Meuret, Suzanne	Dept. job	1/2 RA
Read, Adam	1/2 TA + 1/2 RA	TA
Romano, Eileen	1/2 TA	-
Rowe, Harry	1/2 TA + 1/2 RA	1/2 TA + 1/2 RA
Shaffran, Karen	1/2 TA	RA
Trigilio-Formento, Merri Lisa	TA	TA
Ph.D. Students	**Fall, 1994**	**Spring, 1995**
Bergfeld, Deb	TA	TA
Bryan, Charles	1/2 RA	-
Cascadden, Tracey	F	F
Eberly, Paul	RA	1/2 RA
Gresham, Allen	1/2 TA + 1/2 RA	RA
Grubensky, Michael	1/2 TA + 1/2 RA	1/2 RA
Hanowski, Nicolaus	RA	RA
Ilg, Brad	F	F
Keating, Gordon	-	TA
Loomis, Jennifer	RA	OGS Grad. Scholors/F
Ma, Ancheng	1/2 TA	-
McDonald, Eric	1/2 RA	1/2 TA
Meldrum, Al	TA	1/2 TA + 1/2 F
Pun, Aurora	1/2 TA + 1/2 RA	TA
Servilla, Mark	RA	RA
Treadwell, Carol	1/2 TA	1/2 TA
Wang, Shixin	RA	RA
Watt, Paula	1/2 TA + 1/2 RA	1/2 RA
Wawrzyniec, Timothy	1/2 RA	1/2 TA + 1/2 RA

TABLE 4. Earth and Planetary Sciences -- Sources and Amounts of Support for Graduate Students, July 1, 1994 to June 30, 1995.

Type of Support	Amount of Support ($ x 1000)
1. University	
Teaching Assistantships (salary)	$ 122
Part-time Instructor and workstudy stipends	7
Fellowships, SRAC awards, etc.	5
MEMS TA-ship	13
2. Department	
Research Assistantships	182
Jobs in Department	3
Silver/Kelley Fellowships	28
Alumni Fund Fellowships	10
Travel, Equipment-use, Research Fellowships	3
3. External Grants, Fellowships, etc.	13
TOTAL	$ 386

Graduate Degrees Awarded

The following students received M.S. and Ph.D. degrees in Earth and Planetary Sciences, Fall 1994 through Summer 1995.

Master of Science

John L. Appel, Summer, 1995 - Hydrogeologic Framework of the High Creek Calcareous Fen, South Park, Park County, Colorado. (Professor Michael E. Campana, Advisor).

Rhawn Denniston, Spring, 1995 - Minor and Trace Element Distributions in Fracture-Lining Calcite from Yucca Mountain, Nevada: Reconstructing Calcite Growth Histories and Paleohydrological conditions. (Dr. Charles Shearer and Professor Michael E. Campana, Advisors).

Eric Kirby, Fall 1994 - Tectonic Setting of the Sandia Pluton: an Orogenic 1.4 Ga Granite in New Mexico. (Professor Karl E. Karlstrom, Advisor).

Todd LaMaskin, Summer, 1995 - Cyclostratigraphy and Sequences Stratigraphy of the Middle-Upper Devonian Guilmette Formation, Southern Egan and Schell Creek Ranges, Nevada, (Professor Maya Elrick, Advisor).

Suzanne Meuret, Summer, 1995 - A Paleomagnetic and Rock Magnetic Study of a ca. 1.4 ga Regional Metamorphic Pulse in Central New Mexico. (Professor John W. Geissman, Advisor).

Gregory J. Wroblicky, Summer, 1995 - Numerical Modeling of Stream-Groundwater Interactions, Near-Stream Flowpaths, and Hyporheic Zone Hydrodynamics of Two First-Order Mountain Stream-Aquifer Systems. (Professor Michael E. Campana, Advisor).

Doctor of Philosophy

Thomas F. Bullard, Summer, 1995 - Neotectonics, Geomorphology, and late Quaternary Geology Across a Forearc Region Impacted by the Subduction of the Aseismic Cocos Ridge, Pacific Coast of Costa Rica. (Professor Leslie D. McFadden, Advisor).

Eric V. McDonald, Fall, 1994 - The Relative Influences of Climatic Change, Desert Dust, and Lithologic Control on Soil-Geomorphic Processes and Soil Hydrology of Calcic Soils Formed on Quaternary Alluvial Fan Deposits in the Mojave Desert, California. (Professor Leslie D. McFadden, Advisor).

David B. Ward, Fall, 1994 - Nickel Adsorption on a Natural Sand and Goethite, Kaolinite, and Quartz: Single - vs. Multi-Site Models and the Role of CO_2 (Professor Crayton J. Yapp, Advisor).

STUDENT SCHOLARSHIPS AND OTHER AWARDS

Many Graduate and Undergraduate students were supported by scholarships, fellowships, and other awards during the 1994-95 year. Many scholarships are derived from various funds that have been established for this purpose by alumni and other friends of the Department. The Department augments these awards with travel scholarships that partially offset the expenses of travelling to professional meetings (and often provides free use of vehicles to these meetings), and other scholarships supporting use of the analytical instruments and other research expenses. Recipients of such awards are listed below.

Undergraduate Scholarships and Awards

Harry and Mabel Leonard Scholarships

Eliliani Chavez	$ 200
Marsha Fronterhouse	1,200
Paul Giarratano	700
Al Gomez	1,200
Heather Gustafson	1,200
Kate Helean	900
Charles Hibbitts	1,200
Karen Holmes	1,200
Randal Johnson	850
Tim Lusk	200
Michael Munday	700
Joshua Ring	900
Michael Smith	700
Honore Southern	1,200
LuAnn Steele	900
Joseph Sterling	900
Heather Weigel	850
Julia Wilson	750

General Thomas Campbell Scholarships

Curtis Coney	$ 900
Jeanette Cordova	$ 900
Tiffani Fielder	$ 900
Alisha Foster	$ 900
John Lewis	$ 900
Lisa Rosi	$ 900
Heather Weigel	$ 900

James Drew Pfeiffer Scholarship

Karen Holmes	$ 215
Honore Southern	$ 215

Outstanding Student of Year Awards

S.A. Northrop Outstanding Senior: Karen Holmes
S.A. Wengerd Outstanding Junior: Honore Southern
J.P. Fitzsimmons Outstanding Sophomore: Joshua Ring

Departmental Travel Scholarships

Tony Feig	$ 125
Lisa Danielson	$ 100

American Geological Institute Minority Fellowship

Alicia Gunderson	$ 1,000

Albuquerque Gem and Mineral Society Scholarship

Heather Gustafson	$ 500
Honore Southern	$ 500

New Mexico Geological Society

Heather Gustafson	$ 300

Research Experiences for Undergraduates

Numerous students were supported on research projects in 1994-95 by an NSF REU grant awarded to Drs. Karl Karlstrom and John Geissman. These students, their research title, amount of support since the program's inception early in 1994 and advisors are listed below.

Marsha Abernathy - Soil-geomorphic studies and laboratory investigations of the quaternary geology of the Sevilleta Wildlife Refuge/LTER area, NM ($3,358). Advisor, Les McFadden.
Devin Castenyk - Geochemistry of the groundwater-surface water interface ($2,250). Advisor, L. Crossey.
Deb Corrao - Pennsylvanian marine communities of the Jemez Springs area ($3,358). Advisor, B. Kues.
Lisa Danielson - Experimental and petrologic investigations of reduced olivine in ordinary chondrites ($6,854). Advisor, R. Jones.
Anthony Feig - Paleomagnetism and rock magnetism of the Pikes Peak batholith ($6,142). Advisor, J. Geissman.
Peter Gill - Microstructural and kinematic investigation of high-strain zones, Manzanita Mountains, NM ($664). Advisor, K. Karlstrom.
Heather Gustafson - Tectonic geomorphology of the Sandias and eastern piedmont ($2,637). Advisor, F. Pazzaglia.
Kate Helean - Research assistant, Analytical Electron Microscopy lab ($2,245). Advisor, R. Ewing.
Charles Hibbits - Impact crater melt deposits: chemical transport, colling history, and hydrothermal alteration ($2,784). Advisor, H. Newsom.
Karen Holmes - Petrologic study of the Nacimiento Formation, early Cenozoic of the San Juan Basin ($4,728).
Joseph Huff - Structural and petrologic study of a 1.4 Ga pluton, Hualapi Mountains ($894). Advisors, M. Nyman and K. Karlstrom.

Windy Jaeger - Tungsten in the continental crust through geologic time ($7,261). Advisor, H. Newsom.
Heather Jenkins - Petrology and geochemistry of El Malpais volcanic field (field assistant to Ph.D. student T. Cascadden) ($1,792). Advisor, B. Kudo.
Brandon Pease - Ores, alteration minerals, and genesis of deposits of the Milagros and Star claims, Manzano Mountains, NM ($1,759). Advisor, L. Woodward.
Megan Rhoads - Miocene geomorphology of the Sangre de Cristo piedmont, eastern Espanola basin, NM ($520). Advisor, G. Smith.
Mary Simmons - Structure of high-strain zones, Manzanita Mountains, NM ($631). Advisor, K. Karlstrom.
Michael Smith - Lab assistant for rock preparation room ($2,758). Advisor, K. Karlstrom.
Malinda Stanley - Educational material for the meteorite museum ($606). Advisor, R. Jones.
Joseph Sterling - Surface water-groundwater interactions in a first-order montane stream: mineralogical controls on metal mobility ($1,215). Advisor, L. Crossey.
Honore Southern - Petrology of andesites in the Rio Grande rift and adjacent Colorado Plateau ((2,237). Advisor, B. Kudo.
Michael Timmons - Proterozoic rocks of the Monte Largo Hills, NM ($2,225). Advisor, K. Karlstrom.
Kaye Toolson - Cretaceous decapod crustaceans from the Carthage area, NM ($3,794). Advisor, B. Kues.
Susan Vorenberg - Investigations of the manson impact structure ($1,316). Advisor, L. Crossey.

Graduate Departmental Scholarships and Awards

Caswell Silver Foundation, V.C. Kelley - L.T. Silver Fellowship

Tracey Cascadden	$17,459
Brad Ilg	$14,614

Geology Alumni Fund Scholarship:

Scott Aby	$ 150
Jerry Bird	$ 150
Carter Dunaway	$ 150
Amy Ellwein	$ 600
Tony Garcia	$ 400
Allen Gresham	$ 150
Andy Heckert	$ 150
Gordon Keating	$1,150
Alexis Lavine	$ 250
Ancheng Ma	$ 400
Al Meldrum	$ 400
Marc Melker	$ 250
Aurora Pun	$ 250
Adam Read	$ 600
Eileen Ramano	$ 150
Harry Rowe	$ 400
Carol Treadwell	$ 400
Merri Lisa Trigilio	$ 400
Tim Wawrzyniec	$ 600

0768

Jean-Luc Miossec Memorial Scholarship:

Scott Aby	$ 602

Rodney Rhodes Memorial Award:

Alexis Lavine	$ 183

Richard P. Vann Memorial Scholarship:

Andy Heckert	$ 497

Alexander and Geraldine Wanek Scholarship

Jerry Bird	$ 273

Sherman and Florence Wengerd Travelling Fellowship

Deb Bergfeld	$ 1,000

Departmental Travel Scholarships

P. Watt	$ 250
A. Heckert	$ 150
T. Garcia	$ 100
M. Trigilio	$ 100
H. Rowe	$ 177
A. Lavine	$ 100
M. Servilla	$ 100
D. Bergfeld	$ 187

Departmental Equipment Use Scholarships

T. Cascadden	$ 600
M. Melker	$ 250
E. Romano	$ 250
R. Wawryzniec	$ 1,000

Graduate University Fellowships

Jennifer Loomis, Graduate Scholars Award $5,000
Michael Grubensky, Graduate Achievement Award $1,300
Eileen Ramano, Janet Hurley, Graduate Tuition Award

Graduate Fellowships from External Sources

A. Pun - American Geological Society Minority Fellowship ($1,000)
T. Garcia - American Geological Society Minority Fellowship ($1,000)
T. Cascadden - New Mexico Geological Society, Fall Field Conference Fellowship ($160)
H. Rowe - New Mexico Geological Society, Wallnitz Fellowship ($1,000)
A. Gresham - New Mexico Geological Society, Kottlowski Fellowship ($1,000)

A. Read - New Mexico Geological Society, Research Fellowship ($350)
M.L. Trigilio - New Mexico Geological Society, Research Fellowship ($500)
J. Andrew - Los Alamos Gem and Mineral, Society Fellowship ($200)
A. Gresham - Geological Society of America, Research Fellowship ($1,500)
T. Wawrzyniec - Geological Society of America, Research Fellowship (($1,798)
E. Ramano - Geological Society of America, Research Fellowship (($500)
T. Wawrzyniec - Colorado Scientific Society Research Fellowship ($550)

FUND CONTRIBUTORS: 1994-95

Douglas Brookins Memorial Scholarship

Mr. Steve Whiteley

Chair Discretionary Fund

AT&T Matching Gift of
George Fullas
Dr. John Berkley
Dr. Saleh M. Billo
Ms. Elaine S. Brouillard
Mr. & Mrs. George Fullas
Dr. James Gooding
Lam Research Corporation
Matching Gift of Susan Rhoades
Mr. Bill Lovejoy
Mr. Pierre McKenzie
Ms. Elizabeth Medary
Mr. Dewayne Miller, Jr.
Ms. Susan Rhoades

Geology Alumni Fellowship

Ewing & Associates

Vincent C. Kelley Memorial Scholarship

Mr. David B. Givens

James D. Pfeiffer Memorial Fellowship

Mrs. Patricia Lewis

Richard Vann Memorial Scholarship

Dr. and Mrs. Barry S. Kues

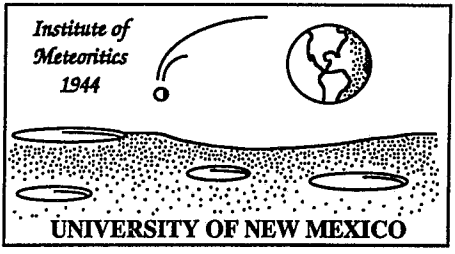
Wengerd Travelling Fellowship

Dr. Bruce Black

The Annual Report Of

THE INSTITUTE OF METEORITICS

July 1, 1994 through June 30, 1995



James J. Papike, Director

Rhian Jones, Coeditor

Institute of Meteoritics
Department of Earth
and Planetary Sciences
University of New Mexico
Albuquerque, NM 87131, USA

TABLE OF CONTENTS

Page

INTRODUCTION 1

50th Anniversary 2

INSTITUTE OF METEORITICS FACULTY AND STAFF 4

ORGANIZATIONAL CHART FISCAL YEAR 1995-1996 5

I. RESEARCH 6

1. Specific Projects 8

a. Microbeam Studies of Lunar Samples, Achondrite Meteorites and Martian Meteorites 8

b. Origin of Chondrites 9

c. A SIMS Study of Calcite: Investigation of Shallow Crustal Transport Phenomena at Yucca Mountain 10

d. Formation of the Continental Crust: Evidence from Siderophile and Chalcophile Trace Elements 10

e. Geochemical and Mineralogical Characterization of Tuff and Related Rocks from Yucca Mountain, Nevada 11

f. Mechanism of the Transformations Between the α, β and γ Polymorphs of Mg_2SiO_4 and $(MgFe)_2SiO_4$ 12

g. Determination of the Fe-Mg Interdiffusion Coefficient in Olivine 12

h. Eruption Evolution of the 720 ka Bishop Tuff at Long Valley Caldera, California 13

i. Advanced Methods for the Determination of Moderately Siderophile Elements by Mass Spectrometry 14

j. Development of Advanced SIMS Techniques - Ion Microprobe Facility 14

2. Grants and Contracts 15

Table 1. Expenditures on Grants and Contracts in Effect for FY 94/95 16

Table 2. Grants and Contracts that will be in Effect for FY 95/96 17

Table 3. Proposals in Review 18

INTRODUCTION

The Institute of Meteoritics (IOM) was founded in 1944, and is one of the oldest institutions of its kind in the world. A major activity during FY 94-95 involved IOM's 50th anniversary which was celebrated during October 13-15, 1994. The major highlight of the 50th anniversary celebration involved the hosting of an international conference entitled "Chondrules and the Protoplanetary Disk." The Institute continues its role as a leading center in research relating to planetary materials and processes. Charter goals of the IOM are:

1. To carry out research in the detailed laboratory analysis of meteoritic and other planetary materials and in other fields of planetary and geologic sciences.

2. To provide materials, facilities, and supervision for research by candidates for advanced degrees in geology and in other fields. To offer instruction in these areas as may be approved through the appropriate academic procedures and channels.

3. To promote the identification and acquisition of meteorites. To participate in exchange programs as may enhance the representative scope and scientific value of the Institute's collections of meteorites. To preserve and place on public exhibition both meteorites and related meteoritic materials and to make these materials available to scientists working in fields closely allied to meteoritics.

Research at the Institute of Meteoritics covers a wide range of problems, including studies of geological processes on meteorite parent bodies (asteroids), the Moon, Earth, and Mars. Our research is aided by collaborations with investigators at other universities and at national laboratories. Microbeam analytical techniques, including electron microprobe (EMP), scanning electron microscope (SEM), transmission electron microscope (TEM), and ion microprobe (SIMS) constitute the most important tools for this research and state of the art facilities are available at UNM. Another technique for bulk trace element geochemical analyses, supported by IOM, is inductively coupled plasma-mass spectrometry (ICP-MS). The 94-95 fiscal year was a time of continued developments in the progress of the UNM-Sandia National Laboratories Ion Microprobe Facility. This facility provides state-of-the-art capabilities for in situ trace element analysis of geologic materials, and there is a high demand for instrument time from research groups throughout the country. This facility has just been funded again (1995-1997) by the National

0773

3. Papers Published in National and International Journals and Books 19

4. Travel 20

II. FACILITIES 26

1. Curation and Meteorite Museum 27

2. Experimental Petrology Laboratory 28

3. ICP/MS Laboratory 28

4. Electron Microprobe and Scanning Electron Microscope Laboratories 29

5. The UNM/SNL Ion Microprobe Laboratory 30

III. TEACHING 32

1. Courses Taught 33

2. Spring IOM Research Seminar Series 33

3. Student Committees 34

4. Progress of Earth and Planetary Science Department Graduate Students Supported by IOM 35

IV. DEPARTMENTAL AND UNIVERSITY ACTIVITIES 38

Visitors to IOM 40

V. PROFESSIONAL ACTIVITIES 43

VI. EDUCATIONAL OUTREACH AND PUBLIC SERVICE 46

1. Meteorite Museum 47

2. Public Service 48

APPENDIX (PUBLICITY) 50

Science Foundation as one of their national facilities for ion microprobe analyses of geological materials.

Teaching activities of the staff of IOM consist of both formal courses and informal meetings with graduate and undergraduate students. We emphasize the direction and supervision of both graduate and undergraduate student research and encourage presentation and publication of the results of this research at national and international levels. The Meteorite Museum continues to play an important role in our educational efforts, and several school groups requested tours of the Museum and research laboratories.

IOM 50th Anniversary.

The Institute of Meteoritics celebrated its 50th anniversary in 1994. We marked the occasion by hosting a conference, "Chondrules and the Protoplanetary Disk", and by holding an Open House and celebratory Banquet. These events were very well attended, and were enjoyed enthusiastically by those who participated.

The conference was held on October 13-15, 1994, in the Department of Earth and Planetary Sciences. It was co-sponsored by NASA and the Lunar and Planetary Institute, Houston, which played an important role in the organization. The conference lasted two and a half days, and consisted of invited and contributed talks, as well as a poster session. Its aim was to bring together petrologists, who study the physical and chemical properties of chondrules, and astrophysicists, who model the wide variety of processes that have been suggested to be resonsible for chondrule formation. Long and lively discussions after each paper contributed to a very successful scientific exchange, bringing the two disparate communities closer together as well as inspiring many new ideas. About 100 people from all corners of the world attended the conference, including about 20 present and former students or members of staff of the Institute.

Following the conference, an Open House was held in the Institute of Meteoritics and Department of Earth and Planetary Sciences. Analytical laboratories, the Curation facility, and both the Meteorite and Geology Museums were open during the afternoon for visits from conference attendees and other guests.

The 50th Anniversary Banquet was held in the evening of October 15, at La Posada hotel in downtown Albuquerque. About 100 people attended the dinner, including present and former staff and student members of IOM, and friends of the Institute including faculty of the Department of

Earth and Planetary Sciences, the Vice Provost for Academic Affairs at UNM (Dr. Mary Sue Coleman), and conference attendees. Several letters of good wishes were also received from former members who were unable to attend. This was a very memorable occasion for all present, and many old acquaintances were renewed. Drs. Klaus Keil and James Papike (former and present Directors) made addresses that emphasized the importance of research institutes such as ours within the University. It is clear that the Institute is held in high regard by its alumni and that over its 50 year history it has made a significant impact in the field of planetary science.

Former members of IOM who attended the 50th anniversary celebrations included: Tamara Dickinson, Wofgang Elston, Eric Gauerke, James Gooding, Gary Huss, Klaus Keil, Lea Killiam, Walter Lance, Peter Maggiore, Martin Prinz, Alan Rubin, Edward Scott, Thomas Servilla, and Paul Warren.

INSTITUTE OF METEORITICS FACULTY AND STAFF

Director, Institute of Meteoritics

Dr. James J. Papike, Regents Professor of Earth & Planetary Sciences

Senior Research Associates

Dr. Adrian Brearley
Dr. Rhian Jones
Dr. Graham Layne
Dr. Horton Newsom
Dr. Charles Shearer

Research Associates

James Connolly
Grant Fowler
Michael Spilde

Support Personnel

Mary Sisley-Franson, Administrative Assistant
Debra Spilde, Administrative Assistant
Sarah Coulie, Staff Assistant
Kenneth Nichols, Photographer

Graduate Students

Rhawn Denniston
Laurie Bowman
Nicolaus Hanowski
Stephanie Maehr
Aurora Pun
Mark Servilla

Undergraduate Students

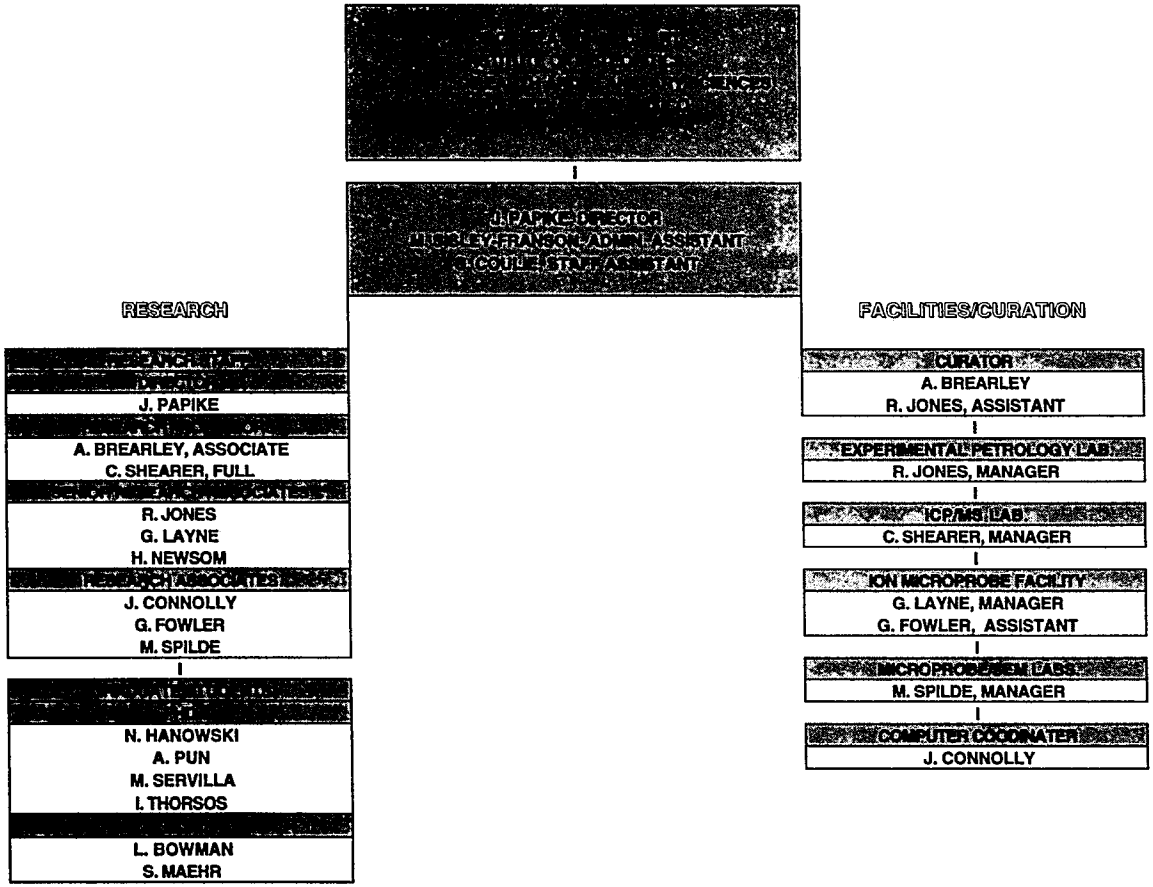
Chris Adcock
Lisa Danielson
Charles Hibbitts
Windy Jaeger
Heather Weigel

Additions to Staff

Grant Fowler, 7/1/94
Mary Sisley-Franson, 10/1/95

Separations from Staff

Debra Spilde, 9/30/94
Kenneth Nichols, 9/30/94


J. PAPIKE, DIRECTOR
RESEARCH
J. PAPIKE
A. BREARLEY, ASSOCIATE
C. SHEARER, FULL
R. JONES
G. LAYNE
H. NEWSOM
J. CONNOLLY
G. FOWLER
M. SPILDE
N. HANOWSKI
A. PUN
M. SERVILLA
I. THORSOS
L. BOWMAN
S. MAEHR
FACILITIES/CURATION
CURATOR
A. BREARLEY
R. JONES, ASSISTANT
EXPERIMENTAL PETROLOGY LAB
R. JONES, MANAGER
ICP/MS LAB
C. SHEARER, MANAGER
ION MICROPROBE FACILITY
G. LAYNE, MANAGER
G. FOWLER, ASSISTANT
M. SPILDE, MANAGER
J. CONNOLLY

SECTION I

RESEARCH

I. RESEARCH

Research activities of staff and students of the Institute of Meteoritics cover a wide range of topics, mostly aimed at understanding the origin and early history of our solar system and the evolution of the planets. More specifically, we have major research initiatives to investigate the igneous evolution of achondrite meteorites, Martian meteorites, and the Moon, and research into an understanding of early solar system processes through the study of chondritic meteorites. The large scale problems of planetary evolution and core formation are being investigated using evidence from siderophile trace elements in the Earth. Research into terrestrial volcanic systems is being carried out on samples from Long Valley Caldera, California. The geophysical properties of the Earth's upper mantle and diffusion properties of olivine are the subjects of two experimental studies. Mineralogical and geochemical studies of the Yucca Mountain, Nevada, proposed nuclear waste repository are also being performed. We are continuing to develop advanced applications of secondary ion mass spectrometry for the analysis of geological materials.

Our research during the report period has resulted in the publication of 17 scientific articles in major national and international journals (p. 19), as well as in the publication of 35 abstracts of papers presented at national and international conferences (p. 20). The extensive involvement of students in original research projects in the Institute of Meteoritics is particularly important for their education and advanced training.

We continue to be very successful in attracting research grants and contracts to the Institute of Meteoritics in support of the research activities of staff and students. Details are provided in Tables I-III (pp. 16-18). Funding was provided by the National Aeronautics and Space Administration (NASA), the National Science Foundation (NSF), Department of Energy (DOE), Sandia National Laboratories (SNL), Waste-Management Education and Research Consortium (WERC), and the Institute for Geophysics and Planetary Physics, Los Alamos National Laboratory (IGPP/LANL).

1. Specific Projects

a. Microbeam Studies of Lunar Samples, Achondrite Meteorites and Martian Meteorites (Funded by NASA)

Microbeam Studies of Lunar Samples. The modern explosion of trace element geochemistry has resulted in a much better understanding of petrogenetic processes on the planetary scale. With the introduction and advancement of trace element microbeam technologies, the analysis of minute volumes in situ on petrographic thin sections increases the scope of this trace element revolution in the geological and planetary sciences. Our ongoing microbeam study of lunar materials combines ion and electron microprobe techniques focusing upon four major areas: (1) calibration of microbeam instruments for the analysis of elements and isotopes useful in deciphering lunar materials, (2) studies of trace and volatile element behavior in lunar picritic volcanic glasses, (3) trace and volatile element studies of melt inclusions (including immiscible melts) in minerals in mare basalts, and (4) trace element studies of plagioclase and pyroxene in lunar highland lithologies to aid in the reconstruction of the evolution of the lunar crust.

Interpretation of these trace element data has produced new insights into the fundamental processes instrumental in the origin and evolution of the Moon. New data for the lunar picritic magmas provide a much better understanding of the evolution of lunar basalts, the composition, evolution, and dynamics of the lunar mantle, and the origin and composition of the Moon. Studies of minerals from the lunar highlands have provided additional insights on the nature and evolution of the lunar crust and the evolution of the early lunar mantle.

Microbeam Studies of the Origin and Evolution of Achondrite Meteorites and Martian Meteorites. Our microbeam studies of achondrite meteorites are designed to unravel the nature and history of the their parent asteroid or planet. These meteorites provide us with clues to decipher early planetary conditions under which they evolved, to understand the development of early planetary crusts, and to elucidate early planetary magmatism. Using ion and electron microprobe techniques, we have focused our studies upon 4 major topics: (1) Origin of diogenites (orthopyroxenites) using trace element characteristics of orthopyroxenes, (2) Origin and evolution of eucrites using trace element characteristics of pyroxene and plagioclase, (3) Conditions under which the Lodran meteorite evolved, and (4)

Nature of the hydrothermal events that are represented in SNC (Martian) meteorite ALH84001. Interpretation of these microbeam data has given us new insights into the evolution of these different planetary bodies. Minor and trace element studies of diogenites have given us a clearer understanding of their role in asteroidal magmatism. Comparison studies of diogenites (orthopyroxene cumulates) with their terrestrial analogs in layered intrusions have demonstrated the potential complexity of magmatic processes on "simple" asteroids. Ion microprobe studies of pyroxenes from cumulate eucrites indicate that these low-Ca pyroxene plus plagioclase rocks may form in the same mafic intrusions as diogenites but later in the crystallization sequence. Electron and ion microprobe studies of orthopyroxene and olivine in the Lodran achondrite provide new information on early melting and reduction events in asteroids.

b. Origin of Chondrites (Funded by NASA)

Chondritic meteorites are among the most pristine extraterrestrial materials available for study in the laboratory. The principal components of chondritic meteorites are chondrules (millimeter-size spherules of silicate material) and matrix (an ultrafine-grained assemblage of silicates, oxides, sulfides, and carbonaceous material). The study of such components provides important insights into processes occurring as the planets, comets, and asteroids formed from the cloud of interstellar dust and gas, the solar nebula. Our overall aim is to integrate these observations with current astrophysical data to develop a viable model for the early solar nebula.

Specific questions relating to the origin of chondritic meteorites which we are currently addressing are: (1) How and under what conditions did chondrules and matrix form and in what location in the nebula? (2) How were chondrules and matrix processed in the solar nebula after their formation? (3) How much and what type of presolar material is preserved in fine-grained matrix material? (4) How were chondrules and matrix affected after accretion by parent body processes such as thermal metamorphism, aqueous alteration, and brecciation? (5) What were the physical conditions and mechanisms of these secondary processes?

Our studies of ordinary and carbonaceous chondrites use a combination of petrographic studies, microbeam techniques (SEM, EMP, STEM, and synchrotron x-ray fluorescence) and SIMS analysis of mineral compositions, as well as experimental and isotopic studies.

c. A SIMS Study of Calcite: Investigation of Shallow Crustal Transport Phenomena at Yucca Mountain. (Funded by WERC)

Understanding and reconstructing the paleohydrology of shallow crustal environments that are potential sites for waste repositories are critical in forecasting possible future changes in the ground water table, the flux of recharge, the nature of fluid flow, and other factors that may adversely impact the integrity of the site. One approach to take in reconstructing the hydrologic history of a potential site is to use mineralogical indicators of fluid flow and water characteristics. This mineralogical approach utilizes mineral stability, mineral assemblages and major, minor, and trace element compositions of individual minerals. Calcite appears to be a ubiquitous mineral occupying fracture systems in many of these shallow crustal environments. We have developed trace and minor element techniques to study hydrogenic calcite, and are currently applying these techniques to calcite from fracture systems at the potential high level waste repository at Yucca Mountain, Nevada.

The chemistry of calcite from the Yucca Mountain site provides a unique perspective concerning the chemistries and flow characteristics of infiltrating water at the site. Our current studies have demonstrated that fracture calcite from Yucca Mountain had a variety of distinctly different bulk elemental and isotopic signatures. These signatures are generally correlated to location within the site (saturated zone versus unsaturated zone) and are thought to reflect source of the water, water chemistry, and phases that precipitated prior to the calcite. Bulk analyses have numerous interpretive problems such as mineral zoning (averages distinctly different episodes of calcite growth), mineral contamination, and mineral grain size. Our approach to this problem is to use microbeam analytical techniques to study the trace and minor element concentrations and distributions in growth zones in calcite.

d. Formation of the Continental Crust: Evidence from Siderophile and Chalcophile Trace Elements. (Funded by NSF)

The abundances of siderophile and highly mobile elements are being used to investigate the accretion of the Earth and the separation of the Earth's core and the continental crust from the Earth's mantle. Well characterized samples from different geochemical reservoirs are being analyzed by inductively coupled plasma mass spectrometry for the moderately siderophile and chalcophile trace elements

Mo, W, As, Sb, and Pb. The differing behavior of the chosen elements provides windows into different processes involved in the early evolution of the Earth. The earliest events of accretion and core formation are being studied directly by the abundance of Mo, which behaves coherently with the light rare earth elements, thus providing a window through the complicated crustal formation process. In contrast, the formation of the continental crust involves the extra enrichment of highly mobile elements including Pb, As, and Sb. The abundances of the siderophile elements in different terrestrial reservoirs including ancient and younger (arcs) continental crust are being used to determine the abundances in the bulk silicate Earth. These abundances provide clues to accretion and metal segregation in the mantle.

e. Geochemical and Mineralogical Characterization of Tuff and Related Rocks from Yucca Mountain, Nevada (Funded by SNL/DOE)

The Yucca Mountain Site Characterization Project of the U.S. Department of Energy is concerned with evaluation of the Yucca Mountain site as the host for a proposed commercial high-level nuclear waste repository. The site is located about 90 miles north of Las Vegas, Nevada, in the vicinity of the Nevada Test Site. Sandia National Laboratories is the prime DOE contractor involved in gathering data on geoengineering properties for site characterization. Sandia is also responsible for development of performance assessment models for all phases of the life of a repository based on the site characterization data. The Institute of Meteoritics supports the Sandia mission by providing sample-specific geochemical and mineralogical analyses of rock from Yucca Mountain on an as-needed basis. Construction of an access tunnel for in situ study of the potential repository locality began in early 1993, and continuing in 1995 includes development of an access incline utilizing a state-of-the-art tunnel boring machine. We are providing petrologic, mineralogic and geochemical data on numerous rock samples obtained from core holes drilled from surface sites in advance of the incline. These data are being numerically quantified and integrated into a database of thermal, mechanical, hydrologic and other physical properties. The data will be analyzed statistically to determine which factors are reliable predictors of those properties required to produce accurate design and performance models. The importance of coupling of mineralogic, hydrologic, thermal, and mechanical processes is being recognized as crucial to the development of good models of total systems performance. Project staffing continues at one 3/4 FTE Research Scientist and two 1/2 FTE Student Associates, and the contract has been extended through May 31, 1997.

f. Mechanism of the Transformations Between the α, β and γ Polymorphs of Mg_2SiO_4 and $(MgFe)_2SiO_4$. (Funded by NSF).

The importance of the phase transformations of the polymorphs of Mg_2SiO_4 on the geophysical properties of the upper mantle has been widely recognized over the last 20 years. Olivine, the most volumetrically important phase in the Earth's upper mantle, undergoes a series of transformations as a function of increasing depth in the mantle, which result in the formation of modified spinel (β-phase) and finally, spinel (γ). Transformations of olivine to β-phase are widely regarded as being responsible for the seismic velocity variations in the transition zone of the mantle in the 370-420 km range in the Earth. The mechanisms of the transformations have major implications for several important aspects of the behavior of the mantle in the transition zone, the dynamics of subduction zones and mantle convection. In particular the olivine-spinel transformation may provide one of the major forces for subduction, be one of the causes of deep focus earthquakes, and may significantly affect the rheology of subducting oceanic lithosphere.

The principal objective of this project is to study in detail the mechanisms of these high pressure mantle phase transformations over a wide range of pressure/temperature conditions relevant to the model mantle geotherm and subducting oceanic lithosphere. This study is the first to try and delineate the pressure/temperature regimes over which different transformation mechanisms may operate in the Earth's mantle and identify what factors may cause changes in the transformation mechanism. The research is a collaborative project involving high pressure experimental work coupled with transmission electron microscope characterization of the products of the experiments. Experimental work is carried out by Professor David Rubie on a multianvil press at the Bayerisches Geoinstitut, Germany, whilst transmission electron microscopy and subsequent interpretation are carried out in the Institute of Meteoritics.

g. Determination of the Fe-Mg Interdiffusion Coefficient in Olivine. (Funded by NSF).

Diffusion is an important geologic phenomenon, and a knowledge of the diffusion rates of ions in silicate materials is fundamental to an understanding of many common processes. Diffusion in olivine controls a variety of igneous and metamorphic processes in the crust and mantle of the Earth, as well as in meteorites and the Moon. A knowledge of the Fe-Mg interdiffusion coefficient is fundamental

to an interpretation of many of these processes. Several previous measurements of this property have been made at high temperatures but extrapolation of the data to lower temperatures results in considerable uncertainties and errors. The aim of this project is to measure diffusion rates directly at low temperatures so that low-temperature modelling of diffusion-related phenomena will be considerably more precise. Initial experiments at high temperatures are designed to develop a viable technique for the low-temperature measurements. Interdiffusion of Fe-Mg in olivine is a complicated function of several variables (temperature, oxygen fugacity, composition, crystallographic orientation), the effects of which must all be determined. Diffusion experiments are carried out in a controlled-atmosphere furnace. Diffusion profiles generated in the experiments are analyzed by electron microprobe analysis, and by a depth-profiling technique using the ion microprobe (SIMS).

h. Eruption Evolution of the 720 ka Bishop Tuff at Long Valley Caldera, California (Funded by IGPP/LANL)

The withdrawal and eruption of silicic magma during the formation of large calderas is not well understood because of the variation of vent configurations and the explosive nature of the magma involved. Using geochemical data obtained from electron and ion microprobe analyses of melt inclusions from the Long Valley Exploratory Well (LVF 51-20) located within the caldera and previously analyzed melt inclusions from the Bishop Tuff outflow sheet, we have gained new insights into the complex eruptive dynamics that occurred during the eruption of the Bishop Tuff. In addition, the melt inclusion geochemistry has provided necessary information to constrain initial and boundary conditions required by numerical simulations of the caldera forming eruption of the Bishop Tuff. Simulations based on real data involving a large volcanic center, such as Long Valley, have never been performed to our knowledge. Results from the numerical simulations yield information on gas and solid volume fraction gradients, temperature gradients, pressure gradients, pyroclastic flow direction and velocity, and how these variables change in linear time. Applications of this study will provide important and timely conclusions regarding the evolution of caldera forming eruptions of silicic magma, the dynamics of explosive, high-volume eruption columns, and the mechanics of large-scale pyroclastic flow deposition and its associated hazards.

i. Advanced Methods for the Determination of Moderately Siderophile Elements by Mass Spectrometry. (Funded by the IGPP/LANL)

A project to evaluate and develop new mass spectrometry methods for the determination of siderophile elements at trace levels is currently underway. This is a joint project involving personnel from the Institute of Meteoritics and Los Alamos. Siderophile elements are elements that are preferentially partitioned into Fe-Ni metal at high temperatures. We are evaluating the sensitivity and precision of conventional methods using Inductively Coupled Plasma Mass Spectrometry, including the development of isotope dilution techniques for the more precise determination of the moderately siderophile elements molybdenum (Mo) and tungsten (W). This project will bring together experts in siderophile element geochemistry and mass spectrometry. Many problems in mineral physics that involve core formation and accretion of planetary bodies cannot currently be addressed due to the lack of methods for highly precise determinations of the siderophile elements. Although the development of Re-Os techniques may provide good information in the future for the behavior of the highly siderophile elements, no such precise technique exists for the moderately siderophile elements. However, the abundances of the moderately siderophile elements may have been established during different stages of accretion and core formation in the Earth. We are focusing on the siderophile elements molybdenum and tungsten. These elements have several properties that are important for understanding problems involving the evolution of the Earth, including their well behaved incompatible behavior. In addition, these elements are refractory, implying their initial abundances in the differentiated planets were in chondritic ratios relative to other refractory lithophile elements, and were not depleted due to volatility during nebular processes.

j. Development of Advanced SIMS Techniques - Ion Microprobe Facility (Funded by NSF)

One of the main franchises of the Ion Microprobe Facility is the development of new and innovative applications of Secondary Ion Mass Spectrometry (SIMS) to the analysis of natural materials. Two main initiatives have occupied the bulk of technique development time.

The first is the optimization of the instrument for small, high current primary microbeams. This development has become essential for a number of projects involving objects smaller than the traditional 25-30 μm lateral resolution of the ion

microprobe for quantitative trace element analysis. A number of optical and electronic modifications have been completed, allowing substantial primary beam currents to be focussed routinely to diameters of less than 10 μm. This new capability is being applied to the trace element analysis of both volcanic tephras (for stratigraphic correlation research) and volcanic melt inclusions.

The second major development initiative has been in the area of Stable Isotope Ratio Analysis (SIRA). Optimization of a new detector and counting electronics has allowed the microbeam analysis of sulfur isotope ratios in sulfides to precisions approaching those of conventional gas source SIRA instruments (which require much larger samples). This new capability will be applied to isotopic investigations of both meteoritic and terrestrial materials in the coming year.

2. Grants and Contracts

Table 1 documents that IOM was funded by a variety of agencies during FY 94/95 including NSF, NASA, SNL, IGPP and WERC. Grant contract expenditures totalled $460,300. Table 2 lists grants and contracts that are already in effect or have already been approved; $684,200 remains in these grants and contracts. Table 3 tabulates proposals that are now in the review process. These proposals request $605,500 for IOM research support.

In summary, IOM continues to enjoy healthy grant/contract support in these times of rigorous competition and limited budgets in the major funding agencies.

TABLE 1: EXPENDITURES ON GRANTS AND CONTRACTS IN EFFECT FOR FY 94/95

AGENCY	TITLE	P.I./CO. I's	$EXPENDED
NSF	"Determination of the Fe-Mg Interdiffusion Coefficient in Olivine: A Comparison of Electron Microprobe and SIMS Analytical Techniques" (EAR 92-10465)	R. Jones	2.3K
NSF	"Mechanisms of High Pressure Phase Transformations Between the α, β and γ Polymorphs of Mg_2SiO_4" (EAR 93-05184)	A. Brearley	23.1K
NSF	"The Formation of the Continental Crust: Evidence from Siderophile and Chalcophile Trace Elements in Volcanic Arcs" (EAR 93-04131)	H. Newsom	32.9K
NSF	"Support of UNM/SNL Ion Microprobe Facility"(EAR 93-03864)	J Papike/Layne, Shearer	55.4K
NASA	"Trace-element Studies of Pyroxenes in Rocks of the HED Association" (NGT-70223)	A. Pun/Papike	4.7K
NASA	"Microbeam Studies of Planetary Materials" (NAGW-3347)	J. Papike/Brearley, Jones, Shearer	181.1K
SANDIA	"Geologic Support for SNL activities for the Yucca Mountain Site Characterization Project" (AB-1106)	J. Connolly	92.6K
IGPP	"Simulating Silicic Eruptions at Long Valley, California, to understand processes of Continental Crust Formation"(No. 414)	J. Papike	19.6K
IGPP	"Advanced Methods for the Determination of Moderately Siderophile Elements by Mass Spectrometry" (No. 411)	H. Newsom	13.5K
WERC	Forecasting the integrity of Waste Sites. A Mineralogical Approach to Understanding Fluid Flow.	C. Shearer	35.1K
		TOTAL	460.3K

TABLE 2: GRANTS AND CONTRACTS THAT WILL BE IN EFFECT FOR FY 95-96

AGENCY	TITLE	P.I./CO. I's	DATES	$ REMAINING
NSF	"Mechanisms of High Pressure Phase Transformations Between the α, β and γ Polymorphs of Mg_2SiO_4" (EAR 93-05184)	A. Brearley	8/1/93-1/31/96	19.4K
NSF	"Phase Transformations involving Olivine, ß-phase and Spinel in the Mantle Transition Zone: Experimental Studies of Transformation Mechanisms in Mg_2SiO_4 and $(Mg,Fe)_2SiO_4$"	A. Brearley	8/1/95-7/31/97	102.0K
NSF	"The Formation of the Continental Crust: Evidence from Siderophile and Chalcophile Trace Elements in Volcanic Arcs (EAR 93-04131)	H. Newsom	6/15/93-11/30/95	21.1K
NSF	"Siderophile elements and the origin of the continental crust" (EAR 95-06597)	H. Newsom	7/1/95-6/30/97	110.0K
NSF	"Support of UNM/SNL Ion Microprobe Facility"(EAR 93-03864)	J. Papike/Layne, Shearer	7/15/93-7/15/95	2.1K
NSF	"Support of UNM/SNL Ion Microprobe Facility"(EAR 95-06611)	G.Layne/Papike	7/15/95-7/15/97	160.0K
NASA	"Microbeam Studies of Planetary Materials" (NAGW-3347)	J.Papike/Brearley, Jones,Shearer	12/16/94-12/15/95	124.0K
SANDIA	"Geologic Support for SNL activities for the Yucca Mtn Site Characterization Project" (AB-1106)	J. Connolly	6/1/95-5/30/97	110.0K
IGPP	"Simulating Silicic Eruptions at Long Valley, California, to understand processes of Continental Crust Formation"(No. 414)	J. Papike	10/1/94-9/30/95	.9K
IGPP	"Advanced Methods for the Determination of Moderately Siderophile Elements by Mass Spectrometry" (No. 411)	H. Newsom	10/1/94-9/30/96	19.3K
WERC	Forecasting the integrity of Waste Sites. A Mineralogical Approach to Understanding Fluid Flow.	C. Shearer	9/1/95-8/31/96	15.4K
			TOTAL	684.20K

TABLE 3: PROPOSALS IN REVIEW

May 23, 1995

AGENCY	TITLE	P.I./CO.I's	DATES	$YR	TOTAL
NASA/PM&G	"Microbeam Studies of Planetary Materials"	J.Papike/Brearley, Jones,Shearer	12/15/95-12/15/96	227.7K	227.7K
NASA/PM&G	"Geochemical clues to terrestrial planet origins"	H.Newsom	1/1/96-12/31/97	49.9K	99.8K
NASA/PG&G	"Impact crater lakes and hydrothermal systems: aqueous processes and volatile transport on Mars:	H.Newsom	10/1/95-9/30/97	36.3K	73.1K
NASA/OSS	"Kinetics and mechanisms of aqueous alteration reactions in chondritic meteorites"	A.Brearley	1/1/96-12/31/97	52.5K	107.7K
NASA/OSS	"Diffusion in olivine: Experimental measurements, and modelling of solar nebula processes"	R. Jones	1/1/96-12/31/97	47.9K	97.2K
			TOTALS	414.30K	605.5K

0790

3. Papers Published in National and International Journals and Books (1994-1995)

Brearley, A.J. (1995) Aqueous alteration and brecciation in Bells, an unusual, saponite-bearing CM carbonaceous chondrite. Geochimica et Cosmochimica Acta, 59, 2291-2317.

Brearley, A.J., and Rubie, D.C. (1994) Transformation mechanisms of San Carlos olivine to β-Phase under subduction zone conditions. Physics of the Earth and Planetary Interiors 86, 45-67.

Devine, J.D., Gardner, J.E., Brack, H.P., **Layne, G.D.**, and Rutherford, M.J., (1995) Comparison of microanalytical methods for estimation of H_2O contents of silicic volcanic glasses. American Mineralogist 80, p. 319-328.

Fowler, G.W., Papike, J.J., Spilde, M.N., and **Shearer, C.K.** (1994) Diogenites as asteroidal cumulates: Insights from orthopyroxene major and minor element chemistry. Geochimica et Cosmochimica Acta, 58, 3921-3929.

Fowler, G.W., Shearer, C.K., Papike, J.J. and **Layne, G.D.** (1995) Diogenites as Asteroidal Cumulates: Insights from Orthopyroxene Trace Element Chemistry. Geochimica et Cosmochimica Acta, 59, 3071-3084.

Harlan, S., Snee, L.W. Geissman, J.W., and **Brearley, A.J.** (1994) Paleomagnetism of the Middle Proterozoic Laramie anorthosite complex and Sherman Granite, southern Laramie Range, Wyoming and Colorado. Journal of Geophysical Research 99, 17997-18020.

Jones, R.H. (1994) Petrology of FeO-poor, porphyritic pyroxene chondrules in the Semarkona chondrite. Geochimica et Cosmochimica Acta, 58, 5325-5340.

McCoy, T.J., Keil, K., Bogard, D.D., Garrison, D.H., Cassanova, I., Lindstrom, M.M., **Brearley, A.J.**, Kehm, K., Nichols, R.H., and Hohenberg, C.M. (1995) Origin and history of impact melt rocks from the EL chondrite parent body. Geochimica et Cosmochimica Acta, 59, 161-175.

Newsom, H.E. (1995) Composition of the solar system, planets, meteorites, and major terrestrial reservoirs. Global Earth Physics: a Handbook of Physical Constants (T.J. Ahrens ed.), 159-189.

Papike, J.J., Fowler, G.W., and **Shearer, C.K.** (1994) Orthopyroxene as a recorder of lunar crust evolution: An ion microprobe investigation of Mg-suite norites. American Mineralogist, 79, 796-800.

Papike, J.J., Spilde, M.N., Fowler, G.W., Layne, G.D. and **Shearer, C.K.** (1995) The Lodran Primitive Achondrite: Petrogenetic Insights from Electron and Ion Microprobe Analysis of Olivine and Pyroxene. Geochimica et Cosmochimica Acta, 59, 3061-3070.

Petaev, M.I., and **Brearley, A.J.** (1994) Exsolution in ferromagnesian olivine of the Divnoe meteorite. Science 266, 1545-1547.

Pun, A.,* and **Papike, J.J.** (1995) Ion microprobe investigation of exsolved pyroxenes in cumulate eucrites: Determination of selected trace-element partition coefficients. Geochimica et Cosmochimica Acta, 59, 2279-2289.

Rubie, D.C., and **Brearley, A.J.** (1994) Phase transitions between β and γ $(Mg,Fe)_2SiO_4$ in the earth's mantle: Mechanisms and rheological implications. Science. 264, 1445-1448.

Scott, E.R.D., **Jones, R.H.**, and Rubin, A.E. (1994) Classification, metamorphic history and pre-metamorphic composition of chondrules. Geochimica et Cosmochimica Acta, 58, 1203-1209.

Shearer, C.K., and Larsen, L.M. (1994) Sector zoned aegirine from the Ilimaussaq Alkaline Intrusion, South Greenland. Implications for trace element behavior in pyroxene. American Mineralogist 79, 340-352.

Shearer, C.K., Layne, G.D., and **Papike, J.J.** (1994) The systematics of light lithophile elements (Li, Be, and B) in lunar picritic glasses: Implications for basaltic magmatism on the Moon and the origin of the Moon. Geochimica et Cosmochimica Acta, 58, 5349-5362.

Members of IOM in bold print.
*** Student authors.**

4. Travel

During the period of the report, IOM Personnel attended ten international and national meetings. Twenty-three papers were presented orally, and ten papers were presented as posters. Two were presented in the "print only" abstracts mode. Four of the talks and three of the posters were presented by students. Abstracts of all presentations were published in abstract volumes for individual meetings. In the list of meetings below, names of IOM presenters are underlined, and student contributions are indicated with an asterisk.

July 25-29, 1994
57th Meteoritical Society Meeting, Prague, Czech Republic

Attended by: J. Papike, A. Pun
Abstracts were published in Meteoritics, Vol. 29

Oral presentations:

Papike, J.J., Spilde, M.N., Fowler, G.W., and Shearer, C.K. "Orthopyroxene as a recorder of primitive achondrite petrogenesis: Major, minor, and trace element systematics of orthopyroxene in Lodran."

Petaev, M.I. and Brearley, A.J. "Exsolution of ferromagnesian olivine in the Divnoe meteorite.

Pun, A.,* and Papike, J.J. "The Pasamonte unequilibrated eucrite: Pyroxene REE systematics and major, minor, and trace element zoning."

Scott, E.R.D., Brearley, A.J., Haack, H., and McCoy, T.J. "Catastrophic fragmentation and reassembly of the parent body of the IVA iron and stony iron meteorites."

Thiemens, M.H., Brearley, A.J., Jackson, T. and Bobias, G. "Detection of a ^{33}S excess in an oldhamite separate from Norton County."

Print only:

Papike, J.J., Fowler, G.W., and Shearer, C.K. "Orthopyroxene as a recorder of lunar crust evolution: An ion microprobe investigation of Mg-suite norites."

July 31- August 5, 1994
28th Annual Meeting of the Microbeam Analysis Society, New Orleans, Louisiana

Attended by: M. Spilde
Abstracts were published in Microbeam Analysis 1994

Oral presentations:

Spilde, M.N. "Geological applications of compositional imaging."

October 13-15, 1994.
Chondrules and the Protoplanetary Disk, Albuquerque, New Mexico

Attended by: A. Brearley, L. Bowman, L. Danielson, G. Fowler, N. Hanowski, R. Jones, G. Layne, S. Maehr, H. Newsom, J. Papike, A. Pun, M. Servilla, C. Shearer, M. Spilde
Abstracts were published in Chondrules and the Protoplanetary Disk. LPI Contribution No. 844, Lunar and Planetary Institute, Houston.

Oral presentation:

Brearley, A. "Chondrule-matrix relationships in chondritic meteorites."

Jones, R. "Relict grains in chondrules: Evidence for chondrule recycling."

Newsom, H. "Siderophile elements and metal-silicate fractionation in the Solar Nebula."

R. Jones chaired sessions, "From CAI to planets, timescales" and "Chondrule precursors."

October 22-27, 1994
Geological Society of America Fall Meeting, Seattle, Washington

Attended by: G. Fowler, J. Papike, A. Pun, M. Servilla
Abstracts were published in Abstracts with Programs

Oral presentations:

Servilla, M.S.,* and Papike, J.J. "Melt inclusions as recorders of pre-eruptive geochemical characteristics of the intracaldera Bishop Tuff: An ion and electron microprobe investigation."

Pun, A.,* and Papike, J.J. "Determination of solid-solid trace-element partition coefficients in exsolved pyroxenes using SIMS techniques."

December 5-9, 1994
American Geophysical Union, Fall Meeting, San Francisco, California

Attended by: A. Brearley, L. Danielson, W. Jaeger, R. Jones, H. Newsom, M. Servilla
Abstracts were published in EOS, Vol. 75

Oral presentation:

Brearley, A.J. and Rubie, D.C. "The spinel to modified spinel transformation in Mg_2SiO_4: The effect of temperature."

Newsom, H.E. "Siderophile element constraints on core formation: Initial abundances"

Poster presentations:

Burnley, P.C. and Brearley, A.J. "High resolution transmission electron microscopy of martensitically produced spinel lamellae in olivine."

Jaeger, W.L.,* Newsom, H.E., Maehr, S.A.,* Sims, K.W.W., and Noll, P.D., Jr. "The depletion of tungsten in the bulk silicate Earth, support for heterogeneous accretion."

Jones, R.H. "Measurement of the Fe-Mg interdiffusion coefficient in olivine using SIMS depth profiling."

Shearer, C.K., Layne, G.D., and Papike, J.J. "An ion microprobe study of chalcophile and siderophile elements in lunar picritic glasses. Constraints on the origin of lunar basalts and the nature and evolution of the lunar mantle."

Servilla, M.S.,* Wohletz, K.H., and Papike, J.J. "Numerical simulations predict different eruptive phases of the 720 Ka Bishop Tuff at Long Valley Caldera, California.

March 13-17, 1995
26th Lunar and Planetary Science Conference, Houston, Texas

Attended by: A. Brearley, L. Danielson, G. Fowler, N. Hanowski, G. Layne, R. Jones, H. Newsom, J. Papike, A. Pun, C. Shearer
Abstracts were published in Lunar and Planetary Science XXVI

Oral presentations:

Brearley, A.J., Bajt, S. and Sutton, S.R. "Distribution of moderately volatile trace elements in fine-grained chondrule rims of metamorphosed CO3 chondrites."

Brearley, A.J. and Layne, G.D. "Light lithophile element (Li, Be and B) abundances in microchondrules in CH chondrites: Insights into volatile behavior during chondrule formation."

Fowler, G.W., Shearer, C.K., and Papike, J.J. "SIMS studies of planetary cumulates: Modeling diogenite petrogenesis."

Hutcheon, I.D. and Jones, R.H. "The ^{26}Al-^{26}Mg record of chondrules: Clues to nebular chronology."

Jones, R.H. and Danielson, L.* "A chondrule origin for dusty, relict olivine grains."

Newsom, H.E. "Metal-silicate fractionation in the solar nebula."

Papike, J.J., Fowler, G.W., McCallum, I.S., and Shearer, C.K. "SIMS studies of planetary cumulates: Orthopyroxene from the Stillwater Complex, Montana. The Bronzitite/Norite transition."

Pun, A.* and Papike, J.J. "Yamato unequilibrated eucrites Y-74450, Y-793548, Y-82210, Y-74159 and Y-75011: Pyroxene trace element systematics."

Shearer, C.K., Layne, G.D., and Papike, J.J. "Origin of the Apollo 15 green glass. Evidence from Ni, Co, Mn, V, and Cr."

Poster presentation:

Danielson, L.R.* and Jones, R.H. "Experimental reduction of olivine: Constraints on formation of dusty relict olivine in chondrules."

Hanowski, N.H.* and Brearley, A.J. "Pyroxene microstructures in the equilibrated eucrite Juvinas."

Oehler, A. and Hanowski, N.* "DLR-Goniospectrophotometer abundance estimates from bi-directional reflectance measurements in the UV, VIS, and NIR."

Oehler, A. Dummel, A. Hanowski, N.,* Rebhan, H., and Neukum, G. "Spectral photometric parameters (UV, VIS, NIR) for 13 materials similar to lunar and asteroidal regoliths."

Print only:

Shearer, C.K., Papike, J.J., and Layne, G.D. "The role of ilmenite in the source region for mare basalts: Evidence from Nb and Zr in picritic glasses."

A. Brearley chaired session, "Carbonaceous chondrites."

H. Newsom chaired session, "Origins of planetary systems."

J. Papike chaired session, "Planetary Interior Processes."

May 24-26, 1995
V.M. Goldschmidt Conference, University Park, Pennsylvania

Attended by: H. Newsom, C. Shearer
Abstracts were published in V.M. Goldschmidt Conference Program and Abstracts (1995) The Geochemical Society.

Oral presentations:

Newsom, H.E., Jaeger, W.L., and Maehr, S.A. "The abundance of W in the bulk silicate earth: Constraints on core formation."

H. Newsom chaired session, "Geochemistry of core formation in the earth."

May 30 - June 2, 1995
American Geophysical Union, Spring Meeting, Baltimore, Maryland

Attended by: G. Layne, C. Shearer
Abstracts were published in EOS, Vol. 76

Poster presentation:

Layne, G.D., Charland, A. and Stix, J. "Melt inclusion evidence for small shallow magma chambers and open system volatile loss from modern eruptions of Nevado del Ruiz, Columbia."

Other professional travel by IOM Personnel:

September 6, 1995. Los Alamos National Laboratories. C. Shearer

September 15-16, 1995. Los Alamos National Laboratories to discuss possible collaborations with Mexican scientists. J. Papike and C. Shearer

October 15-16, 1995. CAPTEM meeting. Albuquerque, NM. H. Newsom

October 23, 1995. Mineralogical Society of America council meeting. Seattle, WA. J. Papike

October 27-31, 1994. Yucca Mountain research. Las Vegas, NV. C. Shearer

October 31, 1994. 6th Annual Joint Meeting of the New Mexico Section of the Materials Research Society and American Ceramics Society. Albuquerque, New Mexico. N. Hanowski

January 11, 1995 and February 15, 1995 Los Alamos National Laboratories to conduct research on Yucca Mountain. C. Shearer

March 12, 1995. Planetary Materials and Geochemistry, Management Operations Working Group. Houston, TX. R. Jones

March 11-12, 1995. CAPTEM meeting. Houston, TX. H. Newsom

April 18-21, 1995. WERC DOE Conference. Las Cruces, NM. C. Shearer

April 27-30, 1995. CNRS Centre de Recherche sur la Synthèse et Chemie de Minéraux, Orleans, France to serve on Ph.D. examination committee of Tahar Hammouda, Ph.D. Candidate at the University of Orleans. A. Brearley

May 1-25, 1995. Bayerisches Geoinstitut, to carry out high pressure experiments using the multianvil press. Bayreuth, Germany. A. Brearley

May 10-12, 1995. Bayerisches Geoinstitut, Bayreuth, Germany. R. Jones

May 15-16, 1995. Institute for Geophysics and Planetary Physics Panel Meeting, Los Alamos National Laboratories. J. Papike

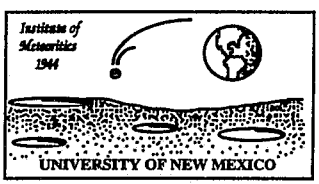
May 22-23, 1995. Hart Symposium, Woods Hole Oceanographic Institution. Woods Hole, MA. G. Layne

May 27-29, 1995. Mineralogical Society of America Council Meeting. Baltimore, MD. J. Papike and C. Shearer

June 5-7, 1995. Lunar and Planetary Institute for Lunar and Planetary Geosciences Review Panel Group Chiefs' Meeting. Houston, TX. J. Papike

SECTION II

FACILITIES



II. FACILITIES

1. Curation and Meteorite Museum

The Meteorite Museum has continued to be a major, popular attraction on campus for many school parties and tourists alike. During the year, several elementary and high schools from Albuquerque, as well as elsewhere in the state, arranged guided visits to the Museum, emphasizing the important educational role of the Museum for the local community. We again contributed a successful exhibit to the Albuquerque Gem and Mineral Show, March 4-5, 1995, on the theme of meteorite impacts and related materials.

During the year, our efforts to expand the computer database of the Institute's meteorite collection have continued with the addition of new information about individual samples and meteorites. This work has largely been carried out by Ken Nichols and Malinda Stanley, under the supervision of Adrian Brearley.

The importance of the Institute's collection to the scientific study of meteorites is underscored by the fact that we have been very active loaning and providing samples for analysis to investigators worldwide. This year over 17 samples and thin sections from the collection were loaned to 11 qualified investigators in the US, Australia and Japan. In addition, research in the Institute continues to make extensive use of samples from the collection.

We have been fortunate to obtain samples of 7 new meteorites which were not previously represented in the Institute's collection. Several of these samples have been purchased with Institute funds and public donations to the museum. Our most notable addition is a 31 kg end piece of Tres Costillos, an iron meteorite from Mexico, which has a spectacular cut and etched surface showing a well-developed Widmanstätten texture. We plan to display this piece in the Museum in the near future. With the addition of these new samples, the Institute's collection now contains samples of 561 meteorite falls and finds from around the world. As part of our curation efforts we have also been involved in the classification of 4 new meteorite samples which have been donated to us by private individuals.

2. Experimental Petrology Laboratory

The experimental petrology laboratory was expanded this year to include a second high-temperature furnace. The new furnace, a Deltech vertical muffle tube furnace, was purchased with NASA funds. Both this furnace and the older, Astro, furnace have gas-mixing capabilities and programmable temperature control, and are operational up to 1600°C. Several different types of experiments are being conducted, including 1) an investigation of pyroxene microstructures formed at different controlled cooling rates, and during various annealing conditions, 2) measurement of diffusion coefficients, 3) a kinetic study of olivine reduction reactions.

3. ICP/MS Laboratory

The ability to rapidly and precisely measure trace elements in sub-parts per billion concentrations is required in solving a wide range of environmental, petrogenetic, metallogenic and geochemical problems. For example, the analysis of "heavy metals" (e.g., As, Pb, Cu, Cd, Sb, Ag, Hg, Zn) in water/waste is critical to many environmental impact evaluations (e.g., ground water contamination). The same set of elements in planetary materials provides essential clues to early processes in the Earth and terrestrial planets, such as planetary accretion and core formation. In response to this need, geochemists have shown considerable interest in developing inductively coupled plasma-mass spectrometry (ICP-MS) for the environmental and geological sciences. ICP-MS is a relatively new and promising analytical technique for multi-trace element and isotopic analysis. The technique combines an inductively coupled argon plasma generating ions at 8000 K and a quadrupole mass analyzer for ion detection. The main advantages of ICP-MS as a method for geochemical analysis are its multi-element (and isotopic) capability, sensitivity, and speed at a reasonable cost. It is possible to routinely determine 33 elements spanning the realm of geochemical behavior with detection limits to .001 mg/ml.

The Institute of Meteoritics operates a VG Plasma Quad PQ2 ICP/MS. An analytical methods course in ICP-MS is offered to undergraduate and graduate students interested in using trace element techniques in solving geologic problems. This course has helped undergraduate students gain acceptance into graduate school and graduates find employment. The laboratory has developed analytical procedures for the analysis of most stable elements in the periodic table in a wide range of analytical matrices.

Current and projected use of the laboratory for trace element analysis include faculty, staff and students from the Institute of Metoeritics, Department of Earth and Planetary Sciences, Department of Chemistry, and Department of Civil Engineering at UNM. A total of 15 students (undergraduate and graduate) within the Department of Earth and Planetary Sciences used the ICP-MS facility as part of their research interests. This involved eight faculty and staff in the department. Analyses were also carried out for the following off-campus projects:

David Vaniman and Grant Heiken, Yucca Mountain trace element characterization of minerals (Los Alamos National Laboratories)
E. Peterson, Super-conductor analysis (Los Alamos National Laboratories)
Fluid flow studies (Sandia National Laboratories)
Soil contamination studies (Sandia National Laboratories)
Groundwater contamination (Jacobs Engineering, Albuquerque)
G.C. Ulmer, Analytics of carbonates for REE (Temple University)

4. Electron Microprobe and Scanning Electron Microscope Laboratories

The Electron Microprobe laboratory houses a JEOL JXA-733 Superprobe equipped with 5 wavelength dispersive spectrometers, an energy dispersive spectrometer (EDS), and an Oxford/Link eXL II X-ray analytical system, which also controls the spectrometers and multi-sample stage to provide automated operation. The Scanning Electron Microscope (SEM) laboratory contains an Hitachi S450 SEM with a Tracor Northern TN2000 EDS analytical system.

Both the electron microprobe and the SEM are used by faculty, research staff and graduate students within the Department of Earth and Planetary Sciences and the Institute of Meteoritics. New users are normally required to complete the microprobe class (EPS 518), which is offered in alternating years, or a Problems Class (EPS 551 or 552). The microprobe currently has 17 trained Departmental and IOM users and one from NM Tech. The SEM has 20 trained users from UNM, NM Tech, and Sandia and 1 trained corporate user.

The SEM and Microprobe Laboratories were used by the following out-of-department individuals, with training and supervision by IOM personnel:

M. Cather, Petroleum Recovery Research Center, NM Tech (SEM)
N. Creager, Department of Anthropology, UNM (SEM)

M. Cather, Petroleum Recovery Research Center, NM Tech (SEM)
N. Creager, Department of Anthropology, UNM (SEM)
N. Dunbar, Department of Geoscience, NM Tech (SEM)
D. Ennis, Department of Geoscience, NM Tech (SEM)
L. Goodwin, Department of Geoscience, NM Tech (Microprobe)
L. Munk, Soil and Water West, Inc., Albuquerque, New Mexico (SEM)
J. Sigda, Department of Geoscience, NM Tech (SEM)
C. Stein, Sandia National Labs (SEM)

Analytical work is routinely performed by IOM personnel for Department faculty, research staff and students. In addition, analyses are regularly conducted for UNM departments, NM Tech students and faculty, Sandia National Laboratories, and for private corporations, both in and out of state. Analyses were conducted for the following out-of-Department requests:

L. Barker, KOAT TV, Albuquerque, NM (SEM)
J. Beckner, Department of Geoscience, NM Tech (Microprobe)
Camp, Bresser and McKee, Albuquerque, NM (Microprobe)
Doug Czor, Albuquerque, NM (Microprobe)
N. Creager, Department of Anthropology, UNM (Microprobe)
R. Estes, Department of Anthropology, UNM (Microprobe)
J. Garvey, Department of Chemical Engineering, UNM (Microprobe)
J. Jia, Department of Material Engineering, NM Tech (SEM)
Hecla Mining Company, Coeur D'Alene, ID (Microprobe)
C. Kraneberg, Center for High Tech Materials, UNM (Microprobe)
J. Martinez, Physical Plant, UNM (SEM)
W. Moats, NM State Department of Environment, Albuquerque (Microprobe)
T. Moore, New Mexico Engineering Research Institute, UNM (SEM)
P. Mozley, Department of Geoscience, NM Tech (Microprobe & SEM)
M. Nyman, Department of Chemical Engineering, UNM (Microprobe)
G. Peake, Center for High Tech Materials, UNM (SEM)
Solv-Ex Corp., Albuquerque, NM (SEM)
J. Sullivan, Department of Geoscience, NM Tech (Microprobe & SEM)

5. The UNM/SNL Ion Microprobe Laboratory

A CAMECA IMS 4f Secondary Ion Mass Spectrometer (SIMS), originally purchased by Sandia National Laboratories (SNL) in 1989 at a cost of $1.2M, was relocated from SNL to the Advanced Materials Laboratory on UNM South Campus on June 25, 1992. This instrument is now jointly operated by IOM and SNL Department 1823 (Surface and Molecular Spectroscopy and Gas Analysis) as the UNM/SNL Ion Microprobe Facility. Graham Layne serves as Manager of this joint venture. IOM Research Associate Grant Fowler joined the Facility in July 1994 as an operator/analyst.

II. FACILITIES

Since mid-1993 the Facility has been funded as an open user facility by the NSF Division of Earth Sciences (Facilities and Instrumentation Program). This funding has recently been renewed, at an increased level, for the period extending until June 1997.

Pursuant to our NSF funding arrangements, we continued to provide 2/3 of our available operational hours (2 days/week) to NSF-funded geoscience projects, with the balance (1 day/week) largely devoted to Institute of Meteoritics research. An additional 12 days was allotted to cooperative geochemical research with colleagues at Los Alamos National Laboratory.

External Users of the Facility July 1, 1994 - June 30,1995

D. London, J.Icenhower; University of Oklahoma.
B. Dutrow; Louisiana State University.
L.A. Taylor, G. Snyder, J. Mitchell; University of Tennessee.
J. Ayers, S. Dittmer; Vanderbilt University.
I.S. McCallum; University of Washington.
D. Hickmott; Los Alamos National Laboratory.
J.Beget; University of Alaska.
T. Sisson, US Geological Survey.

Internal Users of the Facility July 1, 1994 - June 30,1995

R. Ewing/J Janeczek; Earth and Planetary Science.
A.Brearley, R. Jones, C.Shearer, J.Papike, A. Pun, R. Denniston, M. Servilla; IOM.

SECTION III

TEACHING

III. TEACHING

1. Courses Taught

Fall 1994

EPS 101 "Physical Geology" Taught by A. Pun.

EPS 265 "Exploring the Solar System" Taught by J. Papike.
Guest lectures by A. Brearley, G. Fowler, N. Hanowski, R. Jones, S. Maehr, H. Newsom, C. Shearer and M. Spilde.

EPS 301 "Introduction to Mineralogy and Materials Science" Taught by R. Ewing
Guest lectures by A. Brearley, R. Jones, J. Papike.

EPS 303 "Igneous and Metamorphic Petrology" Taught by A. Kudo and M. Nyman
Guest lecture by A. Brearley.

EPS 311L "Mineralogy I" Taught by C. Klein. Guest lecture by J. Papike.

EPS 551 "Problems: Microprobe Analysis" (for N. Hanowski). Taught by A. Brearley and M. Spilde.

Spring 1995

EPS 105 "Physical Geology Lab" Taught by A. Pun.

EPS 487 "Advanced Mineralogy" Taught by J. Papike.

EPS 493 "Independent Study" (for Lisa Danielson) Taught by R. Jones.

EPS 495 "Senior Thesis" (for Lisa Danielson) Taught by R. Jones.

EPS 517L "Instrumental Methods in Geochemistry (Application of Inductively Coupled Mass Spectrometry for solving Geological Problems)" Taught by C. Shearer.
Guest Lecture by H. Newsom.

2. Spring IOM Research Seminar Series

January 23 J. Connolly
An introduction to the internet.

January 30 A. Brearley
Some musings on the relationships between chondrules and matrix in chondritic meteorites.

February 6 G. Fowler
Modeling petrogenesis of the HED parent body.

February 13 R. Jones
^{26}Al, plagioclase-bearing chondrules, and the solar nebula.

February 20 G. Layne
What do silicic magma chambers look like?

February 27 H. Newsom
Tungsten in the solar nebula and the Earth.

March 6 J. Papike
Planetary Cumulates.

March 27 C. Shearer
Melt immiscibility: A significant or trivial mechanism to form granites in the lunar crust?

April 3 M. Spilde
Cautionary tales from the low end of the spectrum.

April 10 N. Hanowski
Goniospectrophotometric analyses of planetary surface analogues.

April 17 L. Bowman
Diogenite modes/chromites.

April 24 M. Servilla
Characterization of melt inclusions in the Bishop Tuff.

3. Student Committees

Graduate Student Advisement

Student	Committee	IOM Committee Members
Deborah Bergfeld	Ph.D.	J. Papike

Laurie Bowman	M.S.	J. Papike (Advisor)
Charles Bryan	Ph.D.	J. Papike
Tracy Cascadden	Ph.D.	J. Papike
Rhawn Denniston	M.S.	C. Shearer (Advisor)
Nicolaus Hanowski	Ph.D.	A. Brearley (Advisor) J. Papike
Jim Karner	M.S.	J. Papike
Stephanie Maehr	M.S.	H. Newsom (Advisor)
Peter McCarville	M.S.	H. Newsom C. Shearer
Al Meldrum	Ph.D.	J. Papike
Jane Pedrick	Ph.D.	A. Brearley, J. Papike
Aurora Pun	Ph.D.	J. Papike (Advisor), C. Shearer
Mark Servilla	Ph.D.	J. Papike (Advisor), C. Shearer
Karen Shaffran	M.S.	J. Papike
Shixin Wang	Ph.D.	J. Papike

Undergraduate Student Advisement

Lisa Danielson	R. Jones (Advisor)
Charles Hibbitts	H. Newsom (Advisor)
Windy Jaeger	H. Newsom (Advisor)
Heather Weigel	H. Newsom (Advisor)
Malinda Stanley	R. Jones (Advisor)

4. Progress of Earth and Planetary Sciences Department Graduate Students Supported by IOM

Laurie Bowman joined IOM as an M.S. student in the fall of 1994. She received her B.S. in Earth and Planetary Sciences from the University of New Mexico in the summer of 1994. Her continuing research involves modal analysis of achondrites

under the direction of Dr. J. Papike. She worked as a lab assistant in the microprobe lab under the direction of M. Spilde. Laurie plans to graduate in the spring of 1996.

Rhawn Denniston completed his M.S. degree (Spring, 1995) on cathodoluminescence, electron microprobe, and SIMS analysis of calcites from Yucca Mountain, Nevada. His completed thesis is entitled "Trace and Minor Element Distributions in Fracture Calcite from Yucca Mountain, Nevada: Reconstructing Calcite Growth Histories." He is preparing two papers from this thesis. He was funded under AWU and WERC research grants. Rhawn is entering the Ph.D. program in geology at the University of Iowa in fall 1995.

Nicolaus Hanowski studied physics and geology as an undergraduate at the University of Munich and taught astromony and planetary science for the adult education program, Munich. At the same time he was running a sales business for astronomical instruments and equipment. A one-year research project in spectroscopy followed at the German Space Research Establishment (DLR), Berlin, Nicolaus received his masters degree (diploma) in geology from the University of Munich in 1994 and joined IOM in August 1994 as a research assistant on a NASA grant. He has entered the Ph.D. program and is carrying out research on the thermal history of the eucritic meteorite, Juvinas, and aqueous alteration processes in CM chondrites.

Stephanie Maehr joined IOM as an M.S. student in the spring of 1994. She successfully defended her master's thesis proposal in November of 1994. Her research involves examining the geochemistry of Pb, As, and Sb with respect to B, Be, ^{10}Be, Ba, Zr, Hf, and Rb in arc lavas from volcanoes located on both sides of the Quesado Sharp Contortion in Costa Rica. Her assistanship from the Institute of Geophysics and Planetary Physics has been renewed for a third year. This assistantship involves developing sample preparation and analysis techniques for the determination of trace amounts of Mo and W in terrestrial and possibly in lunar basalts.

Aurora Pun is near completion of her doctorate degree. She has carried out a SIMS study on the major mineral phases of cumulate eucrites and unequilibrated eucrites. Her dissertation is entitled, "Major-, minor-, and trace-element studies of pyroxenes and feldspars from eucrites." She has received numerous awards during her graduate program with the most recent scholarship award from the Department of Earth and Planetary Science Alumni Association.

Mark Servilla is continuing to make progress toward completion of his Ph.D. with hopes of defending his research during the fall of 1995. He has completed his interpretation of melt geochemistry obtained from electron and ion microprobe analyses of glass inclusions from the intracaldera Bishop Tuff, and has completed a first manuscript draft that will be submitted for publication early fall 1995 based on this information. In addition, Mark is currently interpreting numerical simulations of the caldera forming eruption of the Bishop Tuff and will soon begin another manuscript describing the simulation results.

SECTION IV

DEPARTMENTAL AND UNIVERSITY ACTIVITIES

IV. DEPARTMENTAL AND UNIVERSITY ACTIVITIES

A. Brearley

Curator of the Meteorite Museum and Collection

Member, Department of Earth and Planetary Sciences and Institute of Meteoritics Facilities Committee

Member, Local Organizing Committee, Conference on Chondrules and the Protoplanetary Disk and Institute of Meteoritics 50th Anniversary Celebrations

J. Connolly

Member, Departmental Computer Use Committee

Acting Manager, Departmental Local Area Network

N. Hanowski

Organized a meteorite hunt to Valencia County in June 1995

R. Jones

Manager of Experimental Petrology Laboratory

Assistant Curator of Meteorite Collection

Member of Chemical Hygiene Committee, Department of Earth and Planetary Sciences

Co-editor of 1993-1994 IOM Annual Report

Chair, Local Organizing Committee, Conference on Chondrules and the Protoplanetary Disk and Institute of Meteoritics 50th Anniversary Celebrations

Presented Earth and Planetary Sciences, Brown Bag Seminar. "Diffusion in olivine." November 16, 1994

G. Layne

Manager, UNM/SNL Ion Microprobe Facility, Advanced Materials Laboratory

S. Maehr

Presented Earth and Planetary Sciences, Brown Bag Seminar. "The wonders of ^{10}Be." May 10, 1995

IV. DEPARTMENTAL AND UNIVERSITY ACTIVITIES

H. Newsom

Radiation Safety Permit Holder from University of New Mexico Occupational Safety Department. Facilitated transfer of radioactive materials for several department personnel.

Member, Local Organizing Committee, Conference on Chondrules and the Protoplanetary Disk and Institute of Meteoritics 50th Anniversary Celebrations

J. Papike

Director of IOM

Chair of Earth and Planetary Sciences Facilities Committee

Member, Department of Earth and Planetary Sciences Graduate Student Committee

Member, Faculty Senate Research Advisory Committee

Member, Review Team for Maxwell Museum

Member, Local Organizing Committee, Conference on Chondrules and the Protoplanetary Disk and Institute of Meteoritics 50th Anniversary Celebrations

Lectured on "Evolution of the Moon" to UNM Geology Club, February 20, 1995

A. Pun

Presented Earth and Planetary Sciences, Brown Bag Seminar. "Determination of solid-solid trace-element partition coefficients between high- and low-Ca proxenes." April 26, 1995

C. Shearer

Manager, ICP-MS Laboratory

SRA Representative to Faculty Meetings, Fall 1994

M. Spilde

Manager, Electron Microprobe and Scanning Electron Microscope Labs

Member, Department of Earth and Planetary Sciences Computer Committee

Conducted Microprobe and SEM lab tours and demonstrations for Anthropology 570 class on November 3, 1994

Presented Earth and Planetary Sciences, Brown Bag Seminar. "The brown bag Mac: Networking with your Mac" April 12, 1995

Vistors to IOM

The following visitors attended the conference, "Chondrules and the Protoplanetary Disk." October 13-15, 1994

C. Alexander, Carnegie Institution of Washington; R. Ash, University of Manchester, U.K.; N. Bashir, California Institute of Technology; J. Benit, IAS Orsay, France; A. Boss, DTM-Carnegie Institution of Washington; T. Bunch, NASA Ames Research Center; P. Cassen, NASA Ames Research Center; B. Choi, University of California, Los Angeles; H. Connolly, Rutgers University; G. Crozaz, Washington University; J. Cuzzi, NASA Ames Research Center; A. Davis, University of Chicago; T. Dickinson, NASA Goddard Space Flight Center; N. Eberz; S. Enticknap, Lunar and Planetary Institute; T. Fujita, Kyote University, Japan; S. Gibbard, University of Arizona; J. Greenwood, Brown University; J. Grossman, U.S. Geological Survey; L. Hartmann, Smithsonian Astrophysical Observatory; G. Herzog, Rutgers University; R. Hewins, Rutgers University; L. Hood, University of Arizona; M. Horanyi, University of Colorado; S. Huang, University of Arkansas; W. Huebner, NASA Headquarters; G. Huss, California Institute of Technology; R. Hutchison, Natural History Museum London, U.K.; L. Johnson, Rutgers University; K. Keil, University of Hawaii; C. KenKnight; D. Kring, University of Arizona; A. Krot, University of Hawaii; E. Levy, University of Arizona; K. Liffman, Melbourne University, Australia; D. Lindstrom, NASA Johnson Space Center; G. Lofgren, NASA Johnson Space Center; S. Love, University of Hawaii; G. Lugmair, University of California, San Diego; G. MacPherson, Smithsonian Institution; S. Maharaj, Rutgers University; E. Mardon, Antarctic Institute of Canada; G. McKay, NASA Johnson Space Center; K. Metzler, Museum fur Naturkunde, Germany; K Misawa, Kobe University, Japan; H. Nagahara, University of Tokyo, Japan; D. Nava, NASA Goddard Space Flight Center; L. Nyquist, NASA Johnson Space Center; H. Palme, Universitat zu Koln, Germany; J. Paque, NASA Ames Research Center; S. Peale, University of California; M. Petaev, Harvard-Smithsonian Institution; M. Prinz, American Museum of Natural History; A. Rubin, University of California; S. Russell, California Institute of Technology; A. Ruzicka, University of Arizona; T. Ruzmaikina, University of Arizona; I. Sanders, Trinity College, Ireland; E. Scott, University of Hawaii; D. Sears; University of Arkansas; L. Simmons, Lunar and Planetary Institute; W. Skinner; Oberlin College; T. Swindle, University of Arizona; M. Thiemens, University of California, San Diego; A. Tsuchiyama, Osaka University, Japan; F. Ulff-Moller, University of Odense, Denmark; J. Wang, University of Chicago; J. Wasson, University of California, Los Angeles; T. Wdowiak, University of Alabama, Birmingham; S. Weinbruch, Technische Hochschule Darmstadt, Germany; M. Weisberg, American Museum of Natural History, New York; G. Wetherill, DTM-Carnegie Institution of Washington; J. Wood, Harvard-Smithsonian Institution; D. Woolum, California State University; Y. Yu, Rutgers University; B. Zanda, Museum National d'Histoire Naturelle, France; Y. Zhang, University of Arkansas.

In addition to conference attendees, the following attended the IOM 50th anniversary banquet

Y. Asmerom, P. Burkett, C. Chocas, M. and K. Coleman, J. Connolly, S. Coulie, R. Cowan, W. and L. Elston, A. Feig, C. and B. Floran, L. Gathercole, E. Gauerke, B. Hance, G. Heiken, P. Hlava, M. Hutchison, L. Keil, L. Keller, L. and W. Killiam, A. Kudo, B. and G. Kues, W. Lance, R. Macy, P. Maggiore, M. Marchand, L. and M. Mazzullo, N. Melvin, J. Newsom, C. Nyquist, P. Papike, D. Rubin, T. Servilla, P.

Shearer, G. Smith, K. Sorbig, M. Stanley, D. Taylor, G. Trujillo, P. Warren, G. Wasson.

Other Visitors throughout the year

Visitors to IOM during the period of this report included:

Dr. Pam Burnley, University of Colorado to use high resolution TEM in collaboration with A. Brearley. July 21-22, 1994.

Dr. Bruce Bohor, U.S.G.S. Denver, CO, to see J. Papike concerning adjunct professorship. August 5, 1994.

Dr. Larry Taylor, University of Tennessee to discuss research with J Papike. October 13, 1994.

Dr. Anne Charland (Ph.D. Universite de Monteal, 1994) was a visiting postdoctoral fellow from September through December 1994. She worked primarily with Graham Layne on an ion microprobe study of the volatile and sulfur isotope geochemistry of the Nevado del Ruiz volcano in Columbia.

Dr. Sue Kieffer, University of British Columbia, Departmental visit hosted by J. Papike. January 26, 1995.

Dr. William Leeman, Rice University, Departmental visit hosted by H. Newsom. February 5-9, 1995.

Dr. Nelia Dunbar, New Mexico Tech to see M. Servilla about his thesis work. Socorro, NM. March 30, 1995.

Dr. Richard Walker, University of Maryland, to give a departmental seminar, visit our laboratories, and discuss collaborative research with J. Papike. April 26-29, 1995.

Dr. William Phinney (NASA Consultant) to review former astronaut Jack Schmitt's records and visit J. Papike. May 1-2, 1995.

Dr. R. Spalding, (Sandia National Laboratories) and participants in Meteor and Meteorite Trajectory Workshop. Visited R. Jones, toured Meteorite Museum. May 19, 1995.

SECTION V

PROFESSIONAL ACTIVITIES

V. PROFESSIONAL ACTIVITIES

Adrian Brearley

Associate Editor, American Mineralogist (1994-1997)

Group Chief, Petrology and Mineralogy Group, NASA Lunar and Planetary Geosciences Review Panel, Planetary Materials and Geochemistry Program (1994)

Acted as abstractor for Mineralogical Abstracts, abstracted papers from Analytical Chemistry

Jim Connolly

Active participant in Yucca Mountain Project Strategic Planning at Sandia National Laboratories, 1994-1995

Rhian Jones

Acted as abstractor for Mineralogical Abstracts, abstracted papers from Meteoritics

Associate Editor of the journal "Meteoritics"

Member of Planetary Materials and Geochemistry, Management Operations Working Group (1993-1995)

Member, organizing committee, "Chondrules and the Protoplanetary Disk," Albuquerque, October 1994. Local organizing chair

Member of Judges Panel, 1995 Dwornik Student Paper Awards, at Lunar and Planetary Science Conference, March 1995

Horton Newsom

Associate Editor for the international geochemistry journal Geochimica et Cosmochimica Acta

Member of NASA committee: Curation and Analysis Planning Team for Extraterrestrial Materials (CAPTEM)

Member, New Mexico Space Grant Faculty Advisory Board

Jim Papike

Member of the Advisory Committee for the Institute of Geophysics and Planetary Physics (IGPP), Los Alamos National Laboratory, 1991-1996

Vice-President, Mineralogical Society of America, 1994

President, Mineralogical Society of America, 1995

V. PROFESSIONAL ACTIVITIES

Coordinator, Mineralogical Society of America, Planetary Materials Interest Group

Group Chief, NASA Lunar and Planetary Geoscience Review Panel (LPGRP) 1995

Charles Shearer

Member, Chicxulub Working Group

Mineralogical Society of America Representative to American Geological Institute

In addition to the activities listed above, members of IOM acted as reviewers of numerous manuscripts submitted to international journals and proposals submitted to federal funding agencies.

SECTION VI

EDUCATIONAL OUTREACH

AND

PUBLIC SERVICE

VI. EDUCATIONAL OUTREACH AND PUBLIC SERVICE

1. Meteorite Museum

The Meteorite Museum is the most important focus of IOM's educational outreach. Several thousand people of all ages visit the Museum each year and many school parties visit the Museum to enhance scientific projects in Earth Sciences and Solar System studies. IOM personnel commonly volunteer to give guided tours of the Museum and laboratories to groups of visiting students. During the period of this report, groups that have been given tours include Bosque Farms Senior Citizens Gem and Mineral Club, Boy and Girl Scout Troups, Susie-Rayos-Marmon Elementary School, Tomasita Elementary School, Hubert Humphrey Elementary School, Association of Non-Traditional Students, Jefferson Middle School, Albuquerque Academy, Sandia Prep, and Albuquerque Gem and Mineral Club Juniors. Several members of IOM have also visited schools in the area to give talks on various aspects of planetary sciences. Considerable interest was generated by a display of impact-related materials set up by IOM at the Albuquerque Gem and Mineral Club show, March 4-5, 1995. We also set up exhibits at the Albuquerque Intergalactic Reception, (as part of the City of Albuquerque Summerfest Series) on August 27, 1994, and for Astronomy Day at the Coronado Center, April 29, 1995. In addition to the public education provided by the Museum, we are routinely consulted by members of the public to help identify suspect meteorites and to provide information on meteorites and associated phenomena. We have met and corresponded with numerous people from all over the world in providing this service.

In the past year, we have begun development of two new educational outreach programs under the direction of Dr. Horton Newsom. These programs take advantage of the resources of the Institute of Meteoritics, including the research staff and the Meteorite Museum. NM TOPPS, the New Mexico Teacher Outreach Program for Planetary Science, is designed to provide training for primary and secondary school teachers in a planetary science curriculum. Funding is being sought for this program from the National Science Foundation. The NM HOTSS program is a concept for Hands On The Solar System, an enrichment demonstration and lecture program for visitors to the Meteorite Museum and possible future resource center. The audience for this program includes primary, secondary and undergraduate level groups. A related

educational initiative is development of a guide and exercise manual for school groups who visit the Meteorite Museum. The guide is being prepared by an undergraduate, Malinda Stanley, supported by funding from the Research Experiences for Undergraduates program of the National Science Foundation under the supervision of Dr. Rhian Jones. These programs will provide a closer connection in the future between the state's precollege and undergraduate science and education and IOM.

2. Public Service

Adrian Brearley

- Devised, organized and set up meteorite display for Albuquerque Gem and Mineral Club Show, March 4-6, 1995
- Identified numerous suspect meteorites and provided information on meteorites for members of the public from both within and outside New Mexico
- Organized and setup exhibit for the Intergalactic Reception, City of Albuquerque Summerfest, 27th August, 1994

Jim Connolly

- Acted as Special Award Judge (for Albuquerque Geological Society) for Northwestern Regional Science and Engineering Fair, Albuquerque, New Mexico, March 17, 1995
- UNM Elderhostel "Albuquerque-City in a Rift" January 30 - February 2 and April 3-6, 1995
- Gave numerous introductory talks on Geology to elementary and secondary school students attending YWCA Science/Environment Camp program at Pinyon Camp, Tijeras, New Mexico. September through November, 1994 and March through May, 1995
- UNM Elderhostel "Red Rocks, Canyons and Mesas - The Unique Colorado Plateau" June 12-15, 1995

Nicholas Hanowski

- Gave informal presentation "Meteorites" to Albuquerque Astronomical Society in April 1995

Rhian Jones

- Assisted with exhibit at Albuquerque Gem and Mineral Club Show, March 4-5, 1995

VI. EDUCATIONAL OUTREACH AND PUBLIC SERVICE

- Numerous meetings with members of public to identify suspect meteorites and replies to requests for information about meteorites

- Organized IOM exhibit at the Albuquerque Intergalactic Reception, City of Albuquerque Summerfest, August 27, 1994

Horton Newsom

- Lectured on "Impact craters around the world" to Albuquerque Gem and Mineral Club, July 25, 1994

- Lectured on "Exploration of Mars" to Albuquerque Exchange Club, August 24, 1994

- Assisted with exhibit at the Albuquerque Intergalactic Reception, City of Albuquerque Summerfest, August 27, 1994

- Lectured on "Exploration of Mars" to Albuquerque Chapter of the National Space Society, October 28, 1994

- Set Up and Attended IOM presentation for Astromony Day at Coronado Mall, April 29, 1995

Jim Papike

- Lectured on "Evolution of the Moon" to Albuquerque Gem and Mineral Club, June 26, 1995

Aurora Pun

- Assisted Earth and Planetary Sciences museum curator with mineral exibits at the Gem and Mineral show in Tucson, AZ. February 1995

Mark Servilla

- Taught "Basic Life Support/CPR" to Department of Earth and Planetary Sciences staff August 1994

Chip Shearer

- Presented lectures about the Moon at Albuquerque Academy

- Led field trips for Sandia Prep and Albuquerque Public Schools

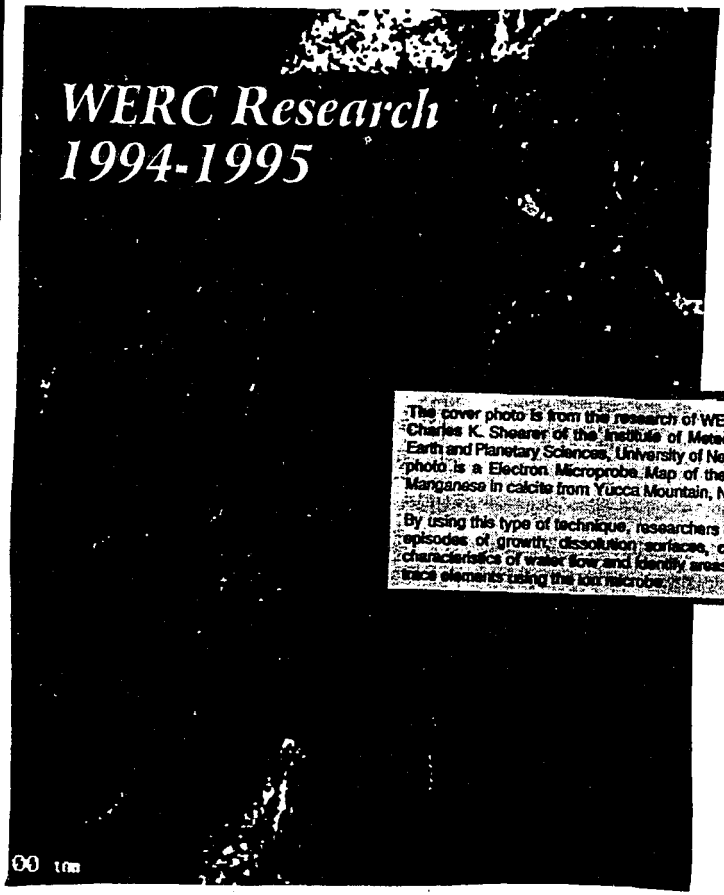
VI. EDUCATIONAL OUTREACH AND PUBLIC SERVICE

Mike Spilde

- Served on Board of Directors of the Albuquerque Gem and Mineral Club, 1994
- Co-Vice President of Programs, Albuquerque Gem and Mineral Club, 1994
- Served as Displays and Programs Chairman for the 26th Annual Mineral Show, Albuquerque Gem and Mineral Club, March 1995

APPENDIX

PUBLICITY



The cover photo is from the research of WERC investigator Charles K. Shearer of the Institute of Meteoritics, Dept. of Earth and Planetary Sciences, University of New Mexico. The photo is a Electron Microprobe Map of the distribution of Manganese in calcite from Yucca Mountain, NV.

By using this type of technique, researchers can distinguish episodes of growth, dissolution surfaces, changes in the characteristics of water flow and, finally, areas to analyze for trace elements using the ion microbe.

Left:
Waste-management Education &
Research Consortium Handbook

Below:
Albuquerque Journal
Tuesday, January 17, 1995

UNM Institute Cracks Secrets of Meteors

By Nancy Tipton
JOURNAL STAFF WRITER

When you're in the business of studying moon rocks, it's tempting to be nostalgic for the '60s.

"We didn't know it at the time, but those were the glory days," says James Papike, director of the Institute of Meteoritics at the University of New Mexico. "Everyone had money."

Papike, however, isn't living in the past.

He and his small group of mineralogists, petrologists, and geochemists are doing what the institute has done for a half-century — studying all the planetary material they can get their hands on.

Papike says he's got the material, the scientific talent and the cutting-edge equipment to keep his staff busy for some time to come.

And while the '90s are much leaner than the '60s and '70s for those seeking money to do such research, Papike says that UNM's institute has built an excellent reputation and has positioned itself to be able to continue the work started by Lincoln LaPaz in 1944.

The Institute of Meteoritics was the first organization of its kind to be devoted exclusively to research on meteorites. LaPaz made it his mission for the institute to become the repository for as many meteors as possible.

He not only encouraged citizens to bring in anything they thought might be a meteor, but he also spent many hours on horseback scouring the countryside for meteors.

Today, the institute has the fifth largest collection of meteors in the United States, including samples from 90 locations in New Mexico and a one-ton boulder found in Kansas in 1948. At the time, the Norton County meteor was the largest known in the world.

In the '60s, Klaus Keil, a young UNM geologist, applied for and received samples of moon rocks to be studied at the institute.

Papike, who was affiliated with the National Aeronautics and Space Administration as a consultant who helped train and debrief astronauts, helped select Apollo study sites and prioritize astronaut activities on the moon, still has a stash of the moon rocks for future study.

"It was very exciting to be part of that great adventure," he said of the U.S. mission to the moon.

Jim Papike is director of the Institute of Meteoritics at the University of New Mexico. The institute was the first organization of its kind to be devoted exclusively to research on meteorites.

ALEXANDRIA KING/JOURNAL

About the time Papike came to UNM in 1990, the institute scored another coup. Papike said that, when he interviewed for the job, he told the search committee that one of his top priorities would be to seek funding for an ion mass spectrometer.

"What I didn't know," Papike said, "is that Sandia (National Laboratories) already had one."

So Papike negotiated with Sandia officials who agreed to a cooperative program and moved the $1.5 million instrument to UNM's Advanced Materials Laboratory.

The instrument allows scientists to study planetary material in different ways than have been possible previously: studying a very small amount of material in a very focused way. For example, the growth of crystals can be studied, giving the researcher a clearer picture of how the rock was formed.

"We're looking at old samples in a whole new way," Papike said.

The scientists also have samples of meteors found in Antarctica, some of which came from the moon. Papike said the source of the meteors is known because planets have a "fingerprint" of mineral ratios.

The institute and its home department, Earth and Planetary Sciences, maintain a small museum in Northrop Hall. The museum is a favorite of school children and is open from 9 a.m.-4 p.m. Mondays through Fridays and is free.

"They get so excited," Papike says of the thousands of children who visit the museum yearly. "We have to keep them interested.

Chondrules and the Protoplanetary Disk
1994 October 13–15
Albuquerque, New Mexico, USA

Nearly 100 scientists from 9 countries gathered at the University of New Mexico in Albuquerque on October 13 to 15 to discuss various mechanisms hypothesized to have been responsible for the thermal processing experienced by chondrules and refractory inclusions in primitive meteorites. This smoothly-run meeting (thanks to the capable handling of Rhian Jones and her colleagues) was followed by a banquet celebrating the 50 years of research performed at the Institute of Meteoritics of the University of New Mexico.

The intent of the conference was to review and assess the many constraints placed by painstaking laboratory analyses and experiments on the thermal environment experienced by chondrules and Ca,Al-rich inclusions (CAIs) during their formation and processing in the early Solar System and then to learn whether these constraints could be satisfied by any of the many proposed mechanisms. In the spirit of NASA's Origin of Solar Systems Program, the program committee (ably led by Roger Hewins) insisted on an interdisciplinary forum on this thorny problem: it would not do to have meteoriticists debate these points in splendid isolation—astrophysical modelers and astronomical observers must also participate in the give and take. This goal was well met. Information flowed freely across frequently impermeable discipline boundaries, and the three days of sessions were filled with avid discussion.

The program of invited and contributed talks and posters covered the full range of topics relevant to the formation of chondrules and CAIs, including chondrule precursors, the time interval between CAI and chondrule formation, heating and cooling rates, volatile element retention, multiple heating events, astronomical studies of protostellar and protoplanetary disks analogous to our solar nebula, and of course the variety of large- and small-scale processes advanced as heating mechanisms.

In order to understand the present state of the field, as well as the evolution in thought that has occurred since the last conference on chondrules (held in 1982 at the Lunar and Planetary Institute, Houston, Texas), it is useful to compare the number of abstracts that favored a particular mechanism in 1982 with those in 1994 (Fig. 1). The leading mechanisms submitted in 1982 were a hot inner nebula and impact melts on sizeable bodies; by 1994, the idea of melting chondrules and CAIs in a hot inner nebula had been demolished by the heating and cooling rate constraints, but the impact melt hypothesis retained some support. Nebula lightning was also proposed in 1982 and again in 1994, but several 1994 abstracts offered criticisms severe enough to discourage all but the most faithful of the lightning devotees. (Fig. 1 shows the net number of abstracts favoring lightning.)

While scientific debates generally are not settled by simply taking a democratic vote, it is clear that the strong support at this year's meeting for a "flash heating" mechanism means that the heating and cooling rate constraints are foremost in deciding among competing mechanisms. "Flash heating" is not in itself specific enough to be compared fairly with other ideas such as nebula lightning, for which persuasive disproofs can be offered, but rather is largely a placeholder for whatever process we eventually will find that can heat precursors to temperatures in the range of 1700 K to 2100 K within seconds to minutes and then permit cooling below the solidus in hours to days.

Given data at two different epochs (1982 and 1994), no theorist could resist making a totally unwarranted linear extrapolation to predict what the most popular mechanism will be in 2006, when we can expect this Jupiter-period conference to return once again to Earth. Fig. 1 shows that flash heating should be the far and away winner. One can also make the geographical extrapolation that the 2006 conference will be held close to Reno, Nevada, though this linear prediction is based on a map from a 1965 Rand McNally Road Atlas rather than a great circle continuation on a globe (a prudent theorist soon learns to insert cautionary caveats).

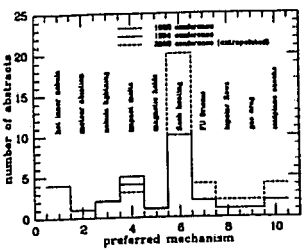


FIG. 1. Histogram showing the number of abstracts from the 1982 and 1994 meetings that favorably mentioned a mechanism for heating chondrule precursors, and a forward extrapolation of the mechanisms anticipated to be favored at the next meeting (in 2006).

The 1984 Kona Conference on the Origin of the Moon was the landmark event where the giant impact hypothesis of lunar origin first came to prominence. The Conference on Chondrules and the Protoplanetary Disk probably will not have quite so dramatic an effect, in large part because the need for flash heating has been widely recognized for some time now, but the conference was highly significant nonetheless. We really have made progress in the last 12 years, in the laboratory, in theoretical modeling, and in observations, and we seem to have narrowed down the list of candidates to a handful of means for producing flash heating. Perhaps the most promising of this group is nebular shock waves —provided that a suitable source of shock waves can be found, shock waves may well have been the culprit.

A book giving complete details about the results of the conference is in the works, so those who were unable to attend need only wait about a year or so for their vicarious experience of the 1994 conference.

Alan P. Boss
Department of Terrestrial Magnetism
Carnegie Institution of Washington
5241 Broad Branch Road, NW
Washington, DC 20015, USA

Lights Beam UFO Welcome

Fair Held Where Few Have Been

By Frank Zerolich
JOURNAL STAFF WRITER

There was plenty of reserved parking available for alien spacecraft at the Albuquerque Intergalactic Reception on Saturday night.

The event, an open-air science and science-fiction fair sponsored by the Albuquerque Convention and Visitors Bureau, attracted several hundred people to the top of the Albuquerque Convention Center Parking Structure, where a landing strip awaited extraterrestrial visitors.

It was the first time the top level of the five-story, three-year-old garage had been used for a public gathering.

The lure of outer space may have brought people to the reception, but most of them also seemed to enjoy sharing the discovery of this elevated space, which featured expansive views of Albuquerque rarely seen by earthbound Downtown celebrants.

Information booths focusing on factual aspects of space science mixed nicely to boutiful listening on the fanciful aspects.

"We like science and science fiction," said Ollie Poling, who attended the Intergalactic Reception with his wife Diana and their 9-year-old son Greg. "But we haven't gotten to the science part yet."

They were headed from a booth manned by costumed "aliens" showing sci-fi videos to a booth featuring exhibits from the Space Science Center in Alamogordo.

Greg Poling said he likes to watch "Star Trek" movies, but he also likes to conduct his own scientific experiments.

Most recently, he said, he dunked an egg into vinegar — and discovered he could look right through its shell to discover the yolk and egg-white nestled inside.

The UFO Museum & Research Center of Roswell featured books and other materials relating to the alleged crash-landing of an Unidentified Flying Object near Corona in 1947.

In the next booth, Lovelace Medical Center displayed information on the seven days of health tests it performed on 23 U.S. astronauts in 1959, before any of them ventured into outer space.

And in the next booth, genuine "visitors from outer space" put in many almost "they were" talk-arians from the Meteorite Museum operated by the Institute of Meteoritics at the University of New Mexico.

"I think science blends in with science-fiction rather than clashes with it," said Rhian Jones, a researcher at the institute. "It's nice to be able to see things that really came from outer space."

Because of the seven-foot height clearance on anything that had to get to the top of the garage, a space capsule display typified up Lovelace Science Center in Alamogordo remained outside at ground level.

Similarly, a ten-tall bank of Classic Comfort Stations (portable toilets) also stayed grounded.

Even food booths got into the Intergalactic Mode. But no matter what you call it, a "Mars Dog" is still a wiener.

At 9:30 p.m., laser lights and other illumination outlining the perspective landing strip were to begin welcoming gloves of guidance during a "communing ceremony" for any UFOs hovering nearby.

Wishful thinking? Well, even if no UFO showed up, there's always next year's Intergalactic Reception to aim for.

Above:
Albuquerque Journal
Sunday, August 28, 1994

Left:
Meteoritics Vol. 30 (1)
January 1995

Small spheres of influence

Richard Ash

CHONDRULES are the most abundant macroscopic form of extraterrestrial material to fall to Earth, and may once have been the most abundant solid material in the young Solar System. Their origin, however, has remained a source of great controversy, and a conference last month* provided a forum for meteoriticists, experimental petrologists and astrophysicists to discuss the formation and preservation of these objects, their relationship to other meteoritic materials and the nature of the material from which they were made.

Over 90 per cent of all meteorites falling to Earth are chondrites, which in turn consist of up to 85 per cent chondrules. Chondrules are spherical objects, up to 5 millimetres in diameter, whose mineralogy is dominated by olivine and pyroxene with textures and shapes that indicate that they were once at least partially molten. The relative abundances of refractory trace elements (such as scandium, yttrium and zirconium) in chondrules are approximately solar, telling us that chondrules have undergone no geological or cosmochemical processing, as this would separate these elements upon chemical grounds. The measured ages of chondrules are amongst the oldest recorded in any material, up to 10 million years older than the oldest igneous meteorites, evidence that they formed in the very earliest phases of Solar System history.

Since the first chondrule conference, held in Houston in 1982, much of the advance in the understanding of chondrule formation has been led by experimental petrologists, particularly Roger Hewins and colleagues (Rutgers Univ.) and Gary Lofgren (NASA Johnson Space Flight Center). Their recent simulations of the textural and chemical phenomena observed in natural chondrules now imply that the chondrule precursors were flash-heated to temperatures between 1,900 and 2,100 K. This temperature could only have been maintained for a matter of seconds, otherwise all potential mineralogical nucleation centres would have been destroyed and the resultant chondrule would invariably be glassy — a texture rare in natural chondrules. The hot droplets initially cooled rapidly, at 2,000 K per hour, but by the time they reached their solidus the cooling rates are estimated to have dropped to only 100 K per hour. Further evidence for rapid heating and cooling is the retention of relatively volatile elements, such as sodium, which is experiments can only be retained for a short duration in high-temperature regimes. To achieve such rapid heating and cooling each chondrule-forming event must have been on a localized scale.

Chondrules in the Sharps meteorite.

A clear majority of conference participants favoured a nebula event for chondrule formation, envisaging 'dust-ball' precursors made up of well mixed presolar grains and Solar System condensates held together by electrostatic charges or an organic 'glue'. Later agglomerates may also have included recycled, broken chondrule fragments from previous chondrule-forming events which, in some cases, have been preserved as relict grains — olivines and pyroxenes out of chemical equilibrium with other minerals in the chondrule. Other evidence for multiple chondrule-forming events comes from paired and rimmed chondrules. The former are chondrules which have become joined whilst still molten. They appear as either adhering pairs or, more rarely, as chondrules completely enclosed within a larger chondrule host. Rimmed chondrules bear an outer rind of igneous material apparently formed by the sintering of dusty rims by a later flash-heating event. An extreme view was that there could have been tens or hundreds of generations of chondrule-forming events, destroying any vestige of the materials predicted to have been formed from the initial condensation of solids in the solar nebula (Conel Alexander, Carnegie Institution of Washington).

Only CAIs (calcium and aluminium-rich inclusions — refractory inclusions found in some carbonaceous and ordinary chondrites) are older Solar System materials than chondrules. The relative ages found using extinct-radionuclide techniques (^{26}Al–^{26}Mg, ^{53}Mn–^{53}Cr and ^{129}I–^{129}Xe dating) all suggest that the chondrule-forming events started between 2 and 7 million years after CAI formation and continued sporadically over the next ten million years. Suggestions that the CAIs formed during energetic outbursts caused by material falling onto the young Sun's surface imply that the chondrule-forming event would have coincided with the t-Tauri phase of the Sun's evolution.

The heat source for chondrule melting remains uncertain. We know from the petrological data that we are looking for a very rapid heating source, but what? Newer detailed modelling of giant lightning flashes in the solar nebula, a previously popular candidate, showed these to be less viable than previously thought. Insufficient charge separation prevents a discharge powerful enough to melt the precursor solids.

Shock-wave heating is another possibility. The high dust densities required for the highly efficient chondrule-forming process point to its occurring in the dusty midplane of the solar nebula. The modelling of astronomical observations of young stars suggests that this region would be subject to shock waves leading to localized high temperatures and pressures. At the meeting, several candidates were proposed for the causes of the shocks, including highly energetic flares from the young, t-Tauri-like Sun. This is a particularly attractive proposition as it allows for multiple heating events over a ten-million-year period — the predicted lifetime for this stage of the Sun's evolution. Other proposed causes of shock were from the heterogeneous infall of dust clouds onto the Sun's accretion disk or from spiral density waves sweeping the nebula, leaving a trail of turbulence in their wake.

Although the consensus was that the chemistry of the chondrules requires small, chemically undifferentiated dust-ball precursors, there remain some who prefer an origin in a modified, geologically undifferentiated planetary body (Robert Hutchison, Natural History Museum, London; Ian Sanders, Trinity College, Dublin). The collision of completely molten planetesimals was advocated as a possibility, with the spray from the smashed body condensing and re-accreting onto the asteroid surface. The principal objection to this model, that complete melting of even a small body is extraordinarily difficult, still appears insurmountable. The presence of even a small amount of solid material would inevitably lead to geochemical elemental fractionations.

Writing in this journal in 1877, H. C. Sorby originally described these particles as "drops of fiery rain". We have come a long way since then; but there is still much that remains unknown about these tiny, unique rocks. □

Richard Ash is in the Department of Geology, University of Manchester, Oxford Road, Manchester M13 9PL, UK.

*"Chondrules and the Protoplanetary Disk, Institute of Meteoritics, University of New Mexico, Albuquerque, New Mexico, USA, 23–26 October 1994.

Nature Vol. 372
17 November 1994

ANNUAL REPORT

Department of Economics
University of New Mexico

July 1, 1994 - June 30, 1995

David S. Brookshire
Chair

THE ANNUAL REPORT OF THE DEPARTMENT OF ECONOMICS

July 1, 1994 - June 30, 1995

David S. Brookshire, Chair

1. Significant Developments During the 1994-1995 Academic Year

The past year saw the implementation of many changes and improvements in the Department of Economics. Prominent were graduate and undergraduate program revisions, faculty turnover, and increased graduate support.

The department is excited about the results that are beginning to show in the revision of the graduate program, which was begun on the basis of the recommendations promulgated by the outside review team and of the department's own review. The course offerings have been rearranged to provide a workable, yet broad range of courses for graduate students in all three Ph.D. fields and at the Masters level. The addition of a Public Finance faculty member in 1996 should allow the department to reach the necessary critical mass in number of faculty to support all fields consistently.

The department completed an extensive and exhaustive review of all undergraduate course offerings that went into effect with the Summer 1995 semester. Undergraduates will be required to take an additional course for a major. Any repercussions will be monitored closely during this year for fine adjustments that may need to be made.

The department had a turnover in faculty, which included the loss of three members and the appointment of two young promising faculty. The department is excited about our new faculty hires. The faculty looks forward to their contributions at all levels of teaching and in collaborative research within the department and with other parts of the university, in particular, with the Latin American Studies program.

The department has laid the basis for increased graduate student support through an expansion of research funding, state funding, and funding through BBER and IPP. Methods are being developed to implement a continual and aggressive search for new funding sources. This involves utilizing the enhanced computer database sources (through MIDAS) offered by the Office of Research Administration and other computer networking methods.

2. Significant Plans

The department's ongoing commitment to improvement in teaching and research will continue. This includes our hope to fill two faculty positions, to upgrade the experimental lab, and to begin new sponsored research.

Public Finance and Development Economics are the areas targeted in the new faculty searches. Public Finance is the priority area, as this is one of our three Ph.D. field areas and would greatly increase our proficiency there. A Development economist would significantly contribute to our undergraduate program and round out the graduate offerings. Both will support and improve our graduate program and research capabilities.

To increase our research capabilities the department plans on installing a Novell network in the experimental lab and developing new software applications for it. The new network will increase our ability to access and use various experimental software applications, thus increasing our research resources. New software applications will be designed that specifically meet the needs of our researchers in the experimental lab. Plans also include expansion of the lab's use as a teaching tool.

3. Appointments to Staff

During the 1994-95 academic year, we successfully completed searches for two new faculty members who will join us beginning in the fall 1995 semester.

Melissa Binder joins the Department of Economics in August 1995 as an Assistant Professor specializing in Labor Economics with research interests in Latin American topics and issues. She received her Ph.D. in 1995 from Columbia University.

Janie Chermak joins the department in August 1995 as an Assistant Professor specializing in Environmental and Natural Resource Economics. She received her Ph.D. in Mineral Economics from the Colorado School of Mines in 1991. Previously, she was an Assistant Professor at the Naval Post-Graduate School in Monterey, CA.

4. Separations from Staff

Shaul Ben-David retired at the end of the 1994-1995 academic year. Although he has moved out of state, he remains active in the department assisting in the development of the experimental lab.

Al Parker retired at the end of the 1994-1995 academic year. He remains active in the department in research and graduate student support.

Monserrat Viladrich left the department at the end of the 1994-1995 academic year. She has joined the Economics Department at Universidad Publica de Navarra in Pamplona, Spain.

5. Publications

The Department of Economics faculty appeared in 14 publications during the 1994 year. Eight of the department faculty published eight journal articles, two book chapters, and

four articles or reports.

6. Outside Professional Activities

Eight faculty members presented 20 papers at professional meetings.

7. Research Grants and Contracts Funded

The department received the following grants to fund faculty and graduate research during this academic year.

Army Environmental Policy Institute

McKee, M.	"Ecological Risk Assessment"
(Berrens, R.)	$50,000
(IPP)	July 1994 to September 1995

Electric Power Research Institute

Burness, S.	"Market Uncertainty and Efficiency in Emissions Allowance
(Brookshire, D.)	Trading Institutions: An Experimental Approach"
(Ben-David, S.)	$100,000
(McKee, M.)	May 1994 to December 1994

National Endowment for the Humanities, Younger Scholars Program

Berrens, R.	"Solutions to the Grazing Dilemma"
(Chang, T.)	$3000
	1995 summer student research project

New Mexico Energy, Minerals, and Natural Resources

Parker, A.	Consultant
	$40,000

New Mexico Public Utility Commission

Parker, A.	Consultant
	$19,600

New Mexico Taxation and Revenue

McKee, M.	"Computable General Equilibrium Model of New Mexico, Year 2"
(McDonald, B.)	$25,000
(Ward, F.)	July 1994 to September 1995

Sandia National Laboratories

Gawande, K.	"Development of Measures of Effectiveness of U.S. Coast Guard Activities using Econometric Methods and Risk-Based Rankings"
	$40,000

Completed September 1994

U.S. Geological Survey

Brookshire, D. (McKee, M.) "Case Study 1: Regional Economic Impact of Earthquake-triggered Hazards in Santa Clara County, California" $25,000 Completed September 1994

Brookshire, D. (McKee, M.) (Berrens, R.) "Case Study 2: Regional Economic Impact of a Climate Change in the Rio Grande Basin in New Mexico." $15,000 Completed September 1994

Brookshire, D. (McKee, M.) (Berrens, R.) (Ganderton, P.) "Land-use Models and Non-Market Values for the Rio Puerco Basin" $49,998 September 1995 to August 1996

The following grants are from internal sources.

Research Allocations Committee, UNM

Bohara, A. (Santos, R.) "Determinants of Health Insurance Among Mexican Americans" $1,750

Ganderton, P. (Lawton, P.) "Indentifying and Interpreting the Role of Habitual Behavior in the Demand for Recreational Amenities" $2,700

Gawande, K. "Two Empirical Investigations: The Political Economy of North-South Protection and a Test of the New Trade Theory" $2,998

Teaching Allocation Subcommittee, UNM

Gawande, K. "Historical Database on Trade, Manufacturing and Agriculture (1972-1992) for Effective Teaching of Econometrics, International Economics, Resource and Environmental Economics, and Labor Economics" $2,500

Research Grants and Contracts Submitted

In addition to the grants funded above, the faculty submitted the following proposals for consideration.

Dept. of Health and Human Services

Ganderton, P. (Anthropology) — "Male Fertility and Parenting in New Mexico: Phase III" $233,018 December 1995 to November 1998

Inter-university Program for Latino Research

Santos, R. (Sierra, C.) — "An Institutional Model for Collaborative Research in Public Policy" $20,000 June 1994 to May 1995 (declined due to reduced $ amount)

National Science Foundation

Brookshire, D. (Berrens, R.) (Ganderton, P.) (McKee, M.) — "Preference Formation and Elicitation in Valuing Non-Market Goods" $299,992 January 1996 to December 1998

Brookshire, D. (McKee, M.) (Jenkins-Smith) — "A Methodology for Rapid Evaluation of the Direct and Indirect Economic Impacts of Large Earthquakes" $196,147 September 1994 to September 1995

Brookshire, D. (McKee, M.) (Berrens, R.) (Biology) — "Predicting Natural and Anthropogenic Changes in the Middle Rio Grande Basin of New Mexico" $25,000 October 1994 to September 2000

New Mexico Water Resources Research Institute

Gisser, M. — "The Problem of Instream Flows in New Mexico: The Market Solution" $25,000 July 1994 to June 1995

Southwest Hispanic Research Institute

Santos, R. — "Latino/a Segregation in the Workplace" $25,000 August 1994 to August 1995

Teaching Allocation Subcommittee, UNM

Bohara, A. (Berrens, R.) — "Enhanced Sustainability and Environmental Equity Instruction by Creating a Rich Data Set" $2656

8. Attachments

Bachelor of Arts Degrees Conferred
58 Bachelor of Arts degrees conferred

Master of Arts Degrees Conferred

Mark Allen	Norton Francis	Hans Voss
Elizabeth Ficek	David Hofer	Di Xu

Doctoral Degrees Conferred
Morteza Allahad (Dávila) *"Does School Quality in Country of Origin Affect Earnings of Immigrants in the United States?"*
John Guthmann (McKee) *"General Equilibrium Model of New Mexico"*
Caribert Irazi (McKee) *"The Effects of Taxes in Developing Economies: A CGE Approach Applied to Kenya"*
Douglas Reynolds (Burness) *"Oil Supply Dynamics"*
Julie Ann Urban (Ganderton) *"Impact of Child Care Arrangements on the Wage Growth of Mothers"*

J. Raymond Stuart Award
Chris Schmidt and Bill Taylor received this honor.

Distinguished Alumnus
Senator Tito Chavez received this honor.

Table 1 - - UNM Department of Economics
Sponsored Research Money Generated

Academic Year	Grant Research
1983-84	103,533
1984-85	522,298
1985-86	380,662
1986-87	310,667
1987-88	285,000
1988-89	250,000
1989-90	146,394
1990-91	170,452
1991-92	209,804
1992-93	198,364
1993-94	169,710
1994-95	197,546

Table 2 - - UNM Department of Economics
Degrees Awarded

Academic Year	Bachelors Degrees	Masters Degrees	Ph.D. Degrees
1983-84	32	5	1
1984-85	47	1	5
1985-86	18	4	2
1986-87	37	2	6
1987-88	29	5	2
1988-89	65	12	1
1989-90	89	4	2
1990-91	70	9	1
1991-92	79	8	0
1992-93	68	11	3
1993-94	65	14	2
1994-95	58	6	5

ANNUAL REPORT
DEPARTMENT OF ENGLISH
July 1, 1994-June 30, 1995
Michael Fischer, Chair

The administrative structure of the English Department stayed the same 1994-95 with one important exception: January 2, 1995 Wanda Martin replaced Michael Hogan as Director of Freshman English. Peter White continued as Director of Graduate Studies, Scott Sanders as Director of Undergraduate Studies, and David Johnson as Director of Creative Writing.

Several important personnel developments took place during the year. David Johnson and Mary Bess Whidden were promoted to full professor. Sandra Lynn completed her last year at the university after a negative tenure decision. Paul Davis, full professor and longtime professor of nineteenth-century English literature, retired December 31, 1994. Kathleen Spivack was our Visiting Writer Spring 1995.

Two new assistant professors were hired and will be joining us Fall 1995: A.E. Mares, who received his PhD from the University of New Mexico in 1974, and Richard Johnson-Sheehan, who received his PhD from Iowa State University in 1995. Professor Mares will be teaching courses in creative writing, poetics, and Chicano literature; Professor Johnson-Sheehan will be teaching courses in rhetoric and technical communications and professional writing.

In addition, effective Fall 1995, Associate Professor Jerome Shea will be transferring to the English Department from University College. Professor Shea will be teaching courses in professional and expository writing. Associate Professor Joyce Elaine Rogers of University College was also going to join our department but died unexpectedly December 24, 1994. A well-attended memorial service held in the Alumni Memorial Chapel February 3, 1995 honored this much-loved faculty member.

Two new staff members also joined the department. Patricia Sprott joined the department January 1995 as Associate Editor. She is managing editor of the Blue Mesa Review and American Literary Realism and responsible for the department's internal publications. Janet Erwin joined the department December 1994 as undergraduate studies staff assistant.

In addition to the work done by the Freshman English, Graduate, and Undergraduate committees (described below), the department formulated guidelines for MA comprehensive exams; addressed the relationship between UNM and two-year institutions; put together a list of possible reviewers for our forthcoming undergraduate and graduate program review;

and, most importantly, developed new criteria for tenure and promotion to associate professor. Important matters to be dealt with next year include reconsideration of our teaching evaluation forms; preparation for our Spring 1996 undergraduate and graduate programs review; and the prospect of post-tenure review of associate and full professors.

1994-95 was a productive year for individual faculty members in our department as well as for the department as a whole. In addition to the activities detailed in individual annual biographical supplements, some specific accomplishments deserve highlighting.

Gary Scharnhorst was elected Vice President of the Pacific Northwest American Studies Association and Vice President of the Western Literature Association. He will become President of WLA in 1997 and oversee the annual meeting of that organization (to be held in Albuquerque in October 1997).

Minrose Gwin delivered the Fennimore Lecture at Albion College, Albion, Michigan and was the featured speaker at the 20th Anniversary Celebration of the Women's Studies Department, University of Tennessee, in conjunction with the university's bicentennial celebration.

Gary Harrison's new book, Wordsworth's Vagrant Muse (Wayne State University Press, 1994) was nominated for three prizes: the Morris D. Forkosch Prize sponsored by the Journal of the History of Ideas, the Christian Gauss Award sponsored by Phi Beta Kappa, and the 1994 MLA Prize.

Susan B. Brill, one of our recent PhDs and now Assistant Professor of English at Bradley University, published Wittgenstein and Critical Theory: Beyond Postmodern Criticism and Toward Descriptive Investigations (Ohio University Press, 1994).

Louis Owens's novel The Sharpest Sight (University of Oklahoma Press) was published in French by Albion Michel in November 1994 and named one of the 15 best American novels by the editors of Bloomsbury Review.

Robert Fleming's The Face in the Mirror: Hemingway's Writers (The University of Alabama Press) was chosen by Choice as an Outstanding Academic Book for 1995.

September 22, 1994, the eminent English literature scholar Karina Williamson McIntosh, now an emeritus professor at Edinburgh University and Oxford University, presented a lecture on editing eighteenth-century texts and participated in a symposium on scholarly editing. James Thorson organized and moderated the symposium; Patrick Gallacher, Connie C. Thorson, Peter White, Gary Scharnhorst, and Mary

Bess Whidden also participated.

The December, 1994 publication of Western Literature in a World Context (St. Martin's Press), an innovative two-volume anthology of world literature, received much attention. Gary Harrison, David Johnson, Patricia Clark Smith, Paul Davis, and John Crawford edited the book, which is based on an undergraduate course team-taught in our department.

Rudolfo Anaya, professor emeritus of English, was named the recipient of the UNM Alumni Association Erna S. Fergusson Award.

Joy Harjo was awarded the 1995 Lifetime Achievement Award of the Native Writers' Circle of the Americas, an international Native American writers' organization. She is the fourth recipient of the award, following N. Scott Momaday, Simon J. Ortiz, and Leslie M. Silko.

Lee Bartlett, Hugh Witemeyer, and Barry Gaines were on sabbatical leave Fall 1994; Carolyn Woodward, James Thorson, and Mary Bess Whidden were on sabbatical leave Spring 1995. Joy Harjo and Laurie Alberts were on leave without pay Fall 1994.

Under the direction of Helen Damico, the UNM Medieval Studies Program sponsored its third annual seminar for secondary school teachers October 21, 1994. This year's seminar was entitled "Beowulf in the Secondary Schools" and featured Professor Kevin Kiernan of the University of Kentucky as the guest speaker. The Peer-Mentoring Program featured Lisa Scarola working at Sandia Preparatory School and Jonatha Jones at the New Mexico Military Institute. This year's spring Medieval Studies lecture series included several interdisciplinary lectures by distinguished scholars on Medieval Islam, February 27-March 2, 1995.

James Thorson was elected to the Council of the American Association of University Professors for a three-year term.

In Pittsburgh, June 2-4, Michael Fischer presented a paper at an interdisciplinary conference on "The Role of Advocacy in the Classroom," which was sponsored by numerous scholarly organizations, including the American Academy of Religion, the American Anthropological Association, the American Council of Learned Societies, and the Association of American Law Schools.

Finally, in addition to presentations at major national and regional conferences, several faculty members gave papers or chaired sessions at international meetings: Robert Fleming (Hemingway/Fitzgerald International Conference, Paris, July 3-8, 1994); Antonio Marquez (International Conference on Latino Cultures of the USA, Paris, July 1994); Barry Gaines

(International Shakespeare Conference, England, October 1994); and Scott Sanders (International Professional Communication Conference, Canada, September 1994).

1994-95 Graduate Report for the Department of English

Members of the Graduate Committee for this year were: James Thorson, Lynn Beene, Gary Scharnhorst, Pat Smith, Cheryl Fresch, Louis Owens, Mary Power (Affirmative Action Rep.), Scott Sanders (Undergraduate Advisor), Michael Hogan and Wanda Martin (Composition Reps.), SueAnn Schatz (English Graduate Student Rep.).

Objectives this year were to better orient new graduate students, establish better communication between non-TAs and TAs and faculty, distribute funds from Research Projects and Travel Grants, concentrate efforts on the job market in English, find funding (TAships) for more of our enrolled students, and start an academic colloquium for graduate students and faculty.

Orientation:

This year the Graduate Office in English mailed information to those students who had notified us they were coming to campus in the Fall as new graduate students in English. All these students were invited to the general orientation meeting in August. In the second week of classes, new students were introduced to faculty and to experienced TAs in the department. At this meeting they were also introduced to their TA mentors who were assigned by the English Graduate Office.

New Graduate Colloquium

In the Spring Semester the graduate office arranged for two graduate students to present papers to the faculty and graduate peers in English. Megan Simpson, doctoral candidate, presented a paper on the poetry of Susan Howe and Jen Riley, doctoral candidate, presented a paper on the poetry of Eavan Boland. Both presentations were well attended and signalled the beginning of more professional expectations for graduate students.

Job Market Assistance

In the fall Semester the graduate director met with all students who had expressed interest in applying for jobs. Every Wednesday for about two months the group met to discuss ways of improving letters of application and resumes. The group then went through the MLA Job Information List and compiled individual lists of schools to which they had applied. The graduate director distributed

these lists to faculty in an effort to use professional contacts where appropriate. The graduate director accompanied the students to the MLA and attempted to help them through the interview process. (The director also attended a three-hour meeting held at MLA about the job market in English). After the MLA the graduate director conducted mock interviews for those students who had on-campus interviews. In the Spring, the graduate director's class on professional development conducted a very well attended seminar on the job market which summarized what we had all learned this year about how to search for and secure a job in English.

Spring Student Faculty Colloquia

In the Spring Semester, the chair of English arranged for three more graduate student/faculty colloquia, which are informal panel discussions about issues of academic interest. The three subjects covered this year were: confronting hate speech, the politics of affirmative action, theory and ethnic literature. All three were well attended and lively discussions.

Admissions

As in the last three years, the graduate committee decided to limit admissions to all graduate programs in English, given the faculty-to-student ratio and the depressed nature of the job market. Following this report is a breakdown of applications/admissions program by program. In sum, however, this year 170 people applied, 13 PhD students were accepted, 14 MA Literature, 15 MA Creative Writing, and 1 MA Professional Writing. There were 43 incomplete applications. Six of the 13 people accepted into the PhD program were graduates of our own MA program. Fewer than half of these students will enroll at UNM.

Teaching Assistantships

Finally, after three years of concentrated efforts to support our own students, every currently enrolled graduate student in English has financial support through TAships or fellowships. For the third year in a row, no assistantships were awarded to candidates from programs outside of our own. In 1995-96 the graduate committee will be instructed to make awards to outside candidates. New TAs in English for 1995-96 are Kim Barber, Carol Byrnes, Shari Evans, Shana Ferguson, Sheila Gilmartin, Janet Gould, Margaret Harada, Renee Jackson, Gale Krueger, Colleen Malone, Mike Moghtader, Richard Mott, Marika Paskiewicz, Andrea Penner, Darrell Peters, Denise Tillery, Kate Warne, and Richard Waters.

Graduations

The Graduate program in English graduated 7 PhD students and 34 MA students, one of the larger classes in many years. Receiving PhDs in 1994-95: Anna Carew-Miller, Ann Grigsby, David Hailey, Michael Mages, David Martinson, Karen Sunde, and Marilyn Wilton.

Awarded MAs were Reza Afaghpour, Rebecca Aronson, Carin Bigrigg, Paul Cerda, James Cox, Lisa Craig, Philip Davis, Kathleen Fleming, Suzanne Frost, Julia Goldberg, Patricia Guyer, Linda Helstern, Jonathan Jochem, Lori Johnson, Corinne Johnson, Caralee Kahn, Heide Kaldenbach-Montemayor, Sally Kmetz, Susan Levasseur, Joan Louise Marjean, Anthony Mancino, Jennifer Miller, Cheryl Minnick, Lisa Newton, Sean O'Brien, Arlen Odenwald, Gloria Pastorino, Steven Pearl, Inez Peterson, Robert Ricci, Pete Sanchez, Brian Winkenweder, and Paul Wolfla.

Research, Project and Travel Grants

Several students received funding through the legislatively appropriated funds for graduate student research, projects, and travel. Graduate students received 21,400 dollars from this fund. The money went to support research in Great Britain and the United States for doctoral students working on dissertations and for doctoral and masters students who were giving papers at conferences or attending MLA for the purpose of interviewing for a job or giving an academic paper. The graduate office in English was also appropriated 10,000 dollars from the State Legislature to upgrade the computer facilities in the English department computer room. Additionally, the Dean of the Graduate School gave the English department 2,000 dollars for two years to award to an incoming minority graduate student.

Awards:

SueAnn Schatz --the Buchanan-Arms award
Danny White--the New Mexico Folklore Prize
Rosa Louie--Graduate School Fellowship
SueAnn Schatz--Graduate School Achievement Award, only five awarded at UNM.
Jennie Dear--Dean's Dissertation Year Fellowship, only one awarded to graduate students throughout the university. The most prestigious award at UNM.
Moira Russell--Tuition Fellowship
Steve Wexler--Tuition Fellowship
Holly Romero--Creative Writing Fellowship
Sophie Wadsworth--Creative Writing Fellowship
Gloria Larrieu--TARC Teaching Award, only five awarded at UNM

Summary

This was a good year for the English department graduate program. Enrollment is down to a reasonable student-to-faculty ratio; every already-enrolled student who requested a Teaching Assistantship was awarded one and all of our students are funded, admission was granted to only the most highly qualified candidates, and students in our programs won all the major awards given by the graduate school, except one. We had over 20,000 dollars to distribute to students for research and travel, and we started an academic colloquium. New students felt more at home in the program and job seekers, though still facing a very difficult market, received some practical and moral support in their efforts. Professor Gary Harrison will serve as graduate director in 1995-96.

Application & Admission Figures 1995 (Spring and Fall)
UNM Department of English Graduate Programs

Total applications: 170

PhD	MA/Lit	MA/CW-poetry	MA/CW-fiction	MA/PW
55	70	4	32	4

Total accepted: 43

PhD	MA/Lit	MA/CW-poetry	MA/CW-fiction	MA/PW
13	14	5	10	1

(Of these PhDs, 6 are from our Masters program.)

Total rejected: 84

PhD	MA/Lit	MA/CW-poetry	MA/CW-fiction	MA/PW
35	34	3	11	1

Total incomplete applications: 43

PhD	MA/Lit	MA/CW-poetry	MA/CW-fiction	MA/PW
6	20	3	12	2

Freshman English Program

As in recent years, the Freshman English staff of 65 Teaching Assistants offered about 110 sections of English 101 and 102 in each semester, helping about 2500 undergraduate students develop their skills as critical readers and writers of academic prose. Students in 101 wrestled with contemporary issues in scientific thinking as they read and wrote about Tom Waldrop's Complexity, an exploration of the development and the work of the Santa Fe Institute. In 102, students used the cross-curricular

anthology Fields of Writing as an introduction to the kinds of discourse typical of different disciplines.

For the first time, the English as a Second Language (ESL) Writing Program was partially staffed by English Department graduate students who had been trained in ESL teaching by Professor Mike Hogan. And looking toward the future, the Freshman English Committee established study committees to consider three areas: the possibilities for increasing the use of computer technology in Freshman Composition, new methods of assessing student outcomes in Freshman Composition, and the impact of a culturally diverse student body on curriculum and instruction in Freshman Composition. These committees offered interim reports in May and agreed to continue working through the fall 1995 semester. The committee will consider their recommendations beginning in January 1996.

1994-95 Undergraduate Report for the Department of English

Members of the Undergraduate Committee for 1994-95 were Professors Gary Harrison, David Jones, Pat Smith, and Hugh Witemeyer; Scott Sanders, Undergraduate Director, chaired the committee. During this year, Staff Assistant Joann Lucero moved to another position at UNM midway through fall term, and Janet Erwin became the Undergraduate Staff Assistant later in the fall term.

Changes to Course Numbers

The numbers of three courses were changed during this year. The Internship, which previously had been taught as Engl 497 (Independent Study) and Engl 498 (Workshop in Writing) received its own number, English 499, and it is designated as a CR/NC only class. This number and the grading restriction reflect how the internship program is designed: in any given semester, from six to twelve students register for Engl 499 for three credit hours, CR/NC only grade option, and they write reports about their completed or ongoing internships. The intern class itself is taught as an introduction to the world of work for English majors. It addresses such issues as preparing a portfolio of writing, reading job advertisements, interviewing, and other aspects of finding an internship placement now and a job later upon graduation. These internship workshops are open to all students majoring or minoring in English.

English 375 and 376 (World Literature Survey) and Engl 201 and 202 (World Literature in Context) were deleted and replaced by Engl 292 and 293 (World Literature Survey). This action brings our sophomore-level literature surveys together: 292/293 (World Literature); 294/295 (Early and Late British Literature); and 296 (American Literature) are

now numbered consecutively as sophomore-level surveys. By this action we omit the possibility of duplication of world literature surveys at both the lower and upper division levels. We assume that 292/93 will be taught in multiple sections with different approaches taken to different material in the different sections--just as we now teach the other literature surveys.

Honors Program

During this year we offered two honors topics classes (as restricted sections of English 411: Topics). In the fall term, Gary Scharnhorst offered a seminar on Mark Twain; in the spring term Hugh Witemeyer taught an honors seminar on E. M. Forster. In fall 1995, Cheryl Fresch will teach an honors seminar on George Herbert. Looking ahead to 1995/96, the committee voted to explore membership in Sigma Tau Delta, an undergraduate English honors society.

Graduates, Awards, and Honors

At the departmental graduation ceremony, more than 150 students were recognized as graduates for the 1994-95 academic year. Students receiving honors and awards are listed below:

Martha Ninneman--Reba Rutz Beidelman Memorial Scholarship
Gwendolyn Huebner and Martin David Rubio--Mary McDonald Scholarship
Micaela Seidel and Georgia West Babb--Katherine Simms Prize

Departmental Honors:

December 1994 graduates: Molly Bennet, cum laude; Lynn Mallory, cum laude; Craig Hubbard, cum laude; Chris Saxon, magna cum laude

May 1995 graduates: Rosa Louie, summa cum laude; Amy Westerfield, cum laude

Conclusion:

Cheryl Fresch will take over from Scott Sanders as Undergraduate Director, beginning with the fall 1995 term. Looking ahead, the Undergraduate program will continue its efforts to organize a database for English undergraduates with information about scholarships, awards, graduate schools, internships, summer writing and publishing institutes, contests, and other items of interest to undergraduates. We are also close to having three years of accurate records of English major and minor graduates. Once this database of graduates is sufficient for gathering a random sample of graduates over a five-year period, we

expect to survey our English major and minor graduates in an effort to begin an undergraduate outcomes assessment program.

Department of Foreign Languages and Literatures

Chair: Diana Robin

ANNUAL REPORT

FOR THE PERIOD OF JULY 1, 1994 TO JUNE 1, 1995

ABSTRACT

In the third year of its existence the Department of Foreign Languages and Literatures moved from a federation of three smaller sub-departments, each with its own budget and autonomous administrative and committee structure, to a single, centralized departmental structure. In October under the leadership of the acting chair of the department of 1994/95, Peter Pabisch, FLL underwent an outside graduate review of its faculty, organization, and degree programs. While still operating under a tripartite budgetary structure and an absence of department-wide committees throughout the fall semester of 1994, the department voted unanimously in January 1995 - following the recommendations of the outside review team and the Dean of the College - to abolish the three autonomous subdepartments (French/Italian, German/Russian/Asian, and Classics) and to establish for 1995/96 department-wide committees and a single, centralized budget under the direction of the department chair. Accordingly department-wide committees were instituted to coordinate and consider the restructuring of FLL's several undergraduate and graduate degree programs. This impetus toward rapid and in some respects radical structural change was facilitated by the following circumstances: the retirement of two senior faculty members in December 1994, the appointment of one new assistant professor (in French), and permission from the Dean to make three additional faculty replacement appointments between spring 1996 and fall 1997 (two in French, one in Japanese).

FLL's enrollment was 2612 students in 156 courses offered during the summer of 1994 and the subsequent fall and spring semesters. Twelve tenure track faculty, seven part-time instructors, and sixteen T.A.s brought a total of 7609 student credit hours.

1. REPORT

Significant developments

In the spring of 1995 the proposal for a new interdisciplinary B.A. and M.A. in comparative literature/cultural studies under the aegis of Foreign Languages and Literatures was approved by the Faculty Senate. This new program combines courses in cultural theory currently offered in the Departments of Anthropology, Sociology, Political Science, Film, Spanish/Portuguese, English, and FLL. In July 1995, FLL chair Diana Robin stepped down as director of CL/CS and Shane Phelan (Political Science) was unanimously elected to succeed her by the interdisciplinary committee-in-charge.

Early in the spring semester, the new graduate committee of FLL swung into action under the leadership of Walter Putnam. In the course of the semester the committee succeeded in developing for implementation in fall 1995 revised M.A. programs in French, German, and Comparative Literature. Following the recommendations of the distinguished outside review panel, the new M.A. reading lists no longer mandate rigid adherence to an outmoded canon of texts; there are fewer required courses in general, more electives are allowed, and the M.A. exams

have been modified in keeping with the programmatic changes currently in place at the top graduate institutions around the country. The committee also prepared and issued a new "white paper" clearly setting forth the guidelines and requirements for incoming graduate students in the department's several programs.

During the same period the new undergraduate committee met to streamline and coordinate the undergraduate course offerings of the department under the leadership of committee chair Monica Cyrino. The committee's deliberations resulted in a number of useful recommendations for information sharing, team teaching, and cooperative ventures among the several different language programs in the department. Among these recommendations was a proposal to place the coordination and supervision of all the department's T.A.s assigned to lower-division language teaching under a single director. Accordingly, Carolyn Simmons was appointed director and coordinator of the department's T.A.s; she will also offer courses in language pedagogy in 1995/96 which will include teaching workshops conducted by well-known methologists from other universities. This unification of FLL's language instruction programs is a first in the history not only of the present department but also of the old Department of M & CL as well.

Under the leadership of Peter Pabisch, Director of the German Summer School, the school (held June 13-July 14 in Taos Ski Valley) celebrated its twentieth anniversary this year. From July 17-20, the School offered an international symposium entitled "The Atlantic Bridge." The Summer School also sponsored two programs in cooperation with the Institute of International Cultural Relations in Stuttgart: one in journalism and a second program in dual vocational education. This year the German Summer School was the beneficiary of over $200,000 in grants.

Several FLL faculty members were awarded summer stipends to travel to research collections, research seminars, or were invited to lecture at universities abroad. Walter Putnam spent the summer at Northwestern University as a participant in an NEH seminar in French cultural and Francophone studies. Monica Cyrino and Susanne Baackmann received RAC grants to do research at the University of California libraries; Warren Smith was an invited speaker at conferences held at the University of Groningen (Holland), the University of Uppsala (Sweden), and the University of Tubingen (Germany); Byron Lindsey traveled to Poland where he was an invited speaker at the Fifth World congress for Central and East European Studies in Warsaw.

In addition to presenting a large number of scholarly papers at professional meetings, the FLL faculty again this year produced a number of books, monographs, journal articles, book chapters, and reviews (as listed in Faculty Publications).

Faculty and staff appointments, sabbatical leaves, visiting professorships retirements, and resignations:

Deborah Jenson (Ph.D. Harvard University), a specialist in nineteenth-century French literature and cultural studies, was hired as an assistant professor in French to replace retiring professor Claude-Marie Senninger. Lore Brau (Ph.D. New York University), a specialist in Japanese

theatre, popular culture and performance studies, was hired as a visiting assistant professor of Japanese to replace visiting lecturer Yukiko Hanawa. In addition, Carolyn Simmons (Ph.D. Princeton University), specializing in nineteenth-century French literature, was hired as a visiting assistant professor to coordinate lower-division French and German; and Hassan Melehy (Ph.D. University of Minnesota), specializing in early modern French literature and cultural studies, was hired as a visiting assistant professor in French to temporarily replace retiring professor Julian White.

Professor and Department Chair Diana Robin spent the year on Sabbatical completing her book on the fifteenth-century Italian humanist Laura Cereta under the auspices of an NEH grant.

French professors Claude-Marie Senninger and Julian White retired in December 1994.

Challenges and plans for the future:

In this coming year as a unified department, the greatest challenge we face is perhaps organizational: how do we begin to forge both a sense of community among faculty who are essentially strangers to one another and who - having come perhaps directly from Ph.D. programs in large, factory-like institutions - may have had little or no experience either in leadership roles or at team building? Perhaps the greatest challenge we face as a group is in balancing our need to preserve and protect the research time of the probationary tenure track faculty while spending the necessary time it takes to build a working team. A further challenge is presented by the academically young profile of the department. In 1995/96 four out of ten faculty in residence in the department will be assistant professors with brand-new Ph.D.s; in 1996/97 six of twelve faculty in residence will be new arrivals. Since among our graduate faculty (in French and German) the situation is more extreme - five out of seven faculty will be recent Ph.D.s whose work will not yet have gained national visibility - we will need to think more creatively about how to attract the most promising graduate students to our programs in French, German, and Comparative Literature/Cultural Studies.

A final challenge is to find ways to capitalize on the diversity represented by our department. Here it is appropriate to quote from the final recommendations made to FLL by the distinguished outside graduate review panel in their report:

"FLL's structure is not a weakness but a strength. Bringing together experts in several fields makes [this department] ...a natural site [for] the study of cultural difference. The strongly represented fields in the department -- German and French are the primary graduate lines -- point to the two nations whose rapproachement has been the foundation of European union. This is an issue which FLL should [seize on]...Given its current range of expertise, FLL would appear destined to engage in productive curricular innovation and cross-field collaboration. On the undergraduate level, it ought to be able to mount, at the least, courses with high enrollment potential such as "Introduction to Literature," "Introduction to Language," or "Introduction to Cultural Studies"....[On the graduate level], FLL is a very likely site for courses on figures such as

Habermas, Foucault, and Derrida -- courses which are equally likely to draw a wider public."

TEACHING FACULTY AND STAFF

Tenured and Tenure Track Faculty

Pabisch, Peter	Professor, German
Robin, Diana	Professor, Classics
Smith, Warren	Professor, Classics
Kolchevska, Natasha	Associate Professor, Russian
Lindsey, Byron	Associate Professor, Russian
Putnam, Walter	Associate Professor, French
Baackmann, Susanne	Assistant Professor, French
Cyrino, Monica	Assistant Professor, Classics
Jenson, Deborah	Assistant Professor, French

Visiting Faculty

Brau, Lorna	Visiting Assistant Professor, Japanese
Melehy, Hassan	Visiting Assistant Professor, French
Schneider, Keiko	Visiting Lecturer II, Japanese

Permanent Part-time Instructors

Wu, Pearl	Lecturer II, Chinese

Part-time Instructors

Duke, Rachele	Lecturer III, Italian
Iundin, Boris	Lecturer II, Russian
Warren, Denise	Lecturer II, Latin

TA's

Classics/Comp. Lit
Lanter, Brian

French
Cahill, Ginette
Goulesque, Florence
Kurzawa, Joel
Kyser-Genoist, Heidi
Marshall, Quannah
Nakas, Ausra

Prentice, Daria
Strategos, Mary
Usinger, Jan
Vranka, Michael

German
De Vargas, Sonja
Duerr, Elke
Jones, Elizabeth
Kaser, Fritz
Nelson, Jason
Schlesier, Sibylle
Stricklan, Mark

Office Staff

Becker-Koch, Pamela, Department Administrator
Stewart, Lisa, Department Secretary
Williams, Wilma, Office Manager

Student Temporary Staff (Work Study)
Alvarez, Christina
Anthony, Yana
Franke, Flora
Garcia, Valerie
Hackney, Thomas
Lalonde, Pamela
Lewis, Heike

Degrees Offered

B.A. in Classics, in French, or in German with a concentration in civilization or in language, in Russian with a concentration in Russian Studies or Russian Language and Literature; in Comparative Literature, or in Languages.
M.A. in Comparative Literature
M.A. in French
M.A. in German
Ph.D. in French (Romance Languages)

Degrees Granted May 1995

B.A.

34 Total

(Classics 5, French 11, German 6, Languages 4, Russian 6, European Studies 1, Comp. Lit. 1)

M.A.

Broughton, Leslie, Comparative Literature

Gienger, Michael, German

Touati, Abderrahman, French

0851

Summary of courses offered

Summer 1994 (Includes Francophone, German Summer Schools)

Language	Course No, Name	No of Students	Credit Hours
FRENCH	101 Ele French	20	60
	102 Ele French	20	60
FR SSCH	370 Adv Lang	11	33
	385 Culture	18	25
	485 Culture	42	60
	575 Gr Prob	2	6
	585 Gr Culture	53	84
TOTALS		166	328
GER SSCH	370 Ad Lang	8	16
	380 Lect Germ	28	56
	385 Deut Lit	20	40
	390 Fubballwelt.	17	17
	410 Stylistics	12	24
	470 Adv Stylistics	11	22
	485 Literature	17	26
	497 Undr Prob	3	7
	551 Grad Prob	2	4
	585 Grad Sem	31	46
	599 Master The.	1	3
TOTALS		150	261
CLASSICS			
LATIN	101 Ele Latin	30	90
	102 Ele Latin	18	54
TOTALS		48	144
JAPANESE	201 Int Japan	13	39
	202 Int Japan	10	30
	297 Culture Japan	20	60
TOTALS		43	129
FALL 1994			
ASIAN:			
CHINESE	101 Ele Chinese	23	69
	102 Ele Chinese	4	12
	201 Int Chinese	5	15

	297 Int Chinese	6	18
JAPANESE	101 Ele Japan	32	96
	103 Ele Conv	9	9
	201 Int Japan	7	21
TOTALS		86	240
CLASSICS	107 Greek Myth	64	192
	345 Periclean Athens	23	69
GREEK	101 Ele Greek	15	45
	103 Greek Lab	3	3
	104 New Test	2	6
	301 Classical Greek	9	27
LATIN	101 Ele Latin	72	216
	201 Int Latin	14	42
	303 Rdgs Latin Lit	6	18
	351 Accel Latin	3	9
	551 Grad Prob	2	6
TOTALS		213	633
COMPARATIVE LITERATURE	452 Med Eng Mys	3	9
	551 Problems	1	3
	599 Thesis	1	3
TOTALS		5	15
FRENCH	101 Ele French	116	348
	102 Ele French	47	141
	103 Ele Fr Conv	14	42
	201 Int French	49	147
	202 Int French	32	96
	203 Int French	14	42
	275 Beg French Acc	13	78
	276 Int French Acc	14	42
	301 Adv French	24	72
	302 Stylistics	9	27
	305 Phonology	23	69
	345 French Civ	14	42
	351 French Lit	15	45
	422 Fr Drama	1	3
	441 Fr Prose	3	9
	450 Contemp Fr	18	54
	497 Undgrad Prob	3	9

	498 Rdg Rsrch	1	3
	500 Tching Prac	9	9
	522 Fr Drama	5	15
	541 19th c Fr Prose	6	18
	570 Seminar/Auto	12	36
	575 Grad Problems	3	9
	699 Dissertation	1	3
TOTALS		446	1359
GERMAN	101 Ele German	102	306
	102 Ele German	34	102
	201 Int German	34	102
	202 Int German	14	42
	203 Int Germ Conv	7	21
	275 Accl Beg Germ	17	51
	301 Adv German	13	39
	303 Adv Germ Conv	9	27
	307 Intro Germ Lit	12	36
	365 Germ Rdg	8	24
	445 Tching Germ	1	3
	450 Goethe	11	33
	497 Ungrd Problems	3	9
	551 Grad Problems	6	18
TOTALS		271	813
ITALIAN	275 Ele Ital Acc	50	150
	276 Ele Ital Acc	18	54
	307 Survey Ital Lit	10	30
	497 Undgrad Prob	3	9
TOTALS		81	243
RUSSIAN	101 Ele Russian	36	108
	102 Ele Russian	10	30
	201 Int Russian	17	51
	202 Int Russian	11	33
	203 Comm Russian	6	6
	230 Russian Studies	11	33
	301 Adv Russian	9	18
	303 Adv Prac Conv	13	26
	401 Russia Today	5	15
	497 Undgrad Prob	2	6
TOTALS		120	323

SPRING 1995

ASIAN:			
CHINESE	101 Ele Chinese	9	27
	102 Ele Chinese	7	21
	201 Int Chinese	11	33
JAPANESE	101 Ele Japanese	2	6
	102 Ele Japanese	20	60
	103 Ele Japan Conv	2	2
	104 Ele Japan Conv	2	2
	202 Int Japan	8	24
	297 Lang & Cult	1	3
TOTALS		62	178
CLASSICS	204 Greek Civ	157	471
	102 Ele Greek	11	33
	103 Greek Lab	5	5
	104 New Test Greek	3	9
	302 Classical Greek	9	27
	497 Undergrad Prob	1	3
	102 Ele Latin	33	99
	202 Int Latin	12	36
	304 Rdgs Latin Lit	4	12
	497 Undergrad Prob	4	12
	551 Grad Prob	1	3
TOTALS		240	710
FRENCH	101 Ele French	72	216
	102 Ele French	72	216
	201 Int French	20	60
	202 Int French	37	111
	203 Int Fr Conv	18	54
	275 Beg Fr Acc	13	78
	276 Int Fr Acc	24	144
	301 Adv Comp	32	192
	302 Beg Styls	20	60
	346 Fr Civ	23	69
	352 Fr Lit	9	27
	432 Fr Lit 18th Cent	6	18
	490 Sem Art/Lit	9	27
	497 Undgrad Prob	2	6
	499 Honors Essay	1	3
	500 Tching Prac	8	8

	505 Intro Rsch	2	6
	532 Fr Lit 18th Cent	1	3
	570 Sem Surrealism	3	24
	575 Grad Problems	6	18
	699 Dissertation	1	3
TOTALS		379	1343
GERMAN	101 Beg German	55	165
	102 Beg German	55	165
	201 Int German	18	54
	202 Int German	28	84
	276 Beg German Acc	14	42
	302 Adv German	14	42
	303 Adv German Conv	8	8
	366 Germ Rdg for Grads	7	21
	401 Contemp Germ Cult	6	18
	452 Am 19th C Ger Lit	11	33
	497 Undergrad Prob	3	9
	551 Undergrad Prob	2	6
	580 Senior Colloquim	7	21
	599 Masters Thesis	1	3
TOTALS			
ITALIAN	275 Beg Ital Acc	40	120
	276 Beg Ital Acc	19	57
	308 Ital Lit	10	30
	497 Undgrad Prob	3	9
	551 Problems	1	3
TOTALS		73	219

UNM ANNUAL REPORT
DEPARTMENT OF GEOGRAPHY
July 1, 1994 to June 30, 1995
Olen Paul Matthews

Chair

1. SIGNIFICANT PLANS

1.1 FIVE-YEAR PLAN

During the Fall, 1993 semester, the department put together a *Five-Year Plan* that will focus the department's research and teaching orientation in two areas:

1. environmental analysis (physical geography and human/environment interaction); and
2. geographic information technologies - GIT (GIS, GPS and remote sensing).

Both of these specialties serve important societal needs and build on existing strengths within the university. When fully implemented, the plan will afford the department the opportunity to increase collaborative research and to develop a GIT laboratory. It will also enable the department to attract graduate students of first quality and to raise the department's overall standing in the university and profession.

The two subfields selected for emphasis are well suited not only for the enhancement of geographical research but for integration into the missions of many other units of the university and the state. The development of geographic information technologies matches well with the developments at the major scientific laboratories, and promises to attract major grants and funding for the department. The demand for GIT training is not limited to the Department of Geography; biologists, geologists, anthropologists, and planners all use the technologies and are eager to have a teaching laboratory on campus. There is also support from biologists and geologists for the attention the environmental focus will give to climatology and global change. Both of these areas are begging for interdisciplinary research efforts, which should attract significant new research funding to the department and university.

1.1.1 Status of Five-Year Plan

The primary goal of the Department of the Geography, as set forth in the *Five-Year Plan*, is to refocus and strengthen its curricula so that it will be in a position to initiate a Ph.D. program in the future. In order to achieve this goal, the department will need to restructure its curriculum and degree programs, increase its FTE faculty to at least 9.5, and build an infrastructure that can support the programs.

The *Five-Year Plan* is being implemented, and the Department of Geography is dramatically different from the one that existed in 1993. The curriculum, which currently emphasizes breadth, is being focused on environmental analysis and GIT; the personality of the department is changing and will continue to change as existing faculty are replaced by new hires; the infrastructure to support a Ph.D. program is being developed; a colloquium series is being institutionalized; the mechanisms necessary to assure high quality teachings are being developed; and the faculty is beginning to actively pursue extramural funding.

2. STAFF APPOINTMENTS AND SEPARATIONS

2.1 FACULTY REPLACEMENTS AND NEW HIRES

The faculty was composed of 4.5 salaried members in the Fall, 1993. Three of the faculty members were professors and two were associate professors. The department searched during the 1993-94 AY for two additional faculty members. One of these searches was for a department chair, while the second search was for an assistant professor. At the conclusion of the search, the department chair position was offered to Dr. Brent Yarnal, but we were unable to consummate a deal. It was subsequently decided to initiate a new search in 1994-95.

The assistant professor position was offered to Dr. Louis Scuderi, and he joined the faculty in the Fall, 1994. Dr. Scuderi received his Ph.D. in 1984 from the University of California,

Los Angeles. His research and teaching interests are in climatology and climate change, geographic information systems, and remote sensing. Dr. Scuderi has authored or co-authored 12 peer reviewed articles and book chapters and has designed, organized, and managed a geographic information system/image processing laboratory. He is an excellent addition to the department.

In addition, we requested permission to deviate from the prescribed search process in the Spring of 1994 so we could offer Dr. David Gutzler a split appointment in the Department of Earth and Planetary Sciences and Geography. Dr. Gutzler's spouse, Dr. Jane Selverstone, had previously been offered a position in the Department of Earth and Planetary Sciences. She was unwilling to accept the offer, however, unless her spouse was also guaranteed employment. The Office of Equal Opportunity Programs approved the request and Dr. Gutzler accepted the offer. He joined the faculty in the Fall, 1995. Dr. Gutzler's background in the analysis of low-frequency atmospheric variability, large-scale ocean-atmospheric interactions, climate change, tropical meteorology, radar meteorology, and atmospheric predictability will enhance the missions of both departments.

In the Fall of 1994, the department readvertised for the open department chair position. Two candidates were interviewed in January. Paul Matthews was offered the job and joined the department in the Fall, 1995. Dr. Matthews has a background in water resources, natural resource policy, public lands, and mineral resources. With this addition the department has seven members, two of which are half-time.

In June, Dr. Snead announced that he would retire in January, 1996. Two new faculty members will be hired to begin in the Fall of 1996.

3. OTHER SIGNIFICANT DEVELOPMENTS

3.1 SOUTHWEST INSTITUTE

The eleventh annual Southwest Institute was organized and operated by Associate Professor Williams. Hosted in 1995 by New Mexico Tech in Socorro, graduate and undergraduate credits were offered by both New Mexico Tech and the University of New Mexico. The format of the program was changed from a two-week lecture series and a one-week field program providing six hours of academic credit, to a combination lecture and field program over an eight-day schedule that would earn a student a maximum of three hours of credit. This format enabled Professor Williams to provide two separate programs: one on **The Gateway Plains** and the **Santa Fe Trail** and the other on **The Canyon Country of the Colorado Plateau**. The eight-day versus three-week time period also encouraged more out-of-state participants (57% of the 123 students), and the programs were endorsed nationally by the National Science Teachers Association and the National Council for Social Studies Teachers. The interdisciplinary lecture series for each program was held at New Mexico Tech (three sessions), followed by a six-day field course accompanied by field faculty representing five different disciplines. Associate Professor Williams organized and edited a 130-page collection of readings and reference material for the Santa Fe Trail program and a 220-page classroom collection for the Canyon Country course. Associate Professor Williams also created 240- and 170- paged field guides for each program respectively.

3.2 EARTH DATA ANALYSIS CENTER (EDAC)

The EDAC is a division of UNM's Institute for Applied Research Services, engaged in remote sensing and geographic information systems (GIS) development. For the past few years, the EDAC hosted a series of GIS courses for the department. In addition, the EDAC served as a focal point for graduate and undergraduate student employment. In 1995, ten graduate and four

undergraduate students were so employed. Nine graduate students used or are using the EDAC's equipment for their theses.

3.3 SPATIAL DATA ANALYSIS LABORATORY

The Spatial Data Analysis Laboratory was successfully funded under NSF DUE-9551046: "Instrumentation for an Undergraduate Spatial Data Analysis Laboratory." The Spatial Data Analysis Laboratory (SDAL) is a state-of-the-art facility designed to provide undergraduate and graduate students with hands-on experience in Geographic Information Technologies (Geographic Information Systems, Image Processing, and Global Positioning Systems) and to support faculty research in these areas. Laboratory computer facilities are designed around twin SUN SparcStation 712 units networked to 10 SUN X-terminals. In addition, the SDAL has 5 Pentium based IBM clones which can be used as stand-alone machines or, through the use of X-terminal software, networked to the SUN workstations to provide additional workstation access. The SDAL has, in addition to its main computing units, peripheral devices that allow for rapid input and output of raw data, maps and imagery. These include tape-drives, CD-ROM units, a full size digitizing table, individual digitizing tablets, a scanner, black and white as well as color printers, and a full size A-E color plotter. Besides storage on individual machines, the SDAL has a RAID storage unit with 12 GB of storage (expandable to 60 GB). Like the RAID unit, all SDAL equipment was chosen so it could be easily and cheaply upgraded.

The laboratory has access to GIS, Image Processing, and Statistics software products, including: ARC/INFO (GIS), MapInfo (GIS), S+ (statistical software link to ARC/INFO), and ER-Mapper (Image Processing).

Through pricing discounts, special educational purchase agreements, and cooperative deals, the $140,000 allocated for SDAL development has been used to purchase ~$250,000 in hardware and software.

4. PUBLICATIONS AND PROFESSIONAL ACTIVITIES

4.1 PUBLICATIONS AND PRESENTATIONS

Cullen, B.T. (1994). *Delimitation of Franchise Territories: An Albuquerque Case Study*, Papers and Proceedings of the Applied Geography Conference, October.

Cullen, B.T. (1994). *The Role of Forests in the Economic Development of Marginal Regions*, Proceedings Of The Study Group On Development Issues In Marginal Regions.

Cullen, B.T. (1995). *Conflict Over The Rangeland of New Mexico*. Annual Meeting, Association of American Geographers, Chicago, March - presentation.

Cullen, B.T. (1994). *'Tragedy of the Commons' or 'Wise Use': The Grazing Controversy in New Mexico*. Fall Meeting, Southwest Division, Association of American Geographers, Hot Springs - presentation.

Cullen, B.T. (1994). *Franchising: A Question of Territory*. Regional Meeting, International Geographical Union, Prague. With Curtiss, R. - presentation.

Cullen, B.T. (1994). *Grazing on Public Land: A New Mexico Case Study*. 1994 Study Group On Development Issues in Marginal Regions Meeting, Cesky Krumlov (accepted for publication).

Gutzler, D.S. (1995). *Daily Variability of Lower Tropospheric Winds Over the Tropical Western Pacific*. Journal of Geophysical Research (in press).

Gutzler, D.S. (Publication pending). *Low Frequency Ocean-Atmosphere Variability Across the Tropical Western Pacific*. Journal of the Atmospheric Sciences (accepted for publication).

Matthews, O.P. (1995). *International Water Allocation Agreements--Some Lessons from Interstate Compacts in the Western United States*, with Zack McCormick as second author, Water Resources and Environmental Hazards: Emphasis on Hydrological and Cultural Insight in the Pacific Rim, Raymond Herrmann, Roy C. Sidle, William Black, and A. Ivan Johnson (eds), AWRA. UNM affiliation listed.

Matthews, O.P. (Publication pending). *Changing the Balance in Western Water Law? Montana's Reservation System*, with Mary McNally as first author, Natural Resources Journal. UNM affiliation listed.

Matthews, O.P. (1995). *A Review of Western Water Sharing Agreements*, with Zack McCormick as second author, ASCE Conference Proceedings.

Matthews, O.P. (1995). *Environmental Restoration Under the Model State Water Code*, Environmental Restoration, Proceedings of the 1994 UCOWR Annual Meeting.

Matthews, O.P. (1995). *Resolving Transboundary Water Conflicts Along the Arkansas-Oklahoma Border*, Water Resource Studies Along the Arkansas-Oklahoma Border, Kenneth F. Steele (ed.), Arkansas Water Resources Center Publication No. MSC-168, Fayetteville.

Matthews, O.P. (1994). *Water Quality in Indian Country*, Applied Geography Conferences, 17:69-73.

Morain, S.A. Refer to the Earth Data Analysis Center (EDAC) Annual Report.

Scuderi, L.A. (1995). Application of artificial neural networks in climatology: A case study of sunspot prediction and solar climate trends. *Geographical Analysis* 27: 42-59 (with S. Gopal).

Scuderi, L.A. (1994). Solar influences on Holocene treeline altitude variability in the Sierra Nevada. *Physical Geography* 15: 146-165.

Scuderi, L.A. (1995). Book review of "Desert Geomorphology." *Annals of the Association of American Geographers*. In press.

Snead, Rodman E. (1994). *Physical Geology: A Collection of Instructional Images on CD* (Features 90 of Dr. Snead's slides along with detailed captions).. JLM Visuals prepared a 653 picture CD RAM.

Snead, Rodman E. (In review). *The Natural Environment*, M. Rahman (ed.). Book chapter in South Asia textbook. Wiley & Sons.

Snead, Rodman E. (1995). *Argentina.* National Council of Geographic Education and Great Plains National Association (NCGE/GPN), Lincoln, Nebraska. Features 50 slides with detailed captions.

Snead, Rodman E. (In Progress). *Rapidly Changing Environments in the West Indies*. Slide set for the National Council of Geographic Education and Great Plains Association.

Williams, J.L. (1995). *Field Guide*, Southwest Institute.

Williams, J.L. (1995) (ed.) *Readings and Reference Material*, Southwest Institute

4.2 OUTSIDE PROFESSIONAL ACTIVITIES

Dr. Cullen currently holds the position of Associate Editor, The Social Science Journal, 1994-present. Other professional positions held by Dr. Cullen include: Co-Section Coordinator, Geography, Annual Meeting, Western Social Science Association, Albuquerque, April 1994; Chair of a sessions entitled "Economic Geography and Resource Allocation" and "GIS Analyses and Issues," Annual Meeting, Western Social Science Association, Albuquerque, April 1994; Judge for the student paper competition at the meeting of the Southwest Division, Association of

American Geographers, 1990-1995; and Joint organizer and chair of a session on "Regional Economic Development," Applied Geography Conference, 1990-1994.

Dr. Gutzler served as Editor of the Journal of Climate and is now finishing his term as Editor at UNM. He served and remains co-chair of the Large-Scale Atmospheric Working Group for analysis of data from the international Coupled Ocean-Atmosphere Response Experiment.

Dr. Matthews presented papers to several professional societies including the American Water Resources Association, Honolulu; American Society of Civil Engineers, Boston; Association of American Geographers, Chicago; American Water Resources Association, Chicago; Southwest Division, Association of American Geographers, Hot Springs, AR; Applied Geography Conference, Akron, OH; and the University Council on Water Research, Big Sky, MT. Dr. Matthews served and continues to serve on several professional boards including: Advisory Board, Interamerican Dialog on Water Management; Vice chair, Policy Committee, Universities Council on Water Resources; Associate Editor, Water Resources Bulletin; Shared Use of Transboundary Water Resources Task Committee, American Society of Civil Engineers; and Water Regulatory Standards Committee, American Society of Civil Engineers.

Dr. Stan Morain's outside professional activities can be found in the EDAC Annual Report.

Dr. Louis Scuderi is currently reviewing articles that appear in the following journals: Arctic and Alpine Research (multiple papers); Quaternary Research; The Annals of the Association of American Geographers; and Radiocarbon. Dr. Scuderi is also a reviewer for NSF proposals in: Solar Terrestrial; Climate Dynamics; Geography and Regional Science; and Polar Programs. He has also presented papers at: 1995 Association of American Geographers Meeting: Chicago; and 1995 IUGG Meeting Boulder, Colorado.

Dr. Williams' outside professional activities are covered under Section 3.1, Southwest Institute (page 4).

4.3 OUTSIDE SPONSORED RESEARCH

Gutzler, D.S. "An Assessment of Atmospheric Variability in TOGA COARE," NOAA office of Global Programs, $89,300. Third and final year of funding transferable to UNM; funding level not yet determined.

Matthews, O.P. (1995). "Oklahoma Metadata Project," USGS, $25,000. Not transferable to UNM.

Matthews, O.P. (1995). "Oklahoma Water Resources Research Institute." USGS, $78,545. Not transferable to UNM.

Scuderi, L.A. NSF DUE-9551046: "Instrumentation for an Undergraduate Spatial Data Analysis Laboratory" $40,000 with $110,000 matching funds from the University of New Mexico.

Scuderi, L.A. NSF SBR95-23600: "The Impact of Climate Change on US Agriculture" $185,000 over three years. Coinvestigators: Robert Kaufmann and Sucharita Gopal, Boston University.

Scuderi, L.A. Research Allocation Committee Large Grant: "Development of a Geographic Information Database for Paleoclimatic Research in American Southwest" $4938. Half of this funding was used to support a graduate student (Donald Helfrich), the remainder to purchase equipment.

5. GOALS FOR 1995-1996

During the next year, the department will be hiring two new faculty members. One position is a resource geographer with a specialization in the interaction between humans and the environment (modeling the uses and abuses of natural resources: water, land, energy, minerals, and/or air). The second position is a physical geographer with a specialization in climatology, biogeography, and/or hydrology. These two positions are critical if the departmen is to develop the critical mass required for implementing a Ph.D. program. The department will work hard to develop a suitable applicant pool in order to find the best possible candidates to achieve this goal.

We will also begin revising our curriculum. This is looked on as a two-year process. Many courses can now be revised to reflect the recent faculty additions and the department 's new areas of interest. The process cannot be completed, however, until the two new faculty have been hired.

The Spatial Data Analysis Laboratory will be made operational this year. This will allow the department to offer courses in GIT. This should increase the department 's visibility on campus. It will also add to our research capability. In addition, the new lab will provide an excellent location for conducting GIT short courses. Making the lab functional will be a time-consuming task, and the department will soon need a technician to help in its management.

In order to be in a position to offer a Ph.D. program in the future, the department needs to increase its research productivity. One goal is to increase the number of outside grants submitted by department members. Another is to increase the number of referred publications.

The department will also review existing policies, including those related to tenure and promotions, to ensure they reflect the current aspirations of the faculty. As a department "in transition," this review and revision process is expected to take several years.

The department will also try and increase the number of graduate and undergraduate students in the program. Most undergraduates become majors after taking a course in geography. For that reason, the department will strive to offer the highest quality undergraduate courses possible. The department will also continue to develop its colloquim series.

As a department that is growing and changing, many of the goals listed are long-term. However, during this next year progress will be made.

College of Arts and Sciences

The Report of The Department of History

July 1, 1994 - June 30, 1995

Jonathan Porter, Chair

GENERAL DEPARTMENTAL INFORMATION

A. Significant Achievements

1. Graduates

	Summer 1994	Fall 1994	Spring 1995
B.A.'s	10	16	23
M.A.'s	1	1	9
Ph.D.'s	1	5	0

Ball, Larry (Adv. Hutton), Fall 1994

Baxter, John (Adv. Kessell), Fall 1994

Broughton, Bill (Adv. Kessell), Fall 1994

Huggard, Christopher (Adv. Nash), Summer 1994

Pasztor, Suzanne (Adv. Hall), Fall 1994

Sykes, Bonnie (Adv. Rabinowitz), Fall 1994

2. Course Offerings

Summer 1994

Course No.	Course Name	No. of Sections	SCH
101	Western Civilization	1	186

102	Western Civilization	1	87
161	History of the U.S.	1	78
162	History of the U.S.	1	123
260	History of New Mexico	1	159
309	Historiography	1	30
315	Hist./Women-Anc. World	1	75
320	St./Biog. & History	1	9
320	St./Comp Ethnohist.	1	13
320	St./Afri. Amer. Hist.	2	39
325	Reform Era 1500-1600	1	54
333	FR Rev-Nap-1789-1815	1	57
370	American Diplomacy	1	63
493	Rdg-Rsrch in Honors	2	6
496	Undergrad. Readings	5	117
551	Problems	5	12
552	Problems	1	14
599	Masters Thesis	3	9
699	Dissertation	2	9

Fall 1994

Course No.	Course Name	No. of Sections	SCH
101	Western Civilization	6	2328
102	Western Civilization	3	711
161	History of the U.S.	8	1809
162	History of the U.S.	3	528
230	USSR People-Pol.Cult.	1	12
251	Traditional Eastern Civ.	1	126

260	History of New Mexico	1	270
280	US Mexico Border	1	138
281	Hist-Colonial Lat Am	1	78
284	Afro-Amer History I	1	42
301	Jewish History to 1492	1	102
309	Historiography	2	132
312	Phillip and Alexander	1	231
313	Greece	1	300
317	Hist of Science to 1543	1	93
320	Studies in History	3	333
323	Renais. Era 1300-1520	1	198
332	Eur.18th. Cent. 1700-1788	1	66
335	Mod Europe 1890-1939	1	117
347	Old Russia 9th-17th C	1	78
349	Russ-1855 to Present	1	93
350	Traditional China	1	117
356	Islamic Middle East	1	96
360	Hist. of New Mexico	1	183
361	Am Urban History to 1870	1	63
364	Political Hist. of US	1	135
373	Hist. Amer. Frontier	1	198
384	Inter. Amer. Relations	1	120
397	Mexico to 1821	1	156
403	Hist. of WWII Era	1	318
425	Hist. of Modern Med.	1	129
453	Asian Studies Thesis	1	6

468	20th. C. Amer 1898-1932	1	63
475	Amer Cul/Soc 1607-1860	1	72
479	Women in the US West	1	138
489	Brazil 1500 to Present	1	21
491	Internship	1	3
493	Rdg-Resrch in Honors	1	3
494	Senior Thesis	1	3
495	Undergrad Hnrs. Collq.	1	12
496	Undergrad Rdgs-Hist	4	9
500	S/Hist Res Meth	1	18
510	T/US & USSR in Carib	3	90
521	Sem & Stu in Med. History	1	24
544	Sem History of Women	1	36
551	Problems	10	72
563	Sem & Stu US Urban Hist.	1	30
570	Sem & Stu US Diplm Hist.	1	24
579	Sem Southwest Hist	1	33
599	Masters Thesis	12	42
699	Dissertation	14	186

Spring 1995

Course No.	Course Name	No. of Sections	SCH
101	Western Civilization	1	480
102	Western Civilization	6	1950
161	History of the U.S.	3	456
162	History of the U.S.	8	1737

204	Greece & Rome	1	195
252	Modern Eastern Civil.	1	123
260	History of N.M.	1	297
282	Mod Latin Amer Hist	1	63
285	African Amer Hist II	1	30
302	Modern Jewish Hist.	1	78
309	Historiography	2	153
314	Rome	1	429
318	Hist Sci From Enlight	1	78
320	Studies in History	9	744
325	Reform Era 1500-1600	1	129
333	FR Rev -Nap-1789-1815	1	87
336	Europe since 1939	1	141
348	Romanov Russ to 1855	1	117
351	Early Modern China	1	45
358	Mod Mid East From 1800	1	117
360	History of New Mexico	1	189
362	Amer Urban Hist from 1870	1	72
375	Military Hist of US	1	390
380	Hist of SW-Span Per	1	195
383	Soc & Devmt. Lat Am	1	108
386	Western Films	1	156
393	Span SO Amer to 1824	1	81
398	Mexico since 1821	1	138
456	Islam	1	81
466	The Civil War Era	1	210

469	20th C Amer 1932-PR	1	150
485	Intell Hist LA	1	60
491	Internship	1	6
493	Rdg-Resrch in Honors	2	6
494	Senior Thesis	4	6
496	Undergrad Rdgs-Hist	3	9
500	Sem Hist Resrch Meth	1	21
510	Sem & Stu in Hist	1	33
547	Sem & Stu Mod Russ Hist	1	33
548	Sem & Stu Iberian Hist	1	30
552	Problems	8	42
564	Sem & Stu Am Intel & Soc Hist	1	30
569	Sem US Social Hist	1	39
573	Sem Amer Western Hist	1	30
579	Sem SW Hist	1	24
582	Sem/Recent LA Hist	1	42
584	Sem Prob Mod LA	1	6
599	Masters Thesis	10	42
699	Dissertation	12	206

3. Personnel & Administration

a. Employees

<u>Permanent</u>:

Abeyta, Liz	Staff Assistant: Graduate Secretary
Berthold, Richard M.	Associate

	Professor: Ancient History
Bieber, Judy	Assistant Professor: Brazil, Latin America
Bokovoy, Melissa	Assistant Professor: Modern Europe
Campbell, Patricia	Administrative Assistant: Western History Association
Connell-Szasz, Margaret	Professor American Indian History
Etulain, Richard W.	Professor: Western America, Literature of the American West
	Director: Center for the American West
Feller, Daniel M.	Associate Professor: and

	Graduate Coordinator Jacksonian Era, Civil War, Reconstruction
Hall, Linda B.	Professor: Modern Latin America, Modern Mexico
Hayoz, Loretta	Clerical Specialist V: Receptionist, Secretary, Typist
Himmerich y Valencia, Robert	Associate Professor: Colonial Latin America Editor, New Mexico Historical Review
Hutton, Paul A.	Associate Professor: Military History, Western America Executive Director Western History

	Association
Jameson, Elizabeth	Associate Professor: Western America, U.S. Social
Kern, Robert W.	Professor: Iberian History Modern Europe
Kessell, John L.	Professor: Spanish Southwest, Borderlands
Lear, Anne	Staff Assistant: New Mexico Historical Review
Maciel, David	Professor: Chicano History, Modern Southwest and Mexico
Martinez, Yolanda	Department Administrator: Department Executive Secretary and Manager

McClelland, Charles E.	Professor: Modern Germany, European Intellectual History
Moy, Timothy	Asst. Professor: Science & Technology
Porter, Jonathan	Professor Modern China, East Asia
Pugach, Noel H.	Associate Professor: U.S. Diplomatic History
Rabinowitz, Howard N.	Professor: American Urban History, The South
Risso, Patricia	Associate Professor: Middle East Islam, South Asia
Robbins, Richard	Professor: and Chairman Russian History
Roebuck, Janet	Professor: English

	History, Urban History
Scharff, Virginia	Assistant Professor: U.S. Social, Women's History
Semo, Enrique	Professor: Colonial Latin America, Mexico
Slaughter, M. Jane	Associate Professor: and Women's History, Sexuality, Modern Europe
Spidle, Jake W.	Associate Professor: German History, Africa, History of Medicine
Steen, Charlie R.	Associate Professor: Early Modern Europe, France
Sullivan, Donald D.	Associate Professor: Medieval and

	Renaissance Europe
Szasz, Ferenc M.	Professor: American Social and Intellectual History
Tyson, Cindy	Part-Time, Clerical Specialist IV
Yazawa, Melvin	Associate Professor: Colonial and Revolutionary America

Temporary:

Ablard, Jonathan	Graduate Assistant
Andres, Benny	Graduate Assistant
Balkenende, Theresa	Reader (Spring)
Bello, Robert	Graduate Assistant
Burton, Sophie	Graduate Assistant
Cocron, Fritz	Visiting Professor
Chamberlain, Kathleen	Graduate Assistant
Christy, Raphael	Graduate Assistant
Darcy, Yvonne	Reader(Fall/Spring)
Drolet, Raymond	Graduate Assistant

Ferrante, Deborah	Reader (Fall)
Gentry, Thomas	Graduate Assistant
Helfferich,Tryntje	Reader (Spring)
Herrera, Carlos	Reader (Spring)
Herron, John	Reader (Fall/Spring)
Hughes, Scott	Research Assistant (NMHR)
Holland, Al	Graduate Assistant
Hunner, Jon	Graduate Assistant
Karmen, Abbe	Teaching Asst.(Spring)
Key, David	Reader (Fall/Spring)
Key, Doug	Reader (Fall/Spring)
Kirk, Andrew	Graduate Assistant
Lalonde, Pamela	Graduate Assistant
Leversee, Juneal	Graduate Assistant
MacMahon, Sandra	Graduate Assistant
Matthews-Lamb, Sandra	Teaching Asst.(Spring)
Mitchell, Pablo	Graduate Assistant
Pan, Denise	Graduate Assistant
Papponi, Janice	Reader (Fall/Spring)
Rector, William	Graduate Assistant
Sedillo, Joseph	Reader (Spring)
Sullivan, Michael	Graduate Assistant
Tanner, Louis	Reader (Fall)
Wagner, Leslie	Reader (Fall/Spring)
Will, Martina	Graduate Assistant

b. Administration

The History Department administration is directed by the Chair and the Department Administrator. The Chair is assisted by the Assistant Chair, and the Department Administrator is assisted by two full time secretaries. The graduate program is supervised by the Graduate Coordinator, who advises the Chair, and the Department Administrator. The undergraduate program is administered by the Undergraduate Advisor. The Chair, Administrative Assistant, Assistant Chair, Graduate Coordinator, and Undergraduate Advisor constitute the Executive Committee, which advises the Chair on the formulation of policy and major administrative matters. Administration and formulation of policy in specific areas is delegated to six standing committees and five individual assignments. Two of the committees (Graduate Entrance Committee and Undergraduate Program Committee) are elected by the faculty: the other committees and the individual assignments are appointed by the Chair. A Salary Committee is appointed annually by the Chair, with an additional member elected. The faculty are divided into five Sections reflecting geographical divisions specializations: America, American West, Europe,

Latin America, and Asia. The senior faculty member of each section is usually designated by the Chair as Section Head, and advises the Chair on matters concerning the Section. The Sections meet to decide matters of curriculum planning, scheduling, and staffing priorities.

Persons serving in responsible administrative positions in the department in 1994-95 were:

Chair:	Jonathan Porter
Department Administrator:	Yolanda Martinez
Assistant Chair:	Mel Yazawa
Graduate Coordinator:	Richard Robbins
Undergraduate Advisor:	Charlie Steen
Affirmative Action Coordinator:	Linda Hall
American Section:	Gerald Nash
America West:	Richard Etulain
Europe:	Robert Kern
Latin America:	Linda Hall
Asia:	Jonathan Porter

4. Activities Beyond the Formal Curriculum

   a. The Department held its semi-annual Open House for all students on August 18 (Fall) and January 12 (Spring), all day in the Common Room. Most of the faculty attended to advise, offer guidance or simply to socialize.

b. Dr. Frank H.H. King delivered a Lecture on "Hong Kong: Present Policy and Future Prospects" Comments by: Dr. J Porter,Lin Ye (Hist. Grad. Student); Prof. Noel Pugach (Moderator)

c. Dr. George Herring-University of Kentucky "VietNam: The War that never goes away." Sponsored by the Asian Studies Prog.;Dept. of History; Dept. of Pol. Sci.

d. Professor Juergen Kacka "Distance and Rapprochment History and Social Sciences since the 1950's." Sponsored by European Studies.

e. Professor Jonathan Israel delivered a lecture on "Why Did the Dutch Spanish Global Conflict Continue For So Long."

f. Panel disscussion sponsored by the departments of History,Political Science and Russian Studies, "The New Chapter in U.S. Russian Relations: Opportunities and Challenges."

g. <u>Graduate Student Conference</u>

<u>Session 1:</u> **Professor Ference Szasz**

Robert Bello, "The Idea of the New World in 16th Century Europe, ca. 1580-1630"

Jerry Davis, "From Land Allotment to Reclamation: A History of the Gay Head Wampanoag Indians and Their Efforts to Regain Lands on Martha's Vineyard, Massachusetts.

Session 2: **Professor Elizabeth Jameson**

Pablo Mitchell, "Queen for a Day: Margaret/Margarita Otero Harrison and Intermarriage in Turn-of-the Century Albuquerque."

Denise Pan, "Commercializing the Spanish Past: The Coronado Cuarto Centennial, 1935-1940."

Session 3: **Virginia Scharff**

Andrew Kirk, "Base, Structure, and Superstructure:Theoretical Assumptions in Environmental History."

Jon Hunner, "Chaos Revisited : Using Complexity Theory in social Analysis."

Session 4: **Richard Etulain**

Abbe Karmen, "A Woman's Place is in the Home--Showing It to Prospective Buyers."

Rob Williams, "Huts of Time: Wallace Stegener's Historical Legacy."

h. History Undergraduate Association presents "The Lions of Capitalism."

i. Professor Quintard Taylor, University of Oregon "African Americans in the American West."

j. The History Undergraduate Association "Restoring the colony, then and now: New Mexico in the 17th Century" by Professor John Kessell.

k. Dr. John Hart delivered a lecture on "Americans

in Mexico after the Civil War."

l. Dr. Ramon Gutierrez, visiting distinguished Professsor of History and holder of the PNM chair presented a Colloquium, Los Hermanos Penitentes: Ethnicity and identity in NM. Sponsored by the Department of History, College of Arts and Sciences and the Public Service Company of New Mexico Foundation.

m. The Tenth Annual Calvin Horn Lecture Series was held in November. "Courtship, Marriage, and Divorce: Western Style." presented by Dr. Glenda Riley.

n. Dr. Li Ping Zhu and Mr. Ye Lin delivered a joint lecture, "China in the Gilded Age: Reflections on Contemporary China."

o. Professor Ramon Gutierrez, PNM Chair delivered a lecture on :"Decolonizing the Body: Kinship and the Nation."

p. Dr. Kristen Parris delivered a lecture, "Between a Nation and Locality: Wenghov" presented by the department of History and the Asian Studies Program.

5. Awards

a. Elaine Carey was the recipient of the Graduate

Achievement Award.

b. Jeffrey T. McKillop and Emma Susan Schulte were awarded the Grunsfeld Award.

c. Thomas Gentry received the Kennedy Award.

d. Sandra Mathews-Lamb was the recipient of the Dean's Dissertation Year Fellowship, and the Phillips Fellowship.

e. Jonathan Ablard received the Title Six Fellowship.

f. Nicholas Ciotola received the Challenge Assistantship.

g. Barbara Sommer received a Fulbright Fellowship.

h. Frederick Martinez received a Graduate Scholars Fellowship.

B. Significant Plans and Recommendations

Significant Plans and Achievements

During the 1994-95 academic year the department began to consider and implement the recommendations arising from the previous year's outside unit review (see last year's annual report). Among these recommendations were some restructuring of the undergraduate program, the introduction

of discussion sections in the lower division survey courses, and limitation of admissions to the graduate program. Because, in any case, the undergraduate program won high praised from the review team, the first will involve a long term process of incremental changes, but we began by reconsidering the requirement for the Historiography course and have begun to try to standardize the ways the course is given by its various instructors. Second, we inaugurated a pilot project for 1995-96 to introduced discussion sections into one American history survey. The results will be evaluated during the year and conclusions regarding broader implementation drawn from them. Third, we determined to limit further the number of graduate students admitted to our program. This proved far from easy, partly because the number of applications has been growing the quality of the applicants increasing. For the incoming 1995-96 graduate student cohort, the result was that we admitted approximately the same number of graduate students as the previous academic year, but

the selection process was far more exigent because the selection was made from such an excellent pool of applicants.

At the end of 1994, Gerald Nash, UNM Distinguished Professor retired from the university and the History Department. Professor Nash's retirement has left a large and important hole in our undergraduate and graduate programs. Fortunately, the college agreed that this position was of vital importance and approved a search for Professor Nash's replacement at the senior level. In the meantime, in order to allow adequate time to accomplish this crucial search, we advertised for and hired a temporary replacement for Professor Nash for the 1995-96 academic year. Our task for the coming year will be to find a historian of Twentieth Century America and the American West who will enable the department to preserve and build on its excellent national reputation in American history, particularly as the premier program in the history of the American West.

Finally, 1994-95 was the last year my nine year term as Chair of the department. The process of selection of a successor proceeded smoothly during the year, and Professor Richard Robbins was named the new chair. His term begins August 1, 1995. I would like to thank the faculty for the support, patience, and good will it showed me during my long term, and above all to thank Yolanda Martinez, Department Administrator, in whose very capable hands the department continues to go forward. It was a great privilege to work with her as my colleague.

C. Affirmative Action

The present ethnic and gender composition of the History Department regular faculty and graduate students is shown in the following tables:

Faculty (tenure stream):		total = 30
Male:	21	(70%)
Female:	9	(30%)
Minority:	4	(13%)

Graduate Students:		total = 89
Male:	44	(49.4%)
Female:	45	(50.6%)
Minority:	12	(7.42)
Hispanic:	10	(8.9%)
American Indian:	1	(1.1%)
Black:	1	(1.1%)

D. Appointments to Staff

1. Visiting or Part-Time Appointments

   a. Fritz Cocron, Visiting Lecturer, Western Civilization, Fall 1994/Spring 1995.

   b. Thomas Gentry, Teaching Associate, History of the U.S., Summer 1995.

   c. Frank Grant, Visiting Lecturer, History of the U.S., Spring 1995.

   d. Chris Huggard, Visiting Lecturer, History of the U.S. Spring 1994.

   e. Abbe Karmen, Teaching Associate, Spring 1995.

   f. Alfred Lopez, Teaching Associate, History of the U.S. and Western Civilization, Fall 1994.

   g. Sandra Mathews-Lamb, Teaching Associate, History of New Mexico, Spring 1994/Summer 1995.

   h. Marina Oborotova, Visiting Professor, Russia and Latin America, Spring 1995.

i. Li Ping Zhu, Visiting Lecturer, History of the U.S., Spring 1995.

E. Separation from Staff

a. Gerald Nash, Distinguished Professor.

b. Debra Nickel-Cardoza, Clerical Specialist V., New Mexico Historical Review.

c. Florence Goulesque, Clerical Specialist V: Center for the American West.

F. Sponsored Research

1. Five professors submitted 7 proposals (17% of current faculty).

2. Of these submitting proposals, 2 obtained awards (40%).

Department of Linguistics
College of Arts and Sciences

ANNUAL REPORT
1 July 1994 - 30 June 1995

Jean E. Newman, Department Chair
(Report prepared by Garland D. Bills, Department Chair effective 1 August 1995
in the absence of a report prepared by the Chair responsible for the period of this report)

1. Significant developments during 1994-95

1995 Linguistic Institute

Much energy throughout this academic year was devoted to hosting the 1995 Linguistic Institute sponsored by the Linguistic Society of America and under the direction of Professor Joan Bybee. Held over a six-week period, June 26-August 4, 1995, this Institute offered over fifty three-credit hour courses taught by an international faculty of more than sixty prominent scholars. More than 400 students and nearly 200 visiting scholars from around the world attended these six-week courses. In addition, the Institute included 23 scholarly conferences and numerous special lectures and workshops that brought hundreds of other linguists to UNM for shorter stays. The UNM Institute has been recognized throughout the linguistics profession as a tremendous success and has attracted very favorable attention to this Department and this University.

A separate detailed report on the 1995 Linguistic Institute prepared by Professor Bybee is attached as Appendix A.

Ph.D. program

The newly approved Ph.D. in Linguistics was officially initiated in Fall 1994 with three students enrolled (Dagmar Jung, Melissa Macpherson, and Joanne Scheibman). Two additional doctoral candidates were accepted into the program during the year: Paromita Chakraborti for Spring 1995 and Terry Janzen for Fall 1995.

Department Chair

In October, 1994, Jean Newman announced her intent to step down as Department Chair at the end of her current appointment. Concurring with the recommendation of the Department faculty, A&S Dean William Gordon appointed Garland Bills to a four-year term as Chair effective 1 August 1995.

2. Significant plans and recommendations for the near future

Faculty

Because of the teaching demands on the Signed Language Interpreting (SLI) program faculty, the Department's highest priority in faculty development for the past two years has been the appointment of an American Sign Language (ASL) lecturer. A search to fill this position has been approved and we hope to make an appointment beginning Fall 1996. The addition of this lecturer position will finally permit the SLI faculty to update the curriculum and to offer an

undergraduate minor in Signed Language Studies, enhancements of the program that have been planned for several years, and also perhaps to contribute to the graduate program in Linguistics.

In addition, to alleviate some of the burden on Professor Phyllis Wilcox, the coordinator of the SLI program, part-time instructor funds were requested (and approved) to reduce her teaching load by one course each semester.

With the departure of Professor Jean Newman in the middle of the coming 1995-96 academic year, a replacement position in psycholinguistics becomes a top priority. Authorization to conduct the search to fill this position effective Fall 1996 has been approved.

Student recruitment

With the initiation of the new doctoral program and the restructuring of the Linguistics curriculum at both undergraduate and graduate levels, little attention has been paid over the past couple of years to student recruitment. Among our greatest immediate needs is to develop descriptive materials for the graduate program and to aggressively recruit students, especially minority students. The success of the 1995 Linguistic Institute forms a very positive basis for a recruitment campaign.

Space

The Department space on the fifth floor of the Humanities Building is severely cramped. Teaching assistants and part-time faculty have had to be given desks to hold office hours in faculty offices and in the Department's main office!

Several years ago the Department's seminar room had to be converted to do double duty to house the Department's library of linguistics books (not to mention a third function of storage of Department equipment and materials). The addition of more than $10,000 in books donated by publishers exhibiting at the 1995 Linguistics Institute has created a serious problem for the library function. In addition, lacking any other suitable space, the computer for graduate student use acquired through a special grant from the Office of Graduate Studies had to be placed in this library/seminar/storage/now-computer room.

In the immediate future an office space will have to be provided for the new part-time instructor in the SLI program, as well as for the new ASL lecturer in Fall 1996.

A major challenge for the next year will be to explore ways of arranging space and acquiring financial support to implement space change so that the Department can adequately support its teaching and research mission.

SLI teaching lab

During the 1994-95 academic year the Signed Language Interpreting faculty, particularly Professor William Isham, pursued plans to create an interactive video-audio laboratory for teaching in the SLI training program. Sophisticated visual support for instruction is essential in the SLI program. Currently students have nowhere to view video tapes other than to crowd into faculty offices, when they are available. The planned facility will include equipment to allow students to observe video tapes and produce signs which can be monitored by the professor over a monitor.

The director of the Language Learning Center has agreed that one of the laboratory rooms in that center may be renovated for use as the SLI teaching lab. It is hoped that during the

1995-96 academic years the funding can be secured for the renovation and purchase of equipment that will make the SLI teaching lab a reality.

3. Appointments to staff

The position of Department office manager was reclassified as Department Administrator I effective 1 July 1994, and Barbara van Buskirk, who had been working in the Department in a temporary capacity, was hired as the Department's administrator on a permanent basis in December 1994.

The SLI program interpreter/assistant, Celia McCrossen-Klaus, was increased from .75 to 1.0 FTE effective 1 July 1995.

Following a national search that attracted a pool of over forty highly qualified applicants, Melissa Axelrod was hired at assistant professor rank beginning Fall 1995 to fill the position in Native American linguistics created by the resignation of Mary Ann Willie.

Holding part-time teaching positions in the Department during the 1994-95 academic year were Tony Begay (Navajo), Dr. Kathleen Houlihan (Linguistics), Jeanne Page (SLI), Jo Santiago (SLI), Mary Schultz (SLI).

4. Separations from staff

Professor Jean Newman announced that she wll be resigning from the University at the end of the Fall 1995 semester in order to accept a faculty position in the University of Waikato in Hamilton, New Zealand.

One of the Department's associated faculty, Otto Santa Ana of the Department of Anthropology, resigned just before the start of the Fall semester to take a position at the University of California at Los Angeles.

5. Faculty activities

Outside sponsored research

The following grants were administered through the Department of Linguistics during the award period:

Garland Bills and Neddy Vigil (Language Learning Center), "Linguistic atlas and archive of the Spanish of New Mexico and southern Colorado", funded by the National Endowment for the Humanities, two awards totaling $317,000, 1 June 1991 to 30 November 1994.

Joan Bybee, "Conference on new methods in comparative aphasiology", funded by the National Institutes of Health, $30,000, 1 January 1995 to 31 December 1995.

Joan Bybee, Lise Menn (University of Colorado, Boulder), Dan Slobin (University of California, Berkeley), and Ruth Berman (Tel Aviv University), "Workshop on the interaction of morphosyntax and lexicon in the acquisition of narrative discourse", funded by the National Science Foundation, $37,279, 1 March 1995 to 31 January 1996.

Joan Bybee, Janet Patterson (Communicative Disorders), Laurence Leonard (Purdue University), and Lise Menn (University of Colorado, Boulder), "Conference on specific language impairment and Williams' Syndrome", funded by the National Science Foundation, $21,247, 1

January 1995 to 30 November 1995.

Phyllis Wilcox, "RSA Region IV interpreter training", funded by the University of Arkansas, $2,500, 1 January 1995 to 30 September 1995.

Phyllis Wilcox, Joan Bybee, and Sherman Wilcox "Linguistics training for signed language interpreters", funded by the National Science Foundation, $124,532, 15 August 1994 to 31 January 1997.

Sherman Wilcox, "Language and gesture workshop", funded by Gallaudet University, $15,000.

Roseann Willink, funded by Alleghany College (project directed by Paul Zolbrod with total funding of $105,000 from the National Endowment for the Humanities), $30,867.35, 1 September 1994 to1 March 1996.

Publications

Especially notable among the faculty's many publications during the report period are the following books:

Joan Bybee (with Revere Perkins and William Pagliuca), *The evolution of grammar* (University of Chicago Press).

Jean Newman (with George Luger, Peder Johnson, Ronald Yeo, and Carl Stern), *Cognitive science: The science of intelligent systems* (University of Chicago Press).

Sherman Wilcox (with David Armstrong and William Stokoe), *Gesture and the nature of language* (Cambridge University Press).

Awards and honors

Eduardo Hernández Chávez received a sabbatical leave for the 1994-95 academic year.

Professor Emeritus Robert W. Young received an Excellence in the Humanities Award from the New Mexico Endowment for the Humanities and was honored at a convocation held at La Posada Hotel, November 11, 1994. Professor Young and his colleague, William Morgan, were selected in recognition of their pioneering work in Navajo linguistics and lexicography.

Other activities

KNME-TV and the Office of Research Administration produced a thirty-minute program titled *Mapa del Corazón* that describes the Linguistic Atlas and Archive project noted above. Shown on KNME on May 10 and 19, 1995 (and again on September 8, 1995), this documentary is the second program of *Field Notes*, a four-part series highlighting leading edge research projects at UNM. This program features Professor Garland Bills and Neddy Vigil, several other project researchers, and six of the 350 Spanish speakers interviewed in the project.

Sherman Wilcox continued as editor of the *Journal of Interpretation*.

Eduardo Hernández Chávez assumed the editorship of the *Southwest Journal of Linguistics* in October 1994.

Garland Bills continued as executive director of the Linguistic Association of the Southwest (LASSO).

6. Student activities

Degrees awarded

The following degrees offered through the Department of Linguistics were awarded to the listed students during the report period:

B.A. in Linguistics:

Summer 1994: Alice Baker.

Spring 1995: Hali Melinda Judkins, Kelly Paige Webster, Giacomo Zafarano.

B.S. in Signed Language Interpreting:

Summer 1994: Veronica Yvonne Uzueta.

Spring 1995: Bonnie-Lyn Barker, Michael Ann Carino, Dawn C. Myers, Susan Marie Pepper, Melissa Ann Peterson, Janet Malia Riley, Laura Lee Simmons, Ann Marie Usinger.

M.A. in Linguistics:

Summer 1994: Bushra Zawaydeh.

Fall 1994: Mohamed H. Omer.

Spring 1995: Marya Corrigan, Laurent Thomin.

The Department faculty also play a major role in coordinating the Ph.D. concentration in Educational Linguistics offered through the College of Education. During this report period, the doctorate in Educational Linguistics was awarded to the following students (among others), listed with dissertation title:

April Ginther, "The internal construct validity of the advanced placement Spanish language examination for examinees of different ethnic and language backgrounds" (Fall 1994).

Steven McCafferty, "Adult language learners' use of private speech" (Spring 1995).

Sandra Simons-Ailes, "Childrens' developing abilities to author fictional narratives" (Spring 1995).

LGSO

The Linguistics Graduate Student Organization (LGSO) continued its active representation of both master's and doctoral candidates in Linguistics and doctoral candidates in Educational Linguistics. Officers for 1994-95 were Sally Weller (president), Soo-Shin Lee? (secretary-treasurer), Alice Baker? (GSA representative), Dagmar Jung (representative to Department faculty meetings), and Paula Bramante (representative to Educational Linguistics faculty meetings). The faculty advisor to LGSO was Alan Hudson.

The LGSO was awarded a Graduate Student Computer Grant in the amount of $7,100 from the Office of Graduate Studies. The grant proposal was prepared by M.A. candidates Alice Baker and Sally Weller. The funds were used to purchase a computer and printer for the exclusive use of graduate students in Linguistics and Educational Linguistics. The computer is located in the Department's library/seminar room.

The LGSO published the third annual volume of the *University of New Mexico Working Papers in Linguistics* and distributed this collection of research papers by UNM students and faculty to programs, libraries, and individuals across the U.S. and abroad. This volume contains the following papers:

Awards and honors

Awarded departmental assistantships for 1994-95 were Alice Baker (RA), Paromita Chakraborti (.50 TA, Spring), Charlotte Christ (.50 TA, Fall), Dagmar Jung (.50 TA), Teresa Meehan (.25 TA, Fall), Joanne Scheibman (.50 TA), Laurent Thomin (.25 GA), Jacqueline Trademan (.25 TA, Fall), Sally Weller (.25 GA), and Holly Wilson (.25 TA). Graduate tuition fellowships were awarded to Marya Corrigan and Ralph Sedaño.

Two SLI majors, Janet Riley and Angela Myers were honored with $200 scholarships from the Albuquerque Sertoma Club; Janet Riley also received a $100 research award..

Ysaura Bernal-Enríquez, doctoral candidate in Educational Linguistics, received one of the few Challenge Assistantships awarded by the Office of Graduate Studies for 1994-95.

Teresa Meehan, doctoral candidate in Educational Linguistics, received a Research Fellowship Award from the National Institute on Drug Abuse for her dissertation research entitled "Measuring the effects of maternal poly-drug use on mother-child communicative interactions: A semiotic perspective".

6. Other professional activities

The Department's colloquium series during 1994-95 included the following speakers (activities during the 1995 Linguistic Institute are not listed here; see Appendix A):

Gary Sanderson (California State University, Northridge), "What's going on in educational interpreting?" (September 21) and "Who's in charge?" (September 22).

Barbara Fox (University of Colorado, Boulder), "Syntax and repair: A cross-linguistic study" and "Video analysis of a conversation" (both November 4).

Russ Tomlin (University of Oregon), "Referential management and memorial activation" and "The cognitive bases of functional interactions in discourse" (both December 9).

Siri Tuttle (University of Washington), "Excorporation and agreement: Parameters in the Athabaskan verb" (February 17).

Helen George (University of California, Los Angeles), "Explanatory research on perceived success in Navajo and English classes" (February 20).

Melissa Axelrod (California State University, San Bernardino), "Gender and aspect in Koyukon" (February 24).

Elizabeth Traugott (Stanford University), "The development of discourse markers: A case of grammaticalization" (March 3).

Arnold Zwicky (Ohio State University), "Why English adverbial *-ly* is not inflectional" (March 22).

The talks by Tuttle, George, and Axelrod were presented during their interviews as candidates for the position in Native American linguistics.

Final Report on the 1995 Linguistic Institute
Submitted by Joan Bybee and Barbara Curran

1. Introduction

The 1995 Linguistic Institute was held at the University of New Mexico, Albuquerque, from June 26 to August 4, 1995. It was sponsored by the Linguistic Society of America and UNM and co-sponsored by Gallaudet University. The Director was Joan Bybee of UNM. Associate Directors were Garland Bills, UNM, and Lise Menn, University of Colorado. Barbara Curran was the Program Coordinator.

The Edward Sapir Professor was Kenneth Hale of MIT and the Hermann and Klara Collitz Professor was R. M. W. Dixon of the Australian National University, Canberra.

2. Participants

More than four hundred students registered for courses at the Institute. Applying from outside UNM were 345 students from around the world. Approximately 60 students from UNM took courses at the Institute. Students who were not continuing UNM students paid $600 for three credit hours and $950 for six to nine credit hours.

The LSA awarded 100 tuition fellowships of $950 each. The Block Fellow was Lynn Nichols of Harvard University. The Language in the USA Fellow was Anne Marie Guerra of the University of Texas, Austin. The LSA Fellow was Joanne Scheibman of UNM.

In addition, several special fellowships were made available for graduate students. The Edward Sapir fellowships were awarded to speakers of Native American languages: Martha Austin, Bernice Casaus, Darlene Littledeer, and Valentin Peralta-Ramirez. The Robins Fellowship was awarded to Ataliba T. Castilho of the University of Sao Paulo, Brazil

Two Roger Brown Fellows were selected and funded by a grant from the National Science Foundation (Principal investigators: Joan Bybee, Lise Menn, Dan Slobin and Ruth Berman) They were Paul Garrett and Gigi Glover.

The number of registered Institute Affiliates was 197 Affiliates were charged $700 for more than four weeks and $450 for less than four weeks. Affiliates who made special contributions were Nancy Ainsworth-Vaughn, who organized and conducted a video tape analysis workshop, Megan Crowhurst and Justine Cassell, who organized the Survival Skills in Academia Workshop, and Janet Patterson, who co-organized two symposia: New Methods in Comparative Aphasiology and the Symposium on Specific Language Impairment and Williams' Syndrome.

Taking the number of students together with the number of Affiliates, more than 600 people attended the Institute. Of course, many more visited the UNM campus during the six weeks to attend the many conferences and workshops held in conjunction with the Institute.

3. Faculty

The faculty were paid $4000 plus travel for one course. All courses were six-weeks in length. The Planning Committee had decided to have only six week courses to minimize the amount of coming and going among students, and to encourage everyone to come and stay the six weeks to enhance interaction. Faculty whose schedules did not allow them to be here the entire six weeks were invited to recommend co-instructors to the Planning Committee. Thus some courses were co-taught with duties being shared sequentially. The faculty were as listed in the second edition of the catalog, except that George Lakoff had to leave after the fourth week due to unexpected personal developments.

4. Classes and enrollment

All classes were offered for three credits and were six weeks long. Classes met Monday, Tuesday, Thursday and Friday for one hour and twenty minutes each day.

It is of some interest to note which classes had the largest enrollments, since we offered a range of topics not included in the last three Institutes, and some of these topics were quite popular. Future organizers might want to try to offer a full range of options in order to attract more students and affiliates to future Institutes.

The Institute offered a broad range of courses and conferences, but the primary theoretical focus was on language in the context of language use. The most popular courses were "The Analysis of Conversation" (Charles and Marjorie Goodwin), "Conversation and Grammar" (Sandra Thompson), and "Societal Bilingualism" (Suzanne Romaine).

Another popular set of theoretical courses were those on cognitive grammar, i.e. "Introduction to the Theory of Cognitive Grammar (Ronald Langacker), "The Metaphor System of English" (George Lakoff), and "Cognitive Mappings in Semantics" (Gilles Fauconnier).

Equally high enrollments were registered in courses on signed languages, especially "Metaphor in Signed and Spoken Languages" (Phyllis Wilcox & Eve Sweetser) and "Cross-Linguistic Study of Signed Languages" (Diane Brentari), which was intended to be a small seminar but attracted 21 registered students. See Appendix 1 for further information

5. Special Interest Groups

A workshop on Survival Skills in Academia, sponsored by the Committee on the Status of Women in Linguistics, met one evening each week. It was organized by Justine Cassell and Megan Crowhurst. This workshop attracted as many as 90 people to its meetings. I am pleased to report that the workshop received a very high rating in the evaluation, and I recommend that it be continued at future Institutes.

The course offerings included several on ASL and other signed languages, and the organizers made a special effort to attract Deaf students and Affiliates to the Institute. Our main effort in this regard centered on the NSF grant to train interpreters, which is described below. We also solicited a co-sponsorship with Gallaudet University, we advertised in places where we thought Deaf students would be found, and we offered some special fellowships for Deaf students. The effort was successful, as we had nine Deaf students attending. Of course, the interpreters constituted a major expense in the overall budget (see below), but we feel that the LSA can provide a major service to Deaf linguists by offering courses in signed languages at the Linguistic Institute. Since so few Linguistics Departments have more than one specialist in signed languages, future Institutes can serve just the needs they were created to serve by offering a small core of courses on signed languages.

6. Signed language interpreters

In order to attract Deaf participants to an Institute, it is important to make it known that appropriate services will be offered, in particular, expert interpreting, properly administered, note takers, and TTY services

Thanks to the efforts of Phyllis Wilcox, planning for these services, especially the interpreting, began years before the Institute started. Phyllis Wilcox, with Joan Bybee and Sherman Wilcox, applied for and received a grant from the National Science Foundation to develop and implement a training program for interpreters so that they would understand the content of the material presented in classes and conferences.

The Principal Investigators working with two graduate assistants developed a training manual, consisting primarily of linguistic terminology and definitions. In January of 1995 a group of consultants (which included some Deaf linguists) met to review and revise this material, and to discuss interpreting issues in general

A call for interpreters went out in the summer of 1994 and thirteen expert interpreters were chosen from a pool of applicants from all over the US and Canada. The interpreters attended a one-week training session, conducted by Marty Taylor with the assistance of Aaron Brace, and then remained in Albuquerque to interpret for the six weeks of the Institute (See Appendix 2 for details about the interpreters and their work)

Thirteen interpreters were employed full-time and five local interpreters worked on an hourly basis The interpreters served nine Deaf students attending eleven classes, one faculty member, two forum lecturers, one affiliate, one organizer and presenter of a two-day workshop, one presenter at the International Cognitive Linguistics Conference, the local Deaf community, some of whom attended the Forum Lectures and workshops, and they provided tactile signing on two occasions for two blind students. The interpreters worked in classes, forum lectures, conferences, symposia, consultations with professors, and meetings concerning student projects.

The full-time interpreters were paid $1000 a week. Their travel to and from Albuquerque was paid by the NSF grant. The grant also paid the Coordinator of Interpreting Services. (See Appendix 2 for further details.)

7. Sources of support

The Linguistic Society of America provides financial support, administrative support, and the general professional framework for the Linguistic Institute. We thank Margaret Reynolds, Mary Niebuhr, and Elizabeth Hogan for their tireless and good-natured service. Gallaudet University also made a financial contribution to the Institute, supporting two courses and the symposium "Language and Gesture: Unity or Duality?". We are grateful to David Armstrong, Budget Director and our contact person at Gallaudet, for making this support possible.

The major financial and overhead burden of the Institute is shouldered by the host Institution. We are grateful for the support of the College of Arts and Sciences, William Gordon, Dean, and the Office of Academic Affairs, Mary Sue Coleman, Provost and Vice President, for their generous financial support. The College of Education supported several courses and cooperated in various ways to make the Institute possible. We thank Richard Van Dongen, Associate Dean of the College of Education for his help. The German Summer School, Director Peter Pabisch, supported two of our faculty with travel grants. Many other departments of the university provided support for the Institute and they are acknowledged in section 10.

Support from the National Science Foundation and the National Institutes of Health is described in the next section.

We are also grateful for the generous private donations of Sally Midgette, Elizabeth and Robert Bybee, the Bybee Foundation, and the Exxon Educational Foundation.

8. Activities supported by external funding agencies

National Science Foundation

Linguistic Training for Signed Language Interpreters. Principal Investigator: PhyllisWilcox, Co-Principal Investigators: Joan Bybee and Sherman Wilcox. $124,532.

Workshop on the Interaction of Morphosyntax and Lexicon in the Acquisitioin of Narrative Competence. PIs: Joan Bybee, Lise Menn, University of Colorado, Dan Slobin, University of California, Berkeley, Ruth Berman, University of Tel Aviv. $37,279

Conference on Specific Language Impairment and Williams' Syndrome: A Double Dissociation of Language and Cognition. PIs: Joan Bybee, Janet Patterson, Laurence Leonard, and Lise Menn. $21,247

Workshop on theMorphosyntax of Athapaskan Languages. Principal investigators were Leslie Saxon, Eloise Jelinek, and Mary Ann Willie. Grant to the University of Arizona.

Cross-linguistic Comparison of Signed Languages. Grant to the University of California, Davis, Principal investigator was Diane Brentari.

National Institutes of Health

New Methods in Comparative Aphasiology. PI: Joan Bybee. $30,000 (Conference organized by Lise Menn, Loraine Obler, and Gonia Jarema.)

9. Staff

The primary staff position was a Program Coordinator who worked half-time from the fall of 1993 to the fall of 1994, and full-time from then until fall of 1995. The position was originally held by Joanne Scheibman, but when she resigned in May of 1994, Barbara Curran was hired. A description of the work of the Program Coordinator is found in Appendix 3

Associate Director Garland Bills, aided by graduate assistants Melissa McPherson, Jacki Trademan, and later by a Work-study student, Marla Schwartz, managed the arduous task of helping Institute participants find appropriate housing

Shortly before the Institute started, five Work-study employees (Yoshiko Chino, Laura Fulcher, Michael Palmer, Marla Schwartz, and Tonda Smit), five graduate assistants,

(Alice Baker, David Margolin, Dori Schwartz, Laurent Thomin, and Sally Anne Weller) and a temporary staff secretary (Charlene Poola) were assigned duties.

Our central location for the Institute was on the ground floor of the building in which the Department of Linguistics is located on the fifth floor. The Honors Center was lent to us for the six weeks, and it was in this location the student staff did most of their work. They distributed mail, arranged the three notice boards, answered questions, took charge of the publishers' book exhibit, were responsible for taking and receiving all copying orders for Alpha Graphics to pick up and deliver, disbursed conference literature, sold t-shirts and posters, and they were in charge of the refreshments table. In sum, they **were** the Linguistic Institute to everyone who visited the Honors Center, for whatever reason, every day.

It is safe to say that, without their able assistance, the 1995 Linguistic Institute would not have happened. They were hard working, reliable and pleasant to everyone all the time. These capable helpers were invaluable.

We are extremely grateful to the many volunteers who took on various chores. In particular, we would like to thank Corinne Bybee Simpler (the Director's sister) for two weeks of administrative service, Margaret Reynolds, and graduate students, Joanne Scheibman, Ysaura Bernal, and Theresa Meehan.

10. Participation of other units of the university

Many departments on campus were given an unexpected extra summer workload due to the Institute, and for the most part they took it in stride.

Library

Zimmerman Library, especially the reference section, offered the Linguistic Institute a great deal of cooperation. Linda St. Claire, Anna Gordon, and Nina Stephenson put together an information packet on references in linguistics, and conducted training sessions on references as well as the use of the library's electronic equipment, such as Libros, for Institute participants. The staff in the Reserve division were helpful to us in the preparation of considerable quantities of reserve materials. Linguist Mary Bruesch from the Fine Arts section aided in this process.

Computer facilities

UNM,s Computer Services (CIRT) assisted at various stages of the planning and implementation process. Jim Pittman got e-mail accounts for close to 200 visiting scholars and more than 55 faculty members with equanimity and a minimum of commotion. Due to the efforts of Joe Quintero, because the Institute dates did not jive with summer session,

we were able to have several computer pods open during the time of a general break. We are grateful to CIRT for their overall help with computer matters on campus in general.

Bookstore

The UNM Bookstore took a genuine interest in the presence of the Institute on campus. They made a concerted effort to display the textbooks in a clear and easy manner for visitors, and did an excellent job of ordering, re-ordering, and special ordering. They ordered extra trade books and arranged a special linguistics display that was well received by Institute students and affiliates alike. They unhesitatingly supported the Linguistic Institute by placing a full-page advertisement in the catalog. They also arranged book signings for campus authors and visiting faculty who had published books within the last year.

In turn, they reported to us that the people attending the Institute were entirely pleasant to deal with, being both enthusiastic about the bookstore and very polite to its staff.

Media Technology.

Luis Villegas and his assistants were superb in coping with the constant demand for equipment that emanated without letup from the classrooms, conferences, workshops, and lectures that took place daily for six weeks. Everyone, from Operations Manager Farhad Javaheripour and Villegas to the Work-study employees, was cheerfully responsive throughout the Institute.

It is especially notable that they achieved so much, because they have so little to work with. Their equipment is often old, broken, or inadequate for today's classroom. And there is far too little of it. It was at times embarrassing to show UNM in such a poor light before an international group of this size.

It is our pleasure to state, however, according to Villegas, our visitors did not misplace or break a single piece of equipment, and everything borrowed has been returned to the Media Technology Department intact

Various Other Departments

General Accounting and Accounts Payable staff were pleasant to work with, as was Leslie Apel in Contract and Grants Accounting, who demonstrated patience in helping us deal with the precise paperwork necessary for using money from grants. Marla Wonn in Research Administration took time to explain the intricacies of grants proposals to those who were generally unfamiliar with their idiosyncrasies Valerie Roybal, Hisako Moriyama and Doug Clark in the Publications Office took an active and supporting interest in the event

Housing and Food Service

It is unfortunate that these two departments gave the impression they had little interest in either the incoming Institute, or, because of its national and international content, its possible impact upon UNM, Albuquerque, and New Mexico. It is sad to report that many visitors went away with an extremely poor image of the University of New Mexico because of indifferent, and sometimes uncooperative, service in these two areas. Albert Dergregorian of Conference Services (who has since left UNM) was consistently pleasant to deal with, but seemed to have limited authority.

Housing had some rather strange requirements that caused our burden in the Institute offices to be that much heavier.

The bookkeeping requirements of the Housing Office were rather complicated, and they required the Institute to accept payment from visiting scholars directly, and to in turn transfer these funds to them, while they demanded that students pay their money directly to the Housing Office. Since it was at times difficult to know whether an applicant was a student or a visiting scholar, and since people inevitably sent their money to the wrong place quite often, this, too, added to the housing ordeal.

Because the tracking system at the Housing Collections Office is evidently not as up-to-date and efficient as it could be, there were many people telephoning, e-mailing, faxing, and writing to the Institute offices who were completely ignorant as to their status. Receipt of their deposit had not been acknowledged, or their name had not been recorded at all . Foreigners were fearful of leaving home and finding themselves without a roof over their head when they arrived at UNM. They were in the proverbial 'Catch-22' situation, since without a social security number they apparently could not be afforded space in the dormitory, and until they were officially accepted as students they could not be given a social security number. This is not a report of isolated instances, unfortunately, but was all too common for those requesting on-campus housing. Also, some checks were kept incorrectly for weeks at the Housing Office that should have been forwarded by them to this office, causing Affiliates whose names were unknown to us, to lose their chance at a place in the dormitories. Since these people had applied in plenty of time, you can imagine they were not pleased.

We began negotiations with La Posada officials two years in advance. Nevertheless, dormitory space for the Institute was limited, due primarily to the fact that the original commitment to space was not honored by Housing. Many people had to be refused admission, and accommodation found for them off campus. Consequently, many people denied dorm space had to seek accommodation in the tight off-campus market. No doubt others simply decided not to attend the Institute because of difficulties in finding lodging.

Bed linens and towels for full-time dormitory residents coming from all over the world were a major headache Since the Housing Office provided only a plastic covered mattress on a dormitory bed, we arranged for individuals to rent linens through the American Linen

Co. Furthermore, we felt it imperative that students arriving late on Friday night, or at any time before our Sunday check-in, when Institute officials could be available to guide them, find at least a couple of sheets and a pillow case (albeit no pillow or blanket) as well as a bath towel, available in their room. We felt this was especially important for older visitors, and also for students who were abroad from their native country for the first time. Practically speaking, it was necessary, of course, for everyone.

Lack of cooperation on the part of Housing made distribution of these linen packets a nightmare, starting from the first allotment on Friday, June 23. On this extremely hot day, the Program Coordinator and six staff members had to create individual linen packets from the bulk delivery made by the American Linen Co. to the La Posada reception area, and then proceed to deliver these packets to each individual dormitory room, assisted by assigned students with keys from the various dormitory buildings. The task took all of Friday afternoon. This was necessitated by the refusal of the Housing Department to allow the linen to be left in bundles in some corner of the reception area, in order that students checking in for the Institute could pick up their linen at the same time. The Housing Department did not want any responsibility for the linen, and in fact it took a lot of persuading on our part to allow this initial distribution to take place. Subsequent weekly deliveries were therefore arranged from the Honors Center in the Humanities Building, to which space dorm residents were required to drag their used linen early each Monday morning.

The task of preparing bundles of clean linen, receiving the dirty linen, and distributing the linen to those needing it, took all of every Monday for at least two persons. Of course visitors were in the end forced to purchase a pillow and blanket once they could find their way around Albuquerque. Garland Bills and others made several runs to nearby discount stores on June 25, during and after check-in, to accommodate our visitors.(Short term conference visitors housed in the traditional dormitory buildings were provided with all of these necessities.)

One of the main difficulties with the food service, aside from the attitude problem of those in charge of La Posada Dining Hall, was that the lunch and dinner hours clashed with classes being offered by the Institute, so that, although meal tickets were required, and the price included in their dormitory fees, many students found themselves unable to take advantage of the dining hall. The staff seemed disinclined or unable to do much about this situation, blaming the Institute to anyone who protested.

Another major difficulty with Food Services concerned the meal cards. The original allotment on the first meal cards was much less than the specified 10 meals per week. It took a near mutiny by dorm residents before a decision, imposed by the highest authority in Housing and Food Services to do what was right, could be achieved. When the adjustments were finally made, many residents wound up with extremely inflated dollar amounts on their meal cards, making us wonder about financial accountability in the Housing Collections Office.

Due to the fact that a great many of our guests were unable to use their meal tickets, they got together at the end of the Institute and purchased food with them from the little store at La Posada, and requested that this food be given to a local charity for the homeless. No one in La Posada was very happy about this, and we were asked to remove the boxes of food from the reception area. However, when we arrived to do so, we were told the boxes had been "picked up". No one appeared to know who picked them up.

Student Union
The staff of the Student Union food service provided us with assistance with refreshments for most of the conferences and workshops taking place concurrently with the Institute. We dealt initially with LeeAnne Smith, who was very helpful, but who is no longer working at UNM. Eventually we worked closely with Edward Yduarte, who cheerfully provided us with excellent service, often at short notice. La Posada was used for refreshments with varying degrees of success. They actually refused to cater the farewell party in the Cellar Ballroom on August 2, claiming not to have received the faxed copy of the Purchase Requisition that had been sent to them at least 10 days prior to the event. SUB catering provided the service instead.

Student Services, including Cashiers, Registrar's and Scheduling offices

Another important problem area, second perhaps only to the Housing and Food Services, concerned Student Services. A meeting took place on September 7, 1994, between Fred Chreist, Jr., Registrar;. Kathleen Sena, Assistant Registrar, Kay Reeves, Scheduling Coordinator, Joan Bybee, Institute Director, Garland Bills, Associate Director, and Barbara Curran , Program Coordinator. The purpose of this meeting was to learn how to proceed with registration of students, payment of fees, etc. We were told to use the UNM admission form with the Institute logo, and have applicants send their applications to us. Again the responsibility of receiving applications and fees was placed on the Institute office, and we served as simply a kind but often ill-informed bureaucratic buffer between those to be served and those who were supposed to provide the service. The Registrar said he would work out a mechanism to accommodate the movement of the applications and fees from the Institute to the Cashiers and the Registration office. He said the cashiers would take all the money and subsequently do a money transfer for the Institute portion back to us.

It was not until students started receiving tuition information for summer classes that we realized the Registrar had done none of the things he had promised, and that the Bursar's office, in fact, knew nothing at all about the Linguistic Institute, and about its special fees. A student called us long-distance from Washington DC to let us know the Cashier she had spoken to had told her he "had never heard of the Linguistic Institute "

Rich Lampasi, Senior Accounting Manager, and Leopoldo Moya, Assistant Controller, deserve congratulations and thanks for rescuing the Institute and the University from a major financial mess Recognizing the need for a quick solution to an unexpected problem, they met with Bybee and Curran and together worked out a system for untangling

Institute students from regular UNM summer students. They did much of this manually, since it was by now far too late to arrange the computer system appropriately.

About the same time, Director of Admissions Clarisse Jenkins called the Program Coordinator and requested an urgent meeting. Curran and Jenkins, together with Mary Jo Sult of Admissions, worked out a viable arrangement together for the handling of the applications, since Admissions had not been told by Chreist about the upcoming Institute either. Neither Jenkins nor Sult are in that department at the present time. With the assistance of Kathleen Sena, a process for issuing foreign student social security numbers was also worked out with Reina Valerio in International Admissions, so that foreign students could now reserve on campus housing and register for classes.

A second dilemma with the admissions procedure generally was that I-TEL UNM was not geared to accommodate the Institute, either in regard to fees or dates. This problem was subsequently alleviated somewhat by some amendments to the system, but not until there had been considerable unnecessary confusion.

Arts & Sciences

Raquel Martinez, Academic Administrator to the College of Arts and Sciences, was a very ready and capable trouble-shooter during various emergency situations; e.g., finding a way to satisfactorily cope with issuing credentials to nearly 200 visiting scholars without spending about two years dealing with paperwork. She offered much help and encouragement with budgeting procedures. However busy she was, Martinez could be counted on to respond, and to find a solution, when called upon. Everyone in the College of Arts and Sciences main office was supportive. Don Weeke's ready assistance with office computer questions, and Margaret Gilmore's wisdom in handling paperwork should not go unacknowledged.

International Programs

Finally, the speed and cheerful spirit of Polly Scoutaris, Assistant Director of International Programs, will not soon be forgotten. She overcame immigration hurdles with aplomb, and issued J1 visa applications with lightening speed. Her knowledge of visa requirements was welcome, and allowed many people to come to the U.S. for the Institute who might otherwise have been denied access, especially from some third world and Eastern European countries

11. Budget

Accounts serving the Linguistic Institute are still open, so no final budget statement can be made at this time

12. Evaluation

An evaluation form was constructed and scored by John Oller of UNM. The form gave participants the opportunity to evaluate the coursess, workshops, conferences, and facilities of the Institute. Scores for the classes have been distributed to the faculty responsible. Participants were asked to rate activities in comparison with other activities of the same type with which they had experience. The five point scale was as follows: 1 = better than any of the rest, 2 = better than most, 3 = about like the others, 4 = not as good as some, 5 = not as good as the rest.

Nearly 200 people responded to the evaluation, which was conducted during the last week of the Institute. The Institute as a whole was rated at 2.08. The mean for all classes was 2.18. These scores reflect the general enthusiasm that participants showed for the academic content of the Institute.

A summary of written comments received is attached as Appendix 5.

13. Scientific achievements

The purpose of a Linguistic Institute is to offer students an opportunity to take courses that they would not have access to at their home institutions, and to establish ties among researchers who would not ordinarily be in close contact by allowing them to work side-by-side for six weeks. These goals were reached by the 1995 Linguistic Institute in a variety of ways.

As mentioned above, the primary theoretical focus of the Institute was on language in the context of language use. The courses on the analysis of conversation and conversation and grammar were quite popular. Participants were also excited about pairing these interests with the new research on gestures by Adam Kendon and David McNeill. Work on the relation between language and gesture was also presented at two very exciting symposia: McNeill and Kendon organized "Gestures Compared Cross-Linguistically" and Sherman Wilcox and David Armstrong organized a symposium "Language and Gesture: Unity or Dualilty" sponsored by Gallaudet University.

The latest research on grammaticalization was featured in courses by Paul Hopper, John Haiman, Bernd Heine, and Joan Bybee. Grammaticalization studies the mechanisms behind the constant evolution and recreation of grammar over time and relies both on language use in discourse and cognitive structuring for explanations. This approach to grammar ties together language use and cognition, and supplies the bridge between the courses on conversation and those on cognitive modeling by Ron Langacker and Gilles Fauconnier, which were also very popular. With these courses and the major conferences, the International Cognitive Linguistic Conference and Functional Approaches to Grammar, the Institute offered a comprehensive and coherent approach to the study of language that is firmly situated in context of human cognition and human interaction.

The Institute also offered a strong focus on Native American languages, especially Athabaskan, with three courses and two conferences on the Athabaskan languages. The

offerings boosted interest in Athabaskan and helped to maintain UNM as one of the main centers of research and teaching for this language family.

As mentioned earlier, our courses on signed languages attracted large audiences, and our forum lectures brought to UNM two of the most prominent Deaf linguists in the country. More important, however, the training program we developed and implemented to provide specialized interpreters was highly successful, and establishes a precedent for other sciences, which need to work to make their subject matter fully accessible to Deaf students and scientists.

Appendix 1: Courses with the highest enrollment and attendance

The following figures are counts of students actually enrolled after 21 days. The actual number of people attending the class was usually twice the enrollment:

Classes with enrollments over thirty:

Charles and Marjorie Goodwin, "The analysis of conversation"	32
Suzanne Romaine, "Societal Bilingualism"	31
Sandra Thompson, "Conversation and Grammar"	38

Classes with enrollments over twenty:

Diane Brentari, "Cross-Linguistic Study of Signed Languages"	21
Joan Bybee, "Universals and Diachrony"	22
William Croft "Grammatical Analysis"	22
Martin Haspelmath "Morphology"	24
Jane Hill "The Sociolinguistics of Native American Language"	24
George Lakoff "The Metaphor System of English"	25
Ron Langacker "Introduction to the Theory of Cognitive Grammar"	23
Phyllis Wilcox & Eve Sweetser "Metaphor in Signed and Spoken Languages"	21

Appendix 2: Providing Signed Language Interpreting

The interpreters' time was evenly divided between interpreting and preparation time. Each interpreter worked with a team mate. Each member of the team interpreted for twenty minutes, while the other member observed and provided feedback and support when needed (e.g. if the interpreter did not hear or understand what the speaker said).

Preparation time included meeting with the professor or presenter, reading, meeting with the team mate, attending staff meetings, and being on-call. The aim was for the interpreters to work forty hours a week; however, during the first three weeks of the Institute when there were several concurrent conferences, the interpreters worked from 45 to 54 hours per week.

As mentioned above, the full-time interpreters received $1000 a week and travel expenses. In the future they should also be given a housing allowance.

The Coordinator is an extremely important person in providing quality interpreting. The 1995 Coordinator was Marty Taylor. Her salary ($13,000) was paid from the NSF grant; the Institute provided her with dormitory housing.

The Coordinator worked six days a week for eight hours a day. She made up schedules and assignments, held staff meetings, and met with faculty and students, individually and in groups. She provided feedback to the interpreters and generally smoothed the way for interactions among the interpreters and the people they served.

The interpreters need to be provided with textbooks for the classes they work in, a paging system, with a pager for each interpreter and the coordinator and a room dedicated to the interpreters. The room should have a video player, a blackboard, a bulletin board, and tables and chairs. The coordinator should have an office, access to photocopying, and a work-study aide. The interpreters need to have abstracts and papers in advance wherever possible.

In preparation for providing interpreting at an Institute, a coordinator should be hired eighteen to twenty months in advance. A call for interpreters should go out more than fifteen months in advance and interpreters should be selected and notified twelve months in advance.

A one-week training and orientation period should precede the Institute, and when Institute participants arrive, orientation sessions should be held for Deaf participants and for faculty.

Appendix 3: Staff duties

Program Coordinator

The Program Coordinator, with the help of the Director, composed and sent out questionnaires to the proposed faculty during the spring of 1994. Using information provided in the questionnaires, the Program Coordinator compiled and created the catalog, for which she solicited local advertising, and she designed the poster. She subsequently used the logo put together by the Director, the Associate Director, and various other people, for the t-shirt. The Coordinator organized a filing system that included files for the faculty, affiliates and students, and she kept track of all applications. She deposited all monies received, and assisted in the budget and other accounting procedures, including grant proposals. As well as attending meetings with the Director, Curran paved the way for the coming "onslaught" with various departments such as the bookstore. She ordered the textbooks, noted problems in this area for faculty, and listed requests from instructors and lecturers for special equipment. She scheduled the classrooms, as well as rooms for concurrent conferences and workshops.

The Coordinator requested bids for hotels to be used by various conferences that could not be housed on campus, and for overflow visitors in general, and, after inspection, selected three. She put out a request for bids on a travel agency to be used by the Institute. She obtained price lists for refreshments and social events. Later, the Coordinator sent airline tickets to the faculty by certified or registered mail. She arranged for J1 or B2 visas as appropriate.

Housing

UNM required that the money and reservations for affiliate on-campus housing be taken by the Institute, but that money for student on campus housing be Housing's responsibility. Off-campus housing was solicited by mass mailings on campus, and by advertising in the student newspaper and the Albuquerque press. Bills and his assistant compiled the data. Updated lists of rooms, apartments, and houses were then sent out regularly to those who requested off campus housing. Child care availability and local camping possibilities for older children were distributed at the same time to those asking for it.

Staff

The Work-study employees and graduate assistants finished their tasks for the most part with the closing of the Institute. Charlene Poola, staff secretary, worked through August Barbara Curran finalized the books at the end of September. During and following the Institute, she issued more than 65 check requests, 11 small purchase orders, 46 purchase requisitions, 12 travel vouchers and several petty cash vouchers, as well as over 57 money deposit lists

Specific duties were handled by certain staffers, including the ordering of special equipment by Yoshiko ('Koko') Chino, Sign language assistance for the Interpreters' Coordinator by Tonda Smit, and—as mentioned earlier—Housing by Marla Schwartz. The book exhibit was the joint responsibility of Marla Schwartz and Laura Fulcher. Alice Baker and Sally Weller compiled and distributed a restaurant guide at the start of the Institute.

Laurent Thomin worked solely with computers. He put the catalog onto Internet, he assisted affiliates in obtaining temporary e-mail addresses, and he issued daily Institute news via e-mail.

The temporary secretary took charge of the linen service that was arranged because UNM did not offer sheets and towels to long-term (six week) dormitory residents. She was assisted in this task by the work studies and research assistants, who operated in shifts each day. She also fielded most of the telephone calls that came into the Institute office, and was able to solve many of the problems that were brought to the office.

Appendix 4: Conferences held at the 1995 Linguistic Institute

Conferences

Andean Linguistics (Bruce Mannheim, University of Michigan)
Acquisition of Narrative Competence (Dan Slobin, University of California, Berkeley, and Ruth Berman, Tel Aviv University, Israel)
Athabaskan Language Conference (Sally Midgette, New Mexico)
Athapaskan Morpho-Syntax Workshop (Leslie Saxon, University of Victoria, Canada)
Conversation Symposium (Talmy Givón, University of Oregon)
Foreign Vocabulary in Sign and Foreign Languages (Carol Padden, University of California, San Diego)
Friends of Uto-Aztecan Conference (Jane Hill, University of Arizona, Tucson)
Functional Approaches to Grammar (Russ Tomlin, University of Oregon)
Gestures Compared Cross-Linguistically (David McNeill, University of Chicago)
Hokan-Penutian Workshop (Victor Golla, Humboldt State University)
Indigenous Languages of the Americas summer meeting (Victor Golla, Humboldt State)
International Cognitive Linguistics Association Conference (Sherman Wilcox, University of New Mexico)
Working Conference on the Papers of J.P. Harrington Papers (Victor Golla, Humboldt State)
Kiowa-Tanoan-Keresan Conference (Laurel Watkins, Colorado College)
Language and Gesture: Unity or Duality (Sherman Wilcox, University of New Mexico)
Linguistic Structure of ASL (MJ Bienvenu, Language & Culture Center, Gaithersburg, MD)
Muskogean-Oklahoma Linguistics Conference (Jack Martin, College of William & Mary)
New Methods in Comparative Aphasiology (Lise Menn, University of Colorado, Boulder)
PICA Conference (Bruce Porch, University of New Mexico)
Siouan-Caddoan Linguistics Conference (Randy Graczyk, St. Charles Mission, Pryor, MT., and David Rood, University of Colorado, Boulder)
Society for Text and Discourse (Susan Goldman, Vanderbilt, and Morton Ann Gersnbacher, University of Wisconsin, Madison)
Specific Language Impairment & Williams' Syndrome (Lise Menn, University of Colorado, Boulder)
Structure of International Signed Pidgin Language (Ted Supalla, University of Rochester)
Symposium on Language Loss and Public Policy (Garland Bills and Eduardo Hernández Chávez, University of New Mexico)

Workshops

Discourse Interest Group [DIGgers] (Nancy Ainsworth-Vaughn, Michigan State University)

Survival Skills in Academia (Justine Cassell, Mass. Institute of Technology (MIT), and Megan Crowhurst, University of North Carolina)
Video/Audiotape Analysis workshop (Nancy Ainsworth-Vaughn, Michigan State)

Forum Lectures

All Forum Lectures took place in the Kiva Auditorium on Wednesday at 4:00 pm.

June 28	Edward Sapir Lecture: "Universal Grammar and the Roots of Linguistic Diversity" Kenneth Hale, Massachusetts Institute of Technology (MIT)
July 5:	"Rethinking Voice" Masayoshi Shibatani, Kobe University, Japan
July 19	"The Structure of International Signed Pidgin Language" Ted Supalla, University of Rochester
July 26	"Foreign Vocabulary in Signed and Oral Languages" Carol Padden, University of California, San Diego
August 2	Hermann and Klara Collitz Lecture "Synchrony Needs Diachrony" R. M. W. Dixon, Australian National University

Appendix 5: Written comments on evaluation forms

SUMMARY OF WRITTEN COMMENTS RECEIVED

1	LI over all and course offerings—quite excellent, good feedback from instructors, top-level experts (1); best in this century (1); good selection of instructors (15); greater participation in this LI was owed to the larger number of courses etc. and conferences, much appreciated; fabulous! (1); liked this year's theme (5); why did it take the LSA so long to realize that a lot of people would be interested in an LI like this one? (1); definitely a big success (3); all in all enjoyed my first LI very much! (1); having all the classes in the same building was a great idea (6); better if classroom building were closer to the organizers and the offices of faculty members (1); are classes always so large? Instructors were not much interested in their courses (1); an unhappy combination of lectures and seminars (2); in my opinion the LI was an embarrassment, UNM should never be the site again (1)	28
2	Dorms—these were okay; living arrangements were excellent but the organization was terrible; fine but not well-organized; maintenance requests not well handled; dorms great, food service terrible (9); the worst, no linen, blanket; kitchens are a great idea but without utensils no use to us	11
3	Food Services—ridiculous hours (8); not adequate (SRC specifically named as unhelpful (12) meal hours were unsatisfactory (15); people with classes at 5 p.m. unable to use the meal tickets they had paid for; La Posada was a catastrophe; why were the LI people forced into such a tight schedule along with regular college students? cheerleaders and football players? too noisy, not appreciated (4); why were the hours not extended so the meal tickets could be used; no bus service Sundays; store not well-stocked; were not warned that the 'corner store' and other facilities would be closed during the last week; I was left with $150 worth of food points that I could not spend! I am writing an official letter of complaint! extremely poor coordination; paid a hundred dollars for food I didn't get to eat; disliked being forced to purchase a meal plan; food service cards mix-up; food was excellent; pages could be written about La Posada's inadequacy; I do not want to get fat like Americans eating hamburgers and fries every day; food arrangement was absolutely horrible; I lost $130 in points, shameful since I am a poor student; got $350 credit then was billed $350 relative to my $950 meal ticket, what gives?; inconsiderate to have people in class hungry at 5 to 6:20 missing their meal, a flaw in the organization; lunch break would also be advisable in future; lack of communication between food providers and the LI organizers was conspicuous (3); disgusting; UNM seemed to be doing its best to make a very bad impression	30

4	LI as a whole—very stimulating experience; hope it will be a model for institutes to come, especially the SL part; has been excellent; best LI ever; okay overall; best I've been involved in; LI staff did a good job—too bad the rest of the campus did not co-operate; wonderful job of organizing (2); I felt the organizing left a lot to be desired, but overall quite firm (1); despite problems (some enormous ones that I have spelled out), I enjoyed the LI very, very much (1)	16
5	Classrooms—some problems were experienced with air-conditioning and with audio-visual equipment and these were not always dealt with satisfactorily; sometimes complaints about room temp went unheeded; some lights kept going on and off; OH was too noisy and lamp burned out	6
6	Thompson, Sandy—excellent course much better than most courses I have had at any other institution	1
7	Rating form—confusing (3); worst ever (1); too hard (1); not user-friendly enough (1); comparitive [sic] rating doesn't make any sense (1); multiple choice questions did not reflect my experience (1); events and courses ought to be judged on their own merits (3); too dehumanizing (1); the complexity of this form discouraged many people from filling it out (2); we need a form with more questions per course, an in depth evaluation (2)	11
8	Sign Language—bravo! attended because of this;	2
9	Lucas and Winston—thought provoking readings and lectures; wonderful asset to the LI; great coverage and good content	3
10	Gesture Conference and Symposium—will surely be talked about for years; Kendon-McNeill class was great	2
11	Brentari's class—the role of mouthing in SL, crucial to progress in our field; great class, best I took here; focus on typology with more emphasis on morphology and syntax would be interesting; encouraged discussion	4
12	COSWL—fantastic job of organizing the Tuesday workshop; hope dialog continues; wonderful and informative; excellent;	6
13	Computing—awful to have it shut off during the last week of the LI; not adequate for the influx of people; simply appalling (1); not adequate in general and esp. for D. Slobin's class where resources were needed; closing of all but two labs during the last week created problems for me; not enough Macs and some of those that were in the labs were out of service (3)	15
14	Schegloff, E—praised for talk given in class	1
15	Goodwins, C &C—among the greatest scientists of our time; their work is underestimated	2

16	Delancey—course was one of the worst I ever sat in on; I recommend his way of requiring work of students with options; another great course, used lots of examples and data, though seemed to lose track of the syllabus, I thought the class was stimulating	3
17	Housing—scandalous, highly irresponsible	1
18	Bills, Garland—one of the organizers I had personal contact with and he seemed helpful and devoted to LI 95	1
19	Photographs—drop this awful idea; $2 for a photocopy was too much!	2
20	Conversation analysis—best course I ever had	1
21	Length of courses—need some 2 and 3 week courses for affiliates who cannot attend a full 6 week session	2
22	Cognitive Linguistics—not well-organized, some rooms too small for attendees to fit in	1
23	Deaf—tell everyone about ADA; not enough chances to participate for deaf students; provide TTY's and note takers for classes	2
24	McIntire, Marina—very unprofessional, content inappropriate for LI; spent a lot of time on deaf culture which she is not qualified to teach; the ASL structure course was disappointing; McIntire course was excellent	3
25	Sweetser, Eve—lectures were clear, well-organized, and well-paced	1
26	Cross-linguistic Comparison of SL—needed to be announced more appropriately; one copy of the schedule tacked to a Bulletin Board was inadequate	1
27	Navajo—field methods class would have been good	1
28	Chafe, Wallace—discouraging input from affiliates made me not bother with his course	1
29	Lost mail—important financial documents were sent to address given by SRC but returned owing to incorrect address; I still do not have them	1
30	Audio-visual—FM receivers, more were needed than were available; there were some foul-ups on equipment ordered for classes; video not so good; disturbing to have equipment carried in and out during class sessions	4
31	Alpha-graphics—reading packets were very expensive; exorbitantly priced and unreliable	4
32	Concurrent events—there were too many of them; would have preferred conferences after the LI; dynamite! only complaint, too much to go to; I'm worn to a frazzle, the whole thing was too dense, should be longer perhaps	10

33	Papers—would have preferred some more options; not writing so much; final test would have been more appropriate (1)	6
34	Undergraduate—courses were pitched too high for me, and not commensurate with the numbers assigned to them; still a great LI	1
35	Asian languages—understood emphasis here on native American languages but would like to see an LI emphasizing Asian languages	1
36	Lakoff, G.—disappointed with his early departure; his leaving 2 weeks prior to conclusion of the LI was unbelievable! wish I hadn't wasted my money	2
37	Class sessions—too long; the whole day was too long 8-6:20	3
38	Forum lectures—too early in the day; disappointing, Shibatani misinterpreted some of his own examples; Dixon made a well-known point but managed to illustrate it in an obtuse way	1
39	Van Buskirk, Barbara—as well as many others in the office were great to deal with!	4
40	Interpreters—superb	1
41	Curran, Barbara—great job	3
42	Society for Text and Discourse—changed schedule without making it well known, very frustrating, especially in comparison with the Denton Conference that was so well organized; uneven and unconnected	2
43	Bookstore—no correlation between class size and book orders; terribly inconvenient	3
44	Library—complaint not about holdings but about availability, more books should be placed on reserve; staff were okay and even helpful; could have improved the planning here	3
45	Social events—more free ones and transportation provided by local volunteers; more party-type events where people could meet and talk	5
46	Athapaskan Morphosyntax Workshop—seems to have been omitted from the evaluation	1
47	Housing and Collections—staff unhelpful, but SRC second floor people were very helpful	1
48	Welcome—should be some sort of welcoming meeting where the participants can all meet the hard-working organizers	1
49	Langacker—fantastic course at just the right level	1

50	Condon—disappointed, non-academic and pre-theoretical, seemed odd to be offered for graduate credit, fun, but I expected to get more out of it, also thought it odd to have a week of classes cancelled so we could write a paper	1
51	ICLA—everything that could have gone wrong, did	1
52	Functionalism Conference—well-organized	1
53	Survival Skills in Academia—would be good if we could purchase the booklets (1); oriented too much to American women and some of the suggestions were inane (1)	2
54	Heine, Bybee, and others—doing excellent and interesting work	1
55	Number of respondents	70

College of Arts and Sciences

Department of Mathematics and Statistics

Annual Report 1994/95

Alexander Stone, Chairman

The research and education missions of the university are well-served by the faculty of the Department of Mathematics and Statistics. The scholarly achievements of the faculty during the last decade have significantly enhanced the reputation of the department on a national and international level. During the same period the department has been highly successful in obtaining external grant awards for its research and educational projects. This trend continued in the last fiscal year, when the department received over $1,300,000 in new and continuing grants.

Our instructional programs also remain strong and we remain committed to maintaining the service courses which are essential to students in engineering, education, humanities, and the physical and life sciences. In AY 1994/95, 265 courses offered by the department generated over 33,000 student credit hours. Nearly 28,000 credit hours were generated by offerings at the freshman - sophomore level. The total number of student credit hours in mathematics and statistics decreased by approximately 5.8% in the last year. This decrease may be due in part to declining engineering enrollments, the popularity of courses offered by TVI, and the current state of the job market in science related areas.

1. Significant Developments during AY 199/95.

(a) The research productivity of the faculty remained at a very high level. The department currently has 34 faculty active in mathematics and statistics research. A total of 71 papers were published in nationally recognized professional journals. Further recognition of the value of this research is evidenced by the fact that we now have grant funding spread in excess of 2 million. In AY 1994/95, 22 grants were awarded to the department by agencies such as NSF, AFOSR, DOE, DOD, Sandia, and the Phillips Laboratory.

Several faculty members are on editorial boards of journals and some are active in reviewing and refereeing duties with journals and granting agencies.

(b) The Department of Mathematics and Statistics administers an independent network of Unix systems and personal computers. The department operates on a private subnet of the main UNM network backbone. Math's network and systems are administered by two full-time systems staff and one part-time student employee. The department's network has state of the art 24 hour a day access to the Internet, the World Wide Web, e-mail, and other global Internet services.

The Math Department's location on the 3rd and 4th floor of the Humanities Building houses approximately 30 Unix systems and

servers, many X-windows graphics terminals, and numerous 386, 486, and Pentium based personal computers. All of these systems exist as hosts on the Department's network and are configured to share network resources and file systems. Although most of the 3rd floor graduate offices access the Department's computing resources via text-only terminals, a lab on the 4th floor provides students with 24 hour a day access to X-windows graphics terminals, MS-Windows PC's, and laser printers. The Department also maintains its own modem server and phone lines, giving users terminal and SLIP/PPP dial-up connections for remote Unix and World Wide Web access from home.

Modern mathematics and statistics programs such as Matlab, Mathematica, Maple, Macsyma, Magma, Splus, etc. are installed on Math systems and are available to all Math users. The Department also maintains up to date TeX systems for the production of technical papers and documents. The department has at least one full-time staff who is expert in using TeX and provides users with TeX technical support and assistance.

In addition to the 3rd and 4th floor Math computing facilities, the department maintains approximately 40 486 systems running Unix and X-Windows in one of the Engineering and Science Computer PODs. These systems are served by several modern Sun systems. These systems support many of the undergraduate mathematics classes and

provide students with access to modern mathematics and statistics programs.

(c) Mathematics and Statistics, along with other departments in Arts and Sciences and the College of Engineering is participating in the activities of the Air Force's new supercomputer facility on the island of Maui. This project provides UNM researchers with access to a state-of-the-art, massively-parallel supercomputer. The goals of the university include the establishment of a resource center that will coordinate a wide range of scientific computing activities.

(d) A Department of Defense grant enabled the department to collaborate with other departments in Arts and Sciences as well as the College of Engineering in developing recruitment and retention programs for female and minority students interested in careers in science and engineering. The program has funded graduate student mentors and a summer bridge program for first year students at UNM.

(e) The department continued its participation in an Arts and Sciences and College of Education project. The purpose of this project is to revamp the mathematics and science curriculum for prospective elementary and mid-school teachers training in the College of Education.

(f) The number of bachelors degrees awarded in AY 1994/95 was 30, while 4 Master's degrees and 5 Ph.D. degrees were awarded.

(g) Total graduate student enrollments remained at approximately the same

level in AY 1994/95 as in AY 1993/94. Nearly 1,500 SCH were generated by graduate courses, with 41% of the credit hours attributed to statistics courses, 32% to applied math courses, and 26% to pure math courses. We had nearly 100 students enrolled in our graduate programs and were able to support 42 teaching assistants. T.A.'s received a stipend of $8,800 for 9 months of service in AY 1994/95. The process for selecting T.A.'s remains very competitive. T.A. offers were made in the spring of 1995 to 12 candidates from a pool of close to 100 applicants.

(h) Professor Richard Metzler continued as a co-director of the Fellows for the Advancement of Mathematics Education (FAME). Funding for this project came from NSF and Exxon and is administered by the Albuquerque Public Schools and the Department of Mathematics and Statistics. The program seeks to enhance the Public Schools training of elementary school teachers in the teaching of mathematics.

(i) The Annual Awards Banquet was held in late April at the Four Seasons Inn. The purpose of this event is to recognize the teaching and research accomplishments of our faculty and students. Franck scholarships were awarded to two undergraduate students.

(j) The annual luncheon honoring the winners of the New Mexico High School Mathematics Contest was also held in April. A four year scholarship was awarded to Madison Link who will begin his studies at

UNM this fall.

(l) The Calculus Reform Project was initiated in the fall of 1993. All sections of our calculus sequence, Math 162-163-264 now use graphing calculators. An effort to assess this effort is planned.

2. Significant Plans and Recommendations.

(a) We will continue our efforts to develop a Geometry and Topology Institute. Professor R. James Milgram, a world leader in geometry and topology, joined our department in Fall 1993 and heads a very strong research group which is among the very best in the country.

(b) The Air Force Maui High Performance Computing initiative, led by Frank Gilfeather, Brian Smith (Computer Science) and John Sobolewski (CIRT) has expanded UNM's role in developing research projects utilizing the Maui faculty. This project continues to provide funding for graduate research assistants and postdoctoral appointments. The hire of additional faculty with interests in scientific computing is a goal.

(c) Our graduate programs remained stable in AY 1994/95. Graduate enrollments during the last decade are up by approximately 31%, with most of the growth occurring in the statistics program. The Graduate Committee is concerned with a number of issues, including the recruitment and retention of students from underrepresented groups. Advisement and examination procedures will continue to be studied. Beginning in AY 1994/95, applicants were required to take the general

GRE.

(d) The undergraduate committee will continue to study issues which include:

- Evaluation of instruction (possible alternatives to ICES)
- Evaluation of calculus reform measures
- Recruitment and retention of math majors
- Articulation of courses among New Mexico schools
- Revising and updating course syllabi
- Text book selection

(e) A major priority is the hiring of new faculty to maintain existing strength in our research areas. The table below gives some data on the number of faculty, T.A.'s and part-time instructors for the past eleven years. While the number of faculty has decreased somewhat, the number of T.A.'s has nearly quadrupled in this period. The number of part-time instructors has remained fairly stable. The interpretation of the data is unclear, but the main argument for additional faculty is maintaining research strength and the ability to meet our instructional missions in graduate and undergraduate education.

	Faculty	T.A.'s	Part time
1983/84	41	11	21
1984/85	41	22	24
1985/86	43	23	20
1986/87	40	25	21
1987/88	41	30	23
1988/89	42	30	21
1989/90	41	30	22
1990/91	43	40	27
1991/92	43	40	16
1992/93	41	42	21
1993/94	41	42	20
1994/95	40	42	22

(f) We are implementing our plan to offer courses so that it will be possible for students to satisfy major and minor requirements by taking courses in the evening or weekends. The plan operates on a 3 year repeating cycle of offerings.

(g) The department will continue to present arguments for a new mathematical sciences building. The major consideration in this request is the significant increase in our computing capability.

(h) The subject of mathematics education will be a matter of continuing discussion in AY 1995/96. The recommendations made by the joint A&S, COE and SNL committee are expected to have a major impact on

future departmental development in this area.

(i) The department will support creative innovation in undergraduate and graduate education. A great deal of attention is now being focused on improving programs of teaching in our public schools. There is a strong national commitment to realize the benefits of new technologies and we must become willing to participate in this trend.

(j) We will seek ways to increase our participation in programs which help to confront pressing societal challenges. Opportunities may well arise in interdisciplinary areas and we should be alert to such possibilities.

3. Appointments to Staff.

(a) In AY 1994/95 we had two visiting faculty. Professor John Casti, from the Santa Fé Institute and the Technical University of Vienna was a visitor during the spring semester of 1995, while Professor Belisario Venture was a visitor in fall of 1994.

(b) In April 1995, Dan Cosper joined the staff, replacing Ruth Goldman as Staff Assistant.

4. Separations from Staff.

(a) Professor Reuben Hersh retired in December 1.

(b) Professor Jeffrey Davis retired at the end of Spring semester, 1995.

(c) Professor Clifford Qualls retired at the end of July, 1995.

(d) Ruth Goldman, Staff Assistant, resigned in April 1995.

5. Faculty Publications.

Aceves, Alejandro B..

"Two-dimensional variational analysis of self-trapped solutions in planar waveguides," Optics Communications, Vol. 105 (1994), pp. 341-346. Coauthors: A. D. Capobianco, B. Constantini, C. De Angelis and G. F. Nalesso.

"Multidimensional Solitons in Fiber Arrays," Optics Letters, Vol. 19 (1994), pp. 329-331, Coauthors: C. De Angelis, A. M. Rubenchik and S. K. Turitsyn

"Storage and Steering of Self-Trapped Discrete Solitons in Nonlinear Waveguide Arrays," Optics Letters, Vol. 19 (1994), pp. 332-334. Coauthors: C. De Angelis, S. Trillo and S. Wabnitz.

"Beam Dynamics in Nonlinear Coupled Slab Waveguides: A Three Dimensional Variational Analysis," Journal of the Optical Society of America B, Vol. 11 (1994), pp. 1229-1235. Coauthors: A. D. Capobianco, B. Costantini, C. De Angelis and G. F. Nalesso.

"Modulational instability of continuous waves and one dimensional temporal solitons in fiber arrays," Optics Letters, Vol. 19 (1994), pp. 1186-1188. Coauthors: C. De Angelis, G. G. Luther and A. Rubenchik.

Bedrick, Edward J..

"Maximum Likelihood Estimation for the Removal Method," The Canadian Journal of Statistics, Vol. 22 (1994), pp. 285-293.

"Model Selection for Multivariate Regression in Small Samples," Biometrics, Vol. 50 (1994), pp. 226-231. Coauthor: C. L. Tsai.

Boyer, Charles P.

"New examples of Inhomogeneous Einstein Manifolds of Positive Scalar Curvature," Mathematical Research Letters, Vol. 1(1) (1994), pp. 115-121. Coauthors: K. Galicki and B. M. Mann.

"The Topology of Holomorphic Maps into Generalized Flag Manifolds," ACTA Mathematica, Vol. 173 (1994), pp. 61-101. Coauthors: J. C. Hurtubise, B. M. Mann and R. J. Milgram.

"The Geometry and Topology of 3-Sasakian Manifolds," Journal für die Reine und Angewandte Mathematik, Vol. 455 (1994), pp. 183-220. Coauthors: K. Galicki and B. M. Mann.

"Some New Examples of Compact Inhomogeneous Hypercomplex Manifolds," Mathematical Research Letters, Vol. 1(5) (1994), pp. 531-538. Coauthors: K. Galicki and B. M. Mann.

Coutsias, Evangelos A.

"Acoustic Wave nonlinearity in stimulated Brillouin scattering," Journal of the Optical Society of America B (1994), pp. 1367-1373.

Efromovich, Sam

"Nonparametric curve estimation from indirect observations," Computing Science and Statistics, Vol. 26 (1994), pp. 196-200.

"On adaptive estimation of nonlinear functionals," Statistics and Probability Letters, Vol. 19 (1994), pp. 57-63.

"Adaptive estimates of linear functionals," Probability Theory and Related

Fields, Vol. 98 (1994), pp. 261-275. Coauthor: M. Low.

"On nonparametric curve estimation: multivariate case, sharp-optimality, adaptation, efficiency," Discussion Paper, Vol. 9418 (1994), pp. 1-35.

"Adaptive density estimation for small samples," Institute of Mathematical Statistics-Bernoulli Abstracts, (1994), p. 40.

"On adaptive nonnegative orthogonal series density estimator for small samples," Discussion Paper, Vol. 9419 (1994), pp. 1-31.

Ellison, James A.

"Longitudinal Beam Dynamics with RF Noise," in Particle Accelerators, Vol. 43 (1994), pp. 159-194. Coauthors: Cogburn, Newberger and Shih.

"Theoretical Study of Longitudinal Beam Splitting and Related Phenomena," Physical Review E. 49 (1994), pp. 2484-2487. Coauthors: Kummer and Shih.

"A Four-Thirds Law for phase randomization of stochastically perturbed oscillators and related phenomena," Communications in Mathematical Physics, Vol. 166 (1994), pp. 317-336. Coauthor: Cogburn.

Epperson, Jay B.

"Diffusions on finite-energy loop spaces," Soochow Journal of Mathematics, Vol. 20 (1994), pp. 113-136.

Galicki, Krzysztof

"New Examples of Inhomogeneous Einstein Manifolds of Positive Scalar Curvature," Research Notes and Announcements, Vol. 1 (1994), pp. 115-121. Coauthors: C. P. Boyer and B. Mann.

"Geometry and Topology of 3-Sasakian Manifolds," Journal für die Reine und Angewandte Mathematik, Vol. 455 (1994), pp. 183-220. Coauthors: C. P. Boyer and B. Mann.

"Some New Examples of Inhomogeneous Hypercomplex Manifolds," Mathematical Research Letters, Vol. 1 (1994), pp. 531-538. Coauthors: C. P. Boyer and B. Mann.

Gibson, Archie G.

"On Breakup States for Three Identical Particles," in "Few Body XIV," Franz Gross (Editor), (William and Mary, Williamsburg, Virginia, 1994), pp. 773-776. Coauthors: C. Chandler and A. J. Waters.

"Solution of a Benchmark Problem with the Chandler-Gibson Equations,", in "Few Body XIV," Franz Gross (Editor), (William and Mary, Williamsburg, Virginia, 1994), pp. 844-847. Coauthors: C. Chandler and A. J. Waters.

"N-Body Quantum Scattering Theory in Two Hilbert Spaces," VII, Real Energy Limits, Journal of Mathematical Physics, Vol. 35 (1994), pp. 1487-1512. Coauthor: C. Chandler.

"Spline Interpolation and Smoothing on Hyperspheres," SIAM Journal on Scientific Computing, Vol. 15 (1994), pp. 1111-1125. Coauthors: C. Chandler and H. J. Taijeron.

Gilfeather, Frank L.

"Cohomology for operator algebras: joins," American Journal of Mathematics, Vol. 116 (1994), pp. 541-561.

Gonzales, Nancy

"Problem Posing: A Neglected Component in Mathematics Courses for Prospective Elementary and Middle School Teachers," School Science and Mathematics, Vol. 94 (1994), pp. 78-84.

Hagstrom, Thomas

"On the accurate long-time solution of the wave equation in exterior domains," Mathematics of Computation, Vol. 63 (1994), pp. 507-539. Coauthors: S. I. Hariharan and R. C. MacCamy.

"Boundary conditions and the simulation of low Mach number flows," Proceedings of the First International Conference on Theoretical and Computational Acoustics, D. Lee and M. Schultz (Editors), Vol. 2 (1994), pp. 657-668. Coauthor: J. Lorenz.

"Open boundary conditions for a parabolic system," Mathematics and Computer Modelling, Vol. 20 (1994), pp. 55-68.

Hahn, Liang-shin

Complex Numbers and Geometry, Spectrum Series of the Mathematical Association of America, Roger Horn, et al. (Editors), (1994).

Koltchinskii, Vladimir

"Komlos-Major-Tusnady approximation for the General Empirical Processes and Haar Expansions of Classes of Functions," Journal of Theoretical Probability, Vol. 7, N. 1 (1994), pp. 73-118.

"Spatial Quantiles and Their Bahadur-Kiefer Representations," in Asymptotic

Statistics, P. Mandl and M. Huskova (Editors), 1994, pp. 361-367, Physica-Verlag, Heidelberg.

"Bahadur-Kiefer Approximation for Spatial Quantiles," in Probability in Banach Spaces, T. Hoffman-Torgensen, T. Kuelbs, et al. (Editors), 1994, pp. 394-408, Birkhauser, Boston.

Kucharz, Wojciech

"Sur les applications régulieres des variétés abéliannes réelles dans S^2," Comptes Rendus de l'Académie des Sciences, Paris, t. 305, Série I, Vol. 318 (1994), pp. 467-470. Coauthor: J. Bochnak.

"Real algebraic morphisms into flag varieties," Bolletino della Unione Matematica Italiana, Vol. 8-A (1994), pp. 345-352.

Lorenz, Jens

"On the existence of slow manifolds for problems with different time scales," Philosophical Transactions of the Royal Society, London A, Vol. 346 (1994), pp. 159-171. Coauthor: H.-O. Kreiss.

"Boundary conditions and the simulation of low Mach number flows," in Environmental Acoustics, International Conference on Theoretical and Computational Acoustics, Vol. 2, D. Lee and M. H. Schultz (Editors), World Scientific, Singapore (1994), pp. 657-668. Coauthor: T. Hagstrom.

"Numerics of attractors and invariant manifolds," in Chaotic Numerics, P. Kloeden and K. Palmer (Editors), American Mathematical Society Series on Contemporary Mathematics, Vol. 172 (1994), pp. 185-202.

Loring, Terry A.

"Deformations of topological spaces predicted by E-theory," in Algebraic Methods in Operator Theory, Birkhauser (Boston), (1994). Coauthor: Marius Dădărlat.

"A test for injectivity for asymptotic morphisms," in Algebraic Methods in Operator Theory, Birkhauser (Boston), (1994).

"Approximation of normal elements in the multiplier algebra of an AF C^*-algebra," Proceedings of the American Mathematical Society, Vol. 12 (1994), pp. 1173-1175. Coauthor: Jack Spielberg.

"K-homology, asymptotic representations and unsuspended E-theory,", Journal of Functional Analysis, Vol. 126 (1994), pp. 367-383. Coauthor: Marius Dădărlat.

"Extensions of certain real rank zero C^*-algebras," Annals of Institute Fourier (Grenoble), Vol. 44 (1994), pp. 907-925. Coauthor: Marius Dădărlat.

Mann, Benjamin M.

"New examples of Inhomogeneous Einstein Manifolds of Positive Scalar Curvature," Mathematical Research Letters, Vol. 1(1) (1994), pp. 115-121. Coauthors: C. P. Boyer and K. Galicki.

"The Topology of the Space of Rational Maps into Generalized Flag Manifolds," ACTA Mathematica, Vol. 173 (1994), pp. 61-101. Coauthors: C. P. Boyer, J. C. Hurtubise and R. J. Milgram.

"The Geometry and Topology of 3-Sasakian Manifolds," Journal für die Reine

und Angewandte Mathematik, Vol. 455 (1994), pp. 183-220. Coauthors: C. P. Boyer and K. Galicki.

"Some New Examples of Compact Inhomogeneous Hypercomplex Manifolds," Mathematical Research Letters, Vol. 1(5) (1994), pp. 531-538. Coauthors: C. P. Boyer and K. Galicki.

Milgram, R. James

"Invariants and cohomology of groups," Boletin Sociedade Matematica Mexicana, Special volume in honor of J. Adem. Coauthor: A. Adem

The Cohomology of Finite Groups," Grundlehren der mathematischen Wissenschaften, Vol. 309, Springer-Verlag (1994). Coauthor: A. Adem.

"The topology of the space of ration maps into generalized flag manifolds," ACTA Mathematica, Vol. 173 (1994), pp. 61-101. Coauthors: C. Boyer, J. Hurbubise, B. Mann.

"The homotopy type of gauge theoretic moduli spaces," *Algebraic Topology and Its Applications*, G.E. Carlsson, R.L. Cohen, W.-C. Hsiang, J.D.S. Jones (Editors), Mathematical Sciences Research Institute Publications, Vol. 27, Springer-Verlag (1994), pp. 15-55. Coauthor: R. Cohen.

Onneweer, Cornelis W.

"On H^p ($\mathbf{R}^n$)-Multipliers of Mixed-Norm Type," Proceedings of the American Mathematical Society, Vol. 121 (1994), pp. 543-552. Coauthor: T. S. Quek.

"On L^p -Multipliers of Mixed-Norm Type," Journal of Mathematical Analysis and Applications, Vol. 187 (1994), pp. 490-497. Coauthor: T. S. Quek.

"Weighted Triebel-Lizorkin Spaces on Locally Compact Vilenkin Groups," Mathematische Nachrichten, Vol. 168 (1994), pp. 191-208. Coauthor: T. Kitada.

Qualls, Clifford R.

"Predictors of cerebral infarction following transient ischemic attack," *Journal of Stroke Cerebrovascular Disease*, Vol. 3 (1993), pp. 23-28. Coauthors: A. Bruno, L. Jeffries and E. LaKind.

"Accuracy of Leopold maneuvers in screening for malpresentation: A prospective study," *Birth*, Volume 20:3 (1993), pp. 132-135. Coauthors: L. Albers, E. Craig, J. Gorwoda and M. Lydon-Rochelle.

"Innervation of normal sural and optic nerves by noradrenaline- and peptide-containing nervi vasorum and nervorum: effect of diabetes and alcoholism," *Brain Research*, Vol. 632 (1993), pp. 48-56. Coauthors: O. Appenzeller, G. Burnstock, J. Lincoln and P. Milner.

"Increased endothelin and creatine kinase after electrical stimulation of paraplegic muscle," *Journal of Applied Physiology*, Vol. 75(6) (1993), pp. 2400-2405. Coauthors: J. Aisenbrey, O. Appenzeller, J. DePaepe, L. Kopriva, J. Krauss and R. A. Robergs.

"Prevention of cesarean section - Does intracervical dinoprostone work?," *Western Journal of Medicine*, Vol. 159 (1993), pp. 149-152. Coauthors: M. S. Chatterjee, C. B. Curet, G. J. Gilson and L. A. Izquierdo.

"Dose response study of N, N-dimethyltryptamine in humans. I.

Neuroendocrine, autonomic, and cardiovascular effects," *Archives of General Psychiatry*, Vol. 51 (1994), pp. 85-97. Coauthor: R. J. Strassman.

"Dose response study of N, N-dimethyltryptamine in humans. II. Subjective effects measured by a new rating scale," *Archives of General Psychiatry*, Vol. 51 (1994), pp. 98-108. Coauthors: R. Kellner, R. J. Strassman and E. H. Uhlenhuth.

"Time series forecasts of emergency department patient volume, length of stay, and acuity," *Annals of Emergency Medicine*, Vol. 3 (1994), pp. 299-306. Coauthor: D. Tandberg.

"Clinical features of ischemia stroke in Hispanics and non-Hispanic whites in New Mexico: A study of 341 consecutive patients at two hospitals," *Ethnicity & Disease*, Vol. 4 (1994), pp. 77-81. Coauthor: A. Bruno.

"Survey of health related databases for the executive branch of the State of New Mexico - 1994." UNM Statistical Laboratory Reports, Part I: A Health Information Data Source Book, 1-93 (1994) and Part II: Directory of Databases, 1-80 (1994). Coauthor: N. A. Okpokho.

"American College of Surgeons Retirement Survey - 1994." UNM Statistical Laboratory Report, 1-95 (1994). Coauthor: O. J. Shoemaker.

"Adaptation in brain glucose uptake following recurrent hypoglycemia," *Proceedings of the National Academy of Science USA*, Vol. 91 (1994), pp. 9352-9356. Coauthors: P. J. Boyle, S. F. Kempers, A. M. O'Connor, R. J. Nagy and R. A. Yeo.

Steinberg, Stanly L.

"Modeling the Membrane Using Boundary-Fitted Coordinates," Applied Mathematical Modelling, Vol. 18 (1994), pp. 391-399. Coauthors: J.E. Castillo, M. McEachern and J. Richardson.

"Comparisons of Numerical Solution Methods for Differential Equations with Discontinuous Coefficients," Mathematics and Computers in Simulation, Vol. 36 (1994), pp. 57-75. Coauthors: B. Das, T. Robey, and D. Zhang.

"Flux-Corrected Transport in a Moving Grid," Journal of Computational Physics, Vol. 111 (1994), pp. 24-32. Coauthor: K. Salari.

"The Synthesis and Analysis of Numerical Programs for Approximating Solutions of Evolution Equations," Proceedings of the special session on Symbolic Methods for Numerical Applications, IMACS World Congress on Computation and Applied Mathematics, W. F. Ames (Editor), IMACS (1994). Coauthor: E. Kant.

"Stability Analysis by Quantifier Elimination," CTU Seminar 94, Part A, Czech Technical University, Prague (1994), pp. 29-30. Coauthor: R. Liska.

"Problem Solving using Mathematica," Proceedings of the 1994 American Society for Electrical Engineers Annual Conference, Edmonton, Alberta, Canada, (1994). Coauthor: H.E. Nuttall.

Stone, Alexander P.

"Impedances of Coplanar Conical Plates in a Uniform Dielectric Lens," Sensor and Simulation Note 372, Phillips Laboratories, (1994).

Sulsky, Deborah L.

Row Ordering for a Sparse QR Decomposition," SIAM Journal on Matrix Analysis and Applications, Vol. 15 (1994), pp. 1208-1225. Coauthor: Thomas Robey.

"A Particle Method for History-Dependent Materials," Computer Methods in Applied Mechanics and Engineering, Vol. 118 (1994), pp. 179-196. Coauthors: Z. Chen and H. L. Schreyer.

"Moving Surface Approach to Softening with Localization," Proceedings of the Europe-U.S. Workshop on Fracture and Damage in Quasibrittle Structures: Experiment, Modeling and Computer Analysis, Prague (1994). Coauthors: Z. Chen and H. L. Schreyer.

Wofsy, Carla

"Dynamics of signal transduction after receptor aggregation," *Proceedings of the National Academy of Science*, Vol. 91 (1994), pp. 3087-3091. Coauthors: B. Goldstein, U. M. Kent, S-Y. Mao, H. Metzger and S. Ross.

"Aggregation of Cell Surface Receptors," in *Lectures on Mathematics in the Life Sciences*, Vol. 24 (1994): *Cell Biology*, pp. 109-135. Coauthor and Coeditor: B. Goldstein. American Mathematical Society, Providence, RI.

"Quantitative Aspects of Receptor Aggregation," in *Mechanisms of Lymphocyte Activation and Immune Regulation*, Vol. V (1994): *Molecular Basis of Signal Transduction*, pp. 175-183. Coauthors: B. Goldstein, U. Kent, S-Y. Mao, H. Metzger, C. Psribluda, V. Pribluda and T. Yamashita. A. DeFranco, S. Gupta,

W. E. Paul and R. Perlmutter (Editors). Plenum Press, New York.

Lectures on Mathematics in the Life Sciences, **24**: *Cell biology* (1994), B. Goldstein and C. Wofsy (Editors), American Mathematical Society, Providence, RI.

Zimmer, William J.

"Model Bench Marking with a Statistical Grading Scale," Annals of Assurance Sciences: Annual Reliability and Maintainability Symposium Proceedings, (1994), pp. 188-194. Coauthors: T. L. Calton, R. R. Prairie and R. Weitz.

"SPC Pro, an Expert System Approach for Variables Control Charts," Quality Engineering, Vol. 7, Number 1, (1994-1995), pp. 89-104. Coauthors: S. Kassicieh and S. Yourstone.

"Bayesian Estimation of the Linear Hazard Rate Model," IEEE Transaction on Reliability, Vol. 42, Number 4, (1994), pp. 636-640. Coauthors: A. Panday and A. K. Singh.

6. Outside Professional Activities.

Aceves, Alejandro

He travelled to conferences in Scotland, Ireland, Denmark and Russia during the summer of 1994, to give presentations on his work in nonlinear optics.

He participated in the Nonlinear Optics Workshop at the University of Arizona in September 1994.

He visited Northwestern University to give a talk in May and in late May attended the SIAM Dynamical Systems conference in Utah, where he was a

featured speaker.

Boyer, Charles P.

He visited the Erwin Schrödinger International Institute for Mathematical Physics from October 8th through 21st, 1994,to participate in a workshop on Quaternionic Geometry and to give a talk on Hypercomplex structures.

He organized and participated in the Fall Seminars given by the New Mexico Geometry/Topology group in Las Cruces in the fall and in the spring at UNM Campus.

He gave a talk on January 23rd, 1995, at the University of Valencia in Spain.

Cameron, Laura

She gave a talk at the New Mexico Council of Teachers of Mathematics, held November 18th and 19th, 1994.

She attended a meeting on Restructuring the Mathematical Preparation of Future Elementary Teachers, held at the College of Education in January.

She attended the 6th annual meeting of the New Mexico Mathematical Association of Two-Year Colleges at the end of March.

Efromovich, Sam

He gave talks at INTERFACE '94 at the Bernoulli Society meeting in Chapel Hill, North Carolina in July, 1994.

He participated in the NSF Statistical Conference at Yale, in December, which was devoted to Le Cam's theory for convergence of experiment.

He gave an invited talk at the annual meeting of the ERAR/IM/SASA statistics

groups, held from March 25th through 29th at Birmingham, Alabama.

Ellison, James A.

He attended the Workshop on Nonlinear Dynamics in Particle Acceleration in Arcidosso, Rome, Italy from September 4th through 9th, 1994.

He visited the Stanford Linear Accelerator and gave two talks, one on Method Averaging in Beam Dynamics and the other, a report on the Arcidosso workshop, in October, 1994.

Galicki, Krzysztof

He was an invited speaker at the SISSA - Quaternionic Geometry and Mathematical Physics conference in Trieste, Italy in early September, 1994.

He visited the Erwin Schrödinger International Institute for Mathematics Physics from September 12th through 30th, where he gave several talks.

Gibson, Archie G.

He visited the High Performance Computing project in Maui in December and January to use the IBM SP2 computer at the center to find a numerical solution of the Chandler-Gibson equations.

Gonzales, Nancy

She attended the state-wide conference in science, mathematics and engineering, entitled "Together we can make it work in New Mexico" and gave a presentation, in October, 1994.

She gave a talk at the state meeting of New Mexico Council of Teachers of Mathematics held November 18-19, 1994.

She was appointed to serve on the State Department of Education's Committee on the Systemic Initiative in Math and Science.

Hagstrom, Thomas M.

He visited the Institute of Computational Mechanics in Propulsion at NASA Lewis Research Center in Cleveland in January, 1994.

He visited the University of Akron, Ohio, and gave a colloquium in January, 1994.

Hahn, L.S.

He prepared the questions for Rounds 1 and 2 of the UNM High School Mathematics Contest in October and February, respectively.

Kelly, Frank J.

He supervised the administration of Rounds 1 and 2 of the UNM High School Mathematics Contest in October and February, and also hosted the Awards Banquet in April 1995.

Koltchinskii, Vladimir

He was invited to participate in a special NSF Statistical Conference in December 1994 at Yale, devoted to Le Cam's theory for convergence of experiment.

Loring, Terry A.

He attended the International Congress of Mathematicians (ICM-94) in Zurich, Switzerland, during July, 1994. He also visited Copenhagen for collaborative research.

He was one of the speakers at the West Coast Operator Algebra Seminar at UCLA in the last week of September, 1994.

He visited the Fields Institute from December 5-9th, 1994, to participate in a workshop on Classification of Amenable C*-algebras.

He was appointed an external investigator on the NSERC 'subject"grant on Classification of C*-algebras.

Mann, Benjamin M.

He participated and organized the New Mexico Geometry/Topology meeting in Las Cruces, in the fall and the spring meeting at UNM campus.

Milgram, R. James

He organized and participated in the New Mexico Geometry/Topology meeting in Las Cruces, in the fall and the spring meeting at UNM campus.

Schrader, Ronald M.

He visited the National Science Foundation in Washington D.C., in January, 1995, to review research proposals.

Steinberg, Stanly L.

He visited Jonkoping in Sweden for a week in September, 1994, to teach a course on Mathematica and its applications.

He presented a paper at the AMS conference in San Francisco at a special session on Applied Logic, in January, 1995.

He organized and hosted an IMACS conference on Applications of Computer Algebra on UNM Campus from May 16th to 20th, 1995.

He attended the International Conference "Centennial Hurwitz on Stability Theory" in Monte Verità, Ascona, Switzerland from May 21-26, 1995.

Stone, Alexander P.

He attended the annual Mathematics Chairs Colloquium, sponsored by the Board of Mathematical Sciences in Arlington, Virginia, in October, 1994.

He attended the U.R.S.I. meeting in January, 1995, in Boulder, Colorado and presented a paper on electromagnetic lens theory.

He presented a paper on electromagnetic lens theory at an International Conference in St. Petersburg, Russia, in May 1995.

Sulsky, Deborah L.

She attended the annual American Physical Society, Division of Fluid Mechanics meeting, November 20-22, 1994 and gave a talk.

Zimmer, William J.

He attended the International Meeting of Science and Technology for Development in Cambridge, Massachusetts, from October 12-15th, 1994 He and Dr. Richard Prairie presented their paper "Invigilation Plans for Monitoring the Reliability of Continuously Produced Product".

7. Outside Sponsored Research.

P.I.	AGENCY	PURPOSE	AMOUNT	DATES
Aceves, A.	DOE	Regular and Chaotic Dynamics	83,000	6/1/93-11/30//95
Aceves, A.	DOD	Math Modelling of Optical Fiber	171,165	10/16/93-10/14/95
Boyer (with Galicki, Mann)	NSF	Quaternionic Geometry	180,000	6/1/95-5/31/98
Buium, A.	NSF	Differential Algebraic Geometry	3,700	7/1/95-6/30/96
Efromovich, S.	Sandia	An adaptive nonparametric regression	35,000	10/1/93-9/30/94
Galicki, K.	NSF	Quaternionic Quotients	40,450	6/1/93-11/30/95
Galicki, (with Boyer, Mann)	NSF	Quaternionic Geometry	180,000	6/1/95-5/31/98
Gibson, A. (with Chandler)	NSF	Scattering Theory	180,000	7/1/92-6/30/95
Kovanis, V.	Phillips	IPA agreement	68.677	5/30/95-5/29/96
Kucharz, W.	NSF	Real algebraic varieties	73,600	6/1/95-5/31/98
Kucharz, W. (with Buchner)	RAC	Real albegraic varieties	30,000	1/1/95-9/20/95
Lorenz, J.	NSF	Numerical analysis and computation of invariant manifolds	24,740	7/1/92-7/31/94
Lorenz, J.	DOE	Numerical and Asymptotic studies with complex flow dynamics	99,771	12/1/94-11/30/96
Loring (with Gilfeather)	NSF	Operator Algebras	35,601	1/1/93-6/30/96
Mann, (with Boyer, Galicki)	NSF	Quaternionic Geometry	180,000	6/1/95-5/31/98
Metzler (with Scott)	CHE	Teachers helping teachers learn	26,663	1/1/94-6/30/95
Qualls, C.	Veterans	IPA agreement	13,600	10/1/93-9/30/94
Qualls, C.	NM Health	Health information survey	19,988	9/7/94-6/30/95
Steinberg, S.	NSF	Symbolic derivation	11,655	9/1/93-2/28/97
Steinberg, S.	NSF	Czech Exchange	11,655	9/1/93-1/28/97
Steinberg, S.	Schlumberger	Computing		ongoing
Steinberg, S.	NSF	IMACS Conference	9,000	3/1/95-11/30/95

P.I.	AGENCY	PURPOSE	AMOUNT	DATES
Steinberg, S.	Nat. Security	IMACS Conference	10,000	5/11/95-5/10/96
Stone, A.	AFOSR	Electromagnetic Theory	25,000	1/1/95-12/31/95
Sulsky, D.	Sandia	Application of particle in-cell method to casting	23,500	5/5/94-11/1/95
Sulsky, D.	DOE	Suspension flow and interface problems	30,000	9/1/93-11/1/95
Zimmer, W.	Phillips	Development of a procedure to validate PRFECT methodology	185,684	1/1/94-9/30/95

Department of Philosophy

University of New Mexico

Annual Report, 1994-5

Russell B. Goodman, Chairperson

1. Significant developments during academic year 1994-5

Department members published three books this year, and numerous articles and reviews, making this year the strongest in terms of publication in the department's history. Leading the way was Professor G. F. Schueler's book with MIT Press, *Desire.* Professor Howard Tuttle published a study of the German philosophers Wilhelm Dilthey and Martin Heidegger and the Spanish Philosopher José Ortega Y Gassett entitled *The Dawn of Historical Reason: The Historicality of Human Existence in the Thought of Dilthey, Heidegger, and Ortega y Gassett* (Peter Lang, publisher). Assistant Professor Barbara Hannan's *Subjectivity and Reduction: An Introduction to the Mind-Body Problem,* was published by Westview Press. Professors Bussanich, Goodman, Sturm, and Taber wrote entries for the forthcoming *Routledge Encyclopedia of Philosophy.* Assistant Professor Amy Schmitter's "Representation, Self-Representation, and the Passions in Descartes" was published in the *Review of Metaphysics,* Associate Professor Andrew Burgess published a paper on Kierkegaard's *Philosophical Fragments* in the *International Kierkegaard Commentary, vol. 7,* Abraham Anderson's "Descartes Contra Averroes?" was accepted at *Interpretation,* and Russell Goodman's "What Wittgenstein Learned From William James" was published in the *History of Philosophy Quarterly.* Numerous reviews and conference papers were also produced by department members.

The department continued its program of exchanges with the Instituto de Investigaciones Filosóficas at UNAM in Mexico City. In the summer of 1994, Chairperson Russell Goodman visited the Institute, participating in Professor José Antonio Robles' seminar on infinity, and giving papers on pragmatism, and on William James. During the Fall term Professor León Olivé, formerly Director of the Institute, visited UNM, meeting with faculty and students, and presenting two papers, one on "Truth," another on "Ethical and Cultural Diversity." In the Spring Term, Professor Raúl Orayen of the Institue taught two courses as a visiting professor: a seminar on *Logic and Ontology* (treating issues developed in his book *Lógica, Significado, y Ontología*), and a second-level course in symbolic logic.

The department conducted a successful search to replace Don Lee. The process required screening over 900 applications, interviewing 13 candidates at the American Philosophical Association meetings in Boston, and choosing between two very strong finalists. In the end, the department chose Aladdin Yaqub, Ph. D. University of Wisconsin, whose book *The Liar Speaks the Truth* was published by Oxford University Press in 1993. Professor Yaqub has primary research interests in logic and philosophy of mathematics. He is also interested in philosophy of science, and medieval Islamic philosophy.

In April, a review of our graduate program was conducted by the Senate Graduate Committee. The university secured the services of a distinguished review committee: Barry Stroud (Berkeley), Catherine Wilson (Alberta), Gary Hatfield (Pennsylvania), and Rob Schwartz (UNM Law School). They reported that the department was basically in good shape, but that its resource base was too small for its responsibilities. In particular, they recommended that teaching assistant lines be added in order to reduce the excessive teaching load carried by graduate students,

and that the department's faculty, now numbering 11, be increased to at least 13, if not to the peer average of 14.

Using its Gwendolyn Barrett funds and the assistance of the College of Arts and Sciences, the department established two Undergraduate Tuition Scholarships, awarded this year to Alison Haberman and James Degnan. The department also continued its Dissertation Fellowship, awarded for 1995-6 to Dan Wolne.

The department sponsored a substantial series of talks, including visiting lecturers from Texas, Arizona, CUNY, UNAM, Rochester, and Ohio State. The highlight was this year's Brian O'Neil Lecturers in the History of Philosophy, presented by Professor Alan Code of Ohio State University, an expert on Plato and Aristotle. We were also pleased to have a number of graduate students present papers on their research. Speakers for the year included:

Keith Lehrer, University of Arizona, "The Unity of Theoretical and Practical Reason. September.

Kinya Masugata, Osaka Kyoiku University, "The Introduction of Kierkegaard to Japan inthe Meiji Era," October

Fred Schueler, UNM, "What are Desires?" Octoaber

Stephen Schiffer, CUNY Graduate Center, "Theories of Truth as Theories of Meaning," October

Robert Veroff, UNM Computer Science, "Automated Reasoning: Introduction and Overview," October

León Olivé, UNAM, Mexico City, "Truth" and "Ethical and Cultural Diversity. October.

Kevin Boileau, UNM, "Nietzsche and Foucault on Individualism" November

Ruth Meredith, UNM, "The Problem of Significant Form." November

Joan Bybee, UNM, Linguistics, "The Evolution of Grammar." November

Max Oelschlaeger, University of North Texas, "What is Environmental Ethics?" December

Johanna Seibt, University of Texas, "Bits and Pieces: Leibnizian-Whiteheadian Thoughts on Extension." December

Andrew Wayne, University of Rochester, "The Ontological Status of Quantum Fields." February

Aladdin Yaqub, Luther College, "The Duhem Problem: A Bayesian Analysis & Implications." February

John Taber, UNM, "The Significance of Kumarila's Philosophy." February

Alan Code, Ohio State University, "Substantial Forms in Aristotle's Metaphysics and Biology" and "Aristotle on Final Cause Explanation in the Life Sciences." March.

Tanya Storch and Fred Schueler, UNM, "What is Morality (East and West)?" March.

Gaynor Wild, Biochemistry, UNM, "Genetics, Psychology, and Phenotype." March.

Barbara Hannan, UNM, "Naturalism: Mental and Moral." March

John Maraldo, University of North Florida, "Nationalismin Japanese Philosophy." April.

John Gluck, UNM, Psychology. "Lying to Get to the 'Truth': The Problem of Deception in Psychological Research." April.

Don Partridge, UNM, Physiology, "Consciousness: an Exaptation in Brain Evolution." April.

Brom Anderson, UNM, "The Pracatical Foundation of Kant's Response to Epistemic Skepticism." April.

Rodney Cupp, UNM, "Dummett's Paradox." April.

Raúl Orayen, UNAM, Mexico City, "Proper Names, Propositions, and Kripke's Puzzle About Belief." May.

2. Plans and recommendations for the future.

The department is planning new exchanges with UNAM and a series of lectures for 1995-6, highlighted by a series "On the Meaning of Pictures" by Richard Wollheim. We will be conducting a search to replace Abraham Anderson, who was denied tenure. We are still extremely short of teaching staff, and hope that if the College of Arts and Sciences finds itself in a position to expand its faculty, that the department will be authorized to hire a new faculty member, most likely in ethics or political philosophy.

3. Appointments to Staff

Aladdin Yaqub, Ph. D. University of Wisconsin, formerly Assistant Professor, Luther College, Decorah, Iowa, and Florida State University, Talahassee.

4. Separations from Staff

None.

5. Outside Sponsored Research

None.

THE ANNUAL REPORT OF

THE DEPARTMENT OF PHYSICS AND ASTRONOMY

July 1, 1994 -- June 30, 1995

David M. Wolfe, Chairman

"Physics is a profession of and for idealists. We are reasonably paid; we are given instruments, laboratories, complicated and expensive machines, and we are asked not to make money with these tools, like most people, but rather to spend money. Furthermore we are supposed to do what we find most interesting, and we account for what we spend to the money givers - the federal authorities and, in the last analysis, the taxpayer. We believe deeply that the pursuit of science by the physicist is important and should be supported by the public.....We are participating in a most exhilarating enterprise right at the center of our culture. What we do is essential in shaping our physical and mental environment. ... We are all working for a common and well-defined aim: to get more insight into the workings of nature. This is a constructive endeavor, where we build upon the achievements of the past; we improve but never destroy the ideas of our predecessors."

adapted from V.F. Weisskopf

The Privilege of Being a Physicist

The Department has had a truly remarkable year. Most of the remarkable achievements were positive, albeit with some struggle, but a few were negative. As the song goes, we will "accentuate the positive".

A. Significant Achievements during the Academic Year 1994-1995 (Research)

The Department continues to make good progress. The funded research has continues to grow. We are working hard on the development of the major areas of our department's research. These are the Institute for Astrophysics (IfA), Optics and the Center for Advanced Studies, the New Mexico Center for High Energy Physics (NMCHEP), and Condensed Matter Physics. For the first time in living memory, the Department set out to develop a long-range plan. We have considered *en masse* a five year program for the direction we wish the Department to take. This has involved a great deal of introspection, discussion, soul searching and a difficult, but obviously necessary, balancing of interests.

The amount of thought, panning, and selflessness that has been necessary for the development of a long-range plan does not come without cost. Problems arise among competitive, ambitious, and very hardworking people. The result has been more discussion and even dissension that is usual for this rather amicable group of scientists. Nevertheless, the Department has pulled together and attempted to put the common good, the ideal of citizenship in an exciting enterprise, above parochial interests. We hope and trust that the University will appreciate the idealism which underlies such an effort.

Institute for Astrophysics

The Department of Physics and Astronomy, through its IfA, has been formally awarded a grant of $15,800,000 by the Air Force Office of Scientific Research. This money is to be used for the development of an astronomy-oriented science center. The project, originally known as Cosmic ¡Explora!, has changed its name to Lodestar. The new name is better suited to our plan to serve as a "guiding light" for science education as well as to avoid confusion with the ¡Explora! Museum of the City of Albuquerque.

The first task desired by the Air Force is an Environmental Assessment of the potential site for Enchanted Skies Park. This task continues at several mesa site west of Albuquerque.

The Socorro site has no environmental restrictions placed upon it and is beginning to function. They are also developing a plan to use this project as the center of a Master of Science Teaching degree. We are looking to this as a model program for UNM through the College of Arts and Sciences.

The discovery of a new galaxy by Patricia Henning comes as wonderful news. This is a startling discovery, work done during her post-doctoral fellowship in Holland and continued in

collaboration with the Dutch since her arrival at UNM. The award to her of an NSF Career Development Grant is only one of many recognitions of her rising status in her profession. A brief description of her year, submitted as part of the Department's records of each faculty member's performance, is attached.

Research:

Henning continued work with collaborators on a 21-cm survey for galaxies in the Zone of Avoidance (ZOA) with the Dwingeloo telescope in the Netherlands. A very nearby, previously unknown spiral galaxy was discovered through this survey, and announced in Nature. This discovery, the Dwingeloo survey, and the results of her pilot survey with the Green Bank 300-foot telescope were described in colloquia at the Astronomy Department of the University of Washington in October 1994, and to the NRAO in Socorro in April 1995. The nearby galaxy work was presented at the LANL/UNM Astrophysics Festival, and the NM astronomy Symposium in the fall. Analysis of her pilot survey will appear in the Astrophysical Journal in September.

In addition to the work in the north, Henning is involved with a survey of optically-selected ZOA galaxies in the southern hemisphere with the Parkes telescope in Australia, with Renee Kraan-Korteweg (Meudon). She is also involved with development of a multibeam system for the Parkes telescope to survey fully the southern sky at 21cm.

Observing time was granted to study the dust in the intergalactic HI cloud near UGC 7636, with the Infrared Space Observatory, to be launched in the next year.

She received an NSF Faculty Career Development (CAREER) Program award to work on the northern and southern surveys, and to study a sample of asymmetric, lopsided galaxies at radio and optical wavelengths. The five-year award will support a student and allow for new computing facilities, as well as support for the PI.

Education:

Henning taught A270, A271, and was responsible for the accompanying laboratories. She team-taught a P400 seminar. With Gregory, she led a weekly seminar on Large Scale Structure in the universe. Under the leadership of McGraw, and with other members of the IfA, much effort was put into planning facets of the Lodestar project. Also, she is a member of the science team for a project funded through NASA's Initiative to Develop Education through Astronomy, which entails the development of mini-lessons to be posted on the Internet via WWW client mosaic. The science team provides data around which lessons are planned, and responds to questions form students.

Professor Derek Swinson is planning to retire in December 1995, after a long and distinguished career at UNM. He has been a world leader in the field of cosmic-ray physics while serving as one of our most dedicated instructors and Departmental citizens. I include also his far too modest report for the past academic year.

Following heart surgery in FEB. 94, I made the decision that I would terminate the operation of our cosmic ray telescopes at Embudo and Socorro at the end of December 1994, and that I would retire from UNM at the end of December 1995. The telescopes continued to operate successfully through December 1994, thus termination a long series of cosmic ray monitoring started by Victor Regener in the late 50's, and with which I became associate since 1965. This work is still being supported by NSF through the end of 1995. Data reduction and analysis is continuing, as well as the process of arching data since 1965. Two papers on my research in cosmic ray anisotropies will be appearing in the Proceedings of the International Cosmic Ray Conference, to be held in ROME later this year.

In my teaching, in December 1994 my article on "Physics and SNOWBOARDING" was the lead article, and photos from it were featured on the cover, in THE PHYSICS TEACHER. This is the third cover of THE PHYSICS TEACHER which has featured photos from my articles in that magazine. At the 1994 Commencement I received an award for outstanding teaching at the undergraduate level. At both the 1994 and 1995 Commencements I put on displays of teaching using our superb array of demonstration equipment. THE PHYSICS TEACHER is publishing another major article of mine, on "VEHICLE ROLLOVER" in the Fall of 1995, with possible another cover.

The Lodestar project is of the utmost priority within our Department. This has been unanimously recognized and the understood within our planning meetings. The result is that a new position in Astrophysics has been given the highest priority in the future hiring plans of the Department. The work and the money are here and the people to do the work are needed. We are grateful to the Dean and the Provost for recognizing this.

Condensed Matter Physics:

This is an area of major concentration for our department and one of the areas where we

can foresee considerable growth. The enormous stress placed on Condensed Matter Physics at both Sandia and Los Alamos Laboratories makes possible a large number of collaborations. The Department has recognized the importance of this field for our growth that we have joined together to request that the second new position we desire is in the field of theoretical condensed matter physics.

The growth of this work becomes evident in the growth of funding, collaboration, and papers (not necessarily in that order). Health problems for Prof. Kenkre led to a decline in sponsored research. Happily, with his return to good health, the very difficult process of recouping funding has commenced and continues. The funding is approximately $150,000 per year, a very large sum in theoretical physics and a very difficult funding era. Kenkre supervised four PhD students at UNM during this period

We continue our collaboration with Dr. Rob Duncan at Sandia, a renowned low-temperature physicist. An Adjunct Professor, Dr. Duncan continues with his NASA grant. This work will result in a Space Shuttle mission scheduled for November 2000. The experiment will measure the properties of superfluid liquid helium under micro-gravity conditions. This is so important a mission to NASA and the Jet Propulsion Laboratory that it is the only surviving experiment in its field. Moreover, Sandia has a surplus of space missions, almost entirely military, and does not have the "facilities" to handle this work. Therefore, Dr. Duncan and JPL are transferring the grant from Sandia to UNM, an amount of approximately $6,000,000 with an overhead over five years of more than $1,000,000!

It is also with great pleasure that the Department notes the promotion to Associate Professor with tenure of Prof. David Dunlap, an outstanding young scientist and teacher. He has

been named the District Councilor for the Society of Physics Students. A region encompassing New Mexico, Arizona, parts of west Texas, and southern Colorado.

This field, in which we are searching for a new faculty member, I include the yearly report of Prof. Kenkre himself as well as the work of Charles Beckel, which continues despite his retirement from so-called "active life".

Professor Kenkre was invited as a Thriges Visiting Professor at the Institute of Applied Mathematics and Modeling, Denmark in Dec. 94. There he developed a theory of saturation phenomena in nonlinear systems. He spent a month (July) as a visiting professor at CNR Pisa, Italy where he developed a theory of AFM (parting tunneling microscopy work) in collaboration with the Biophysics group at Pisa. He was invited to give a plenary lecture in Madrid, Spain on his work on thermal effects on Davydov solitons. He also spent a part of his sabbatical stay at Stanford University where he constructed an explanation of the surprising observations of inverted temperature dependence of vibrational relaxation in polyatomic liquids.

He acquired a number of new sources of research funding during this period. He continued his work at Lovelace research laboratories on nuclear magnetic resonance as a probe of microgeometry, his work on microwave interactions with ceramic materials with CMEC at UNM, and started a new collaboration with Sandia National Laboratories on the fundamentals of powder compaction studied through statistical mechanics methods. Work was begun on superfluidity in connection with another contract.

About a dozen research papers were published on various topics including two on the fundamental theory of scanning tunneling microscopy. Most exciting among the research problems studied was the one concerning the basic connection between quantum mechanics and soliton dynamics. The semiclassical approximation at the basis of some 20 years of work was studied for its range of validity and was shown to be seriously flawed. This important work, done in collaboration with Los Alamos, and with overlap with the PhD thesis on one of UNM students, will be discussed at an invited lecture in Scotland in July by Kenkre.

During the Fall of 1994, his last semester before retirement, Beckel taught Electricity and Magnetism (Physics 405) and Exploring Physics (Physics 162), primarily for seniors and freshmen respectively.

On December 31, 1994, Beckel changed his status to Professor Emeritus. Two research projects continue despite retirement. J.M. Peek (LANL) and S.A. Sonnleitner and C. Beckel (both

UNM) are working on the theory of the hydrogen molecular ion as a source of observed but unidentified diffuse interstellar band spectra. One paper is expected to be submitted during September 1995 and a second paper a few months later.

The second project involves the theoretical determination of properties of boron-rich solids from first principles. In its first phase, work is focusing on the study of elemental boron. The collaboration between Beckel and Dr. Iris Howard of the University of Texas at Arlington is just now widening to incorporate the expertise of UNM Adjunct Professor Susan Atlas, our local expert on parallel computing.

Center for Advanced Studies:

The Center continues apace under the direction of Professor Carl Caves. An Advisory Committee has been appointed, with membership of Profs. Kenkre, Prasad, Finley, and Dunlap. Jointly they decide upon the use of CAS funds, the number of visitors who can be invited, conferences and meetings to support, etc. This system is functioning smoothly and a considerable number of exciting visitors are planned for this year. In addition, Carl Caves will be organizing a major conference, partly sponsored by the CAS.

One of the very nicest parts of this arrangement, however, is the incorporation of the Condensed Matter Theory people into the CAS. This joint and overlapping interest has provided new intellectual fervor throughout the Department.

Murray Gell-Mann taught for us during the Spring. His seminar on Complexity Theory was wildly popular and well attended. He will repeat the class this Autumn, although the course will be at a much higher mathematical level. He has been here quite a bit and has collaborated with Carl Caves on several projects. As well, the students are very pleased to have a scientist of his caliber

among us. He has been described in a recent issue of the New York Review of Books as "the smartest man in the world". Talking to him makes one believe that this is true. He's a genuine joy to have among us. The Albuquerque Journal is planning a long article on him in the near future.

This past year we have had the pleasure of having Prof. K. Wódkiewicz with us. This was the "every other year" time during which he is at UNM. He taught and worked among us in his usual diligent fashion. I include below his list of papers, talks, etc. during the past year.

PUBLISHED PAPERS 1994/95

1. *M. O. Scully and K. Wodkiewicz "Spin quasi-distribution functions" Found. of Phys. 24, 85 (1994)*
2. *P. Riegler and K. Wodkiewicz " Phase-space representation of operational phase operators" Phys. Rev. A 49, 1387 (1994)*
3. *E. Kahler and K. Wodkiewicz "Optical Bloch Equations in the presence of stochastic broad-band vacuum" Journ. of Mod. Opt. 41, 491 (1994).*
4. *A. Orlowski, and K. Wodkiewicz, "Dynamical ordering: Applications to Fokker-Planck equations. " Phys. Rev. A 50, 3401 (1994)*
5. *K. Wodkiewicz, "Classical Limit of Entangled Correlations" Acta Physica Polonica 86, 223 (1994)*
6. *K. Wodkiewicz "Classical and Quantum Malus' Law" Phys. Rev. A 51, 2785 (1995)*
7. *B.-G. Englert and K. Wodkiewicz "Intrinsic and operational observables in quantum mechanism Phys. Rev. A 51, R2661 (1995)*
8. *K. Wodkiewicz " Nonlocal and Local Ghost Fields in Quantum Correlations" Contemporary Physics 1995 (in print)*
9. *B.-G. Englert and K. Wodkiewicz "Quantum Trigonometry and Phase Space Propensity" " Quantization and coherent states methods" Bialowieza workshop, (PlenumS New York) 1995*
10. *B.-G. Englert, K. Wódkiewicz and P. Riegler "Intrinsic phase operator of the Noh-Fougéres-Mandal experiments" Phys. Rev. A (in print)*
11. *K. Wódkiewicz "Randomness, nonlocality and information in entangled correlations" (submitted for publication)*
12. *K. Wódkiewicz and J.K. McIver "Motional narrowing and frequent measurements" in Proceedings of Coherence and Quantum Optics.*
13. *Phung Van Vinh and K. Wódkiewicz "Three-level atom in the presence of stochastic broad-band squeezed vacuum" in Proceedings of Coherence and Quantum Optics.*
14. *K. Wódkiewicz "Quantum trigonometry of the Noh-Fougéres-Mandal experiments" in Proceedings of Coherence and Quantum Optics.*

CONFERENCES - INVITED TALKS 1994/95

1. *Workshop on Quantum Optics, Trieste, Italy (1994).*
2. *Białowieża Workshop on geometrical methods in quantum mechanics, Poland 1994.*
3. *Conference of Information and Entropy in Physics. Santa Fe, USA (1994).*
4. *Coherence and Quantum Optics, Rochester, USA (1995).*

It is also very pleasing to report that Prof. Prasad, a charter member of the CAS has begun exactly the type of collaborative work we hope for in our Department. He is combining his expertise in optics with problems in astronomy. His work on focusing within fibers and the ability to use this technique for phase compensation in interferometry is a new and impressive breakthrough. This impressive work has attracted international attention. His report is below.

There were three distinct directions to my research done/published last year:

1. The theoretical analysis developed by me over the previous several years to address squeezing and other quantum mechanical noise properties of fields produced by an optical parametric oscillator (OPO) was refined further to take into account phase noise of the pump. Such noise limits the degree of squeezing of the signal field produced by the OPO to a finite value. The key advantage of my approach is its generality in addressing the entire gamut of cavity Q values, from 0 (single-pass amplifier) to oo (perfect oscillator). Two papers reporting this work appeared in Physical Review A on pages 1400-1405 and 1406-1426 of Volume 49.

2. The virtue of amplification of faint astronomical signals to boost their strength without degrading the signal-to-noise ratio has been debated for many years. What I showed definitively last year is that amplification must degrade, via intrinsically quantum mechanical additive noise, thermal signals characteristic of astronomical sources so greatly that it is much better to process the original signals themselves. A quantitative demonstration of this result, no different from the result of amplifying ordinary flashlight, appeared in my publication on pages 2799-2803 of Volume 11 of the Journal of Optical Society of America A.

3. Long-baseline interferometric imaging is the only method available for very high angular resolution of incoherent optical sources in the sky. With large separations between movable telescopes of an interferometric array, beam coupling, splitting, and recombination optics need to be both highly flexible and robust. Single-mode optical fibers can accomplish all three tasks with flexibility and robustness with a new fiber design proposed by me. Fibers here will have multiple cores for improvement of coupling. The cores will also be spaced close together for evanescent mixing of core fields to improve their mutual coherence. A full variational theory of such fibers and an analysis of the degree of improvement of beam coupling and coherence based on this theory were

developed by me last year. The work was presented in two papers in Optics Communications in Volume 115 on pages 354-367 and 368-378. This work has evoked a lot of interest in the interferometry community and invited presentations (at Herriot Watt University and at Cambridge University in UK late June 1995 and at the Annual OSA Meeting; later this year in Portland, OR) have resulted.

New Mexico Center for High-Energy Physics:

Prof. John Matthews remains as Director of this effort. The Center now comprises all of the groups working with accelerator-based physics. This includes the groups of Professor Dieterle, as well as the Bassalleck/Wolfe group.

The Particle Physics Seminar, has been initiated by this Center. Overhead return and direct contributions are used to fund this endeavor. This weekly meeting brings speakers from many other institutions, including LANL, Fermilab and many universities. Several of our own faculty have delivered these seminars as well.

The discovery of the top quark is one of the great physics events of the past year. The most important part of the Collider Detector Facility (CDF) at Fermilab for this discovery is the silicon vertex detector. The UNM group has been a major contributor to this detector and thus a major player in the discovery. The work of Professors Gold and Seidel is particularly notable. Finally, this group is continuing by designing the SVX II detector for the facility upgrade presently planned. The report of Professor Seidel is included as an example of the recent work. Especially noteworthy is her work in bringing the Division of Particles and Physics meeting of the American Physical Society to UNM. This is one of the largest meetings of physicists in the world and we were proud to host it.

This document summarizes the principle achievements of Professor Sally Seidel during the period July 1994-June 1995 in the areas of research, teaching, and service.

During this period Seidel was principle author of a paper published in Physics Letters B, Volume 342, entitled "Evidence for W-exchange in Charmed Baryon Decays." She continued to act as leader of the Detector and Testbeam Subgroup of the SVX II Detector Project of the CDF

Collaboration, providing leadership of the physics programs for two radiation damage experiments and two testbeam efforts. In addition to acting as co-PI on the High Energy Group's funded multi-year research contract with the Department of Energy, she is the principle investigator on a National Science Foundation Award for a proposal entitled "Study of Pixel Detectors for Future Collider Experiments."

A project involving the development of specialized techniques for characterizing the electrical properties of double-sided silicon microstrip detectors was completed. The resulting paper, "Characterization Procedures for Double-sided Silicon Microstrip Detectors," authored by Seidel, Student Nichelle Bruner, post-doc Mark Frautschi, and engineer Martin Hoeferkamp, has been accepted by the journal Nuclear Instruments and Methods (NIM). A second instrumentation paper, "A Fixture for Probing Double-sided Silicon Microstrip Detectors,", by Seidel, Frautschi, and Alex Webster, was published in NIM, Volume A 355.

A multi-parameter characterization of 32 prototype silicon sensors was completed and documented in a CDF Collaboration Note, " Electrical Characterization of SINTEF/SI SVX II Prototype Double-sided Silicon Microstrip Detectors," by Seidel, Bruner, Frautschi, Hoeferkamp, and Student Aaron Patton. Detailed studies of the capacitance of structures in silicon detectors were completed and are the subject of an article now in preparation by Seidel, Frautschi, and Hoeferkamp for submission to NIM. A search for rare decays of B mesons at the Tevatron Collider was initiated with the participation of Bruner and postdoc Mark Bailey.

During this year, Seidel joined the ATLAS Collaboration at the Large Hadron Collider. She remains a member of the Executive Board of the CDF Collaboration and was included in the author list of 27 CDF Publications. She presented a contributed talk, "Double-sided Sensors for the CDF SVX II Detector," at the Eighth Meeting of the Division of Particles and Fields of the American Physical Society (DPF94).

Sally Seidel's 1994-1995 teaching duties included the lecture course in advanced undergraduate electricity and magnetism, Physics 405, its associated Problems course, Physics 405P, the lecture course in introductory physics for non-majors, Physics 102, and the seminar in physics concepts and presentation, Physics 400.

Her service contributions to UNM, to education, and to the physics community during this period included chairing the Local Organizing Committee of DPF94, participation in the Physics Department's Graduate and Undergraduate Advisement Committees, creating a specialized laboratory experience for a gifted high school student, Rebecca Kalmus (which resulted in an SVX II note by Kalmus, "Labview Driver for Capacitance Measurements for the SVX II Detectors"), and acting as referee for a variety of funding proposals.

The high-energy group is certainly not the only one in this area. The work of Prof. Dieterle is involved with the recent announcement of a possible mass for the neutrino. This result, if corroborated, will be of extreme importance for both particle physics and cosmology. It is a

breathtaking possibility in this field. He has continued his LANL work with a French-Italian-Russian-US collaboration, CHOOZ. His report follows.

I managed to get my DoE contract renewed at (what I thought at the time was) the peak of funding difficulties. Our LSND (Liquid Scintillator Neutrino Detector) research collaboration at LAMPF has taken data which bears on one of the most important topics in physics, the neutrino mass; at the same time our CHOOZ collaboration with France, Italy, and Russia is installing another experiment in France.

This has been a year of survival, with lots of teaching, proposal writing and research for our group; R. Reeder, Res. Prof.; C. Gregory, technician; J. George, graduate student; M. Lepp, undergraduate. Yet it has been dominated by the (LSND). The data from the LSND experiment are controversial because they indicate that neutrinos may have ma mass that is fairly heavy - roughly 1 electron-volt. This is not what was expected since previous experiments have ruled out most of this mass region-but not all. The NY TIMES was imprudently informed before a paper had been prepared; a better perspective may result form the coming publication in Physical Review Letters.

The work of Profs. Bassalleck and Wolfe has also led to significant new results in the field of heavy-ion physics and work on the elusive H-particle. Major results will be published soon.

Experimental Optics:

Professors Diels and Rudolph have succeeded in garnering a unique honor. They have become the first group at UNM to be awarded a grant from the Keck Foundation. The money, $300,000 over two years, will be used to establish the Keck Microscopy Laboratory. This unique facility will use femtosecond laser pulses in truly unique ways. We will be able to see "stop-action" pictures of chemical and physical process. Enlarge objects within living tissue, enlarge objects hidden from view by opaque material, and many other truly wondrous accomplishments. This is one of the most exciting projects in the Department. Rudolph's characteristically modest report is included.

Teaching: I taught electrodynamics I and II for the first time. I tried to implement some "moments" of an experimentalist's approach to a theoretical course. We finished our book "Ultrashort Laser Pulse Phenomena". One of my students defended successfully his PhD thesis, three other students are about to defend their Master theses.

Research: We developed a new kind of intracavity, time-resolved laser spectroscopy and applied it

for the determination of collisional relaxation rates in iodine lasers. In another project we analyzed experimentally and theoretically the performance of laser-scanning correlation microscopes and applied this technique to biological samples.

It has been a pleasure to have Prof. Sheik-Bahae join our Department. The inventor of the important Z-scan technique in short-pulse laser physics, he has been a major contributor to this field for many years. We have been most fortunate in hiring him at UNM. He has been extremely active since his arrival and his report (also modestly stated) is shown below. One point that he does not mention but that is very important is the possible SATIN collaboration with University of Michigan and Sandia Labs. This is an attempt to improve the speed of the Internet by using an all optical network. The speed increase should be of the order of 100 to 1000 and represents a major advance. This important project involves many industrial collaborators as well such as Hewlett Packard, Belcor, Amoco Laser, and others.

Education: PHY-302 (Optics) and PHY-500 (Advanced Seminar) in Spring semester. Also submitted, as part of an NSF proposal, an educational program regarding the improvement of our current Optics Laboratory course, and also involvement of minorities in graduate and undergraduate research.

Research: 5 Journal publications, 3 conference presentations and 1 patent application. 4 research proposals requesting a total amount of $270k have been submitted to NSF, Sandia, UNM, and NATO. Two are pending and the NATO travel grant (z$10k) has been approved. I have also signed a consulting contract with Los Alamos National Laboratory as a first step toward establishing a research collaboration with their scientists working on projects involving nonlinear optics.

Other Significant Activities

Noting in the above description is meant to detract in any way from other significant research done in the department. The atomic physics work of Prof. Bryant, for example, continues to lead the world in his area. He has created the entire area of high-energy atomic physics and continues to dominate it. His work has attracted international attention. He continues to be one of the most creative researchers. His report is below.

Teaching:
In the Fall 94 I directed a seminar for graduate research students, Physics 500, Atomic Physics. In the Spring 95 I taught a graduate course, Physics 531, Atomic Physics, and I directed a new seminar for teaching assistants and others interested in improving their teaching skills, Physics 500, Didactic Physics, based upon the material covered by our laboratory courses.

My most time-consuming pursuit during the year was providing guidance in the mainstream freshman-sophomore physics labs, 153L, 154L, 163L and 264L. I mentored the graduate students, and found ways to improve the laboratory exercises.

I served as faculty mentor for both semesters for a student in the National Physics Education Program Collaboration, Rufus Yazzie, a junior in mechanical engineering. Rufus helped me in the design and testing of new procedures for the labs. I spent about 5 hours a week with him.

I am serving as associate director of the Los Alamos summer school this summer, equivalent to two weeks, full time, and am responsible for the mentoring of two students, Vada Seccareccia, a junior physics major from Bryn Mawr College, and Sarah Novotny, a first year graduate student at Fordham. They will be doing computations of square-well resonance.

Research:
My research project on the spectroscopy of the negative ion of hydrogen continued this year, supported by the Department of Energy. Our research group consists of one postdoc and three graduate students. We are collaborating with several people at LANL on experimental studies. I travel to Los Alamos about once a week during the academic year and more during the summer. Currently we are analyzing and writing up measurements of multiphoton detachment and transmission through matter of relativistic beams. Our most notable result this year is the recent observation of the singlet D resonance at 10.872 eV in the two-photon-excited continuum of H-. We believe this work opens up a new class of spectroscopy, and we have submitted a paper on it to Physical Review Letters.

One of my students, Ed MacKerrow, completed his dissertation this Spring. I also served as thesis director for Steve Wilkinson, who completed his dissertation this Spring on a project at SNL with Arlee Smith. Wilkinson was a protégé of Marlan Scully.

Public Service:
I have been involved again in the Navajo Young Scholars program, supported by NSF and run by Arizona State. I helped organize a visit of eighth graders in this group to UNM (David Wolfe gave a fascinating performance!) and Explora, and recently spent two days at Window Rock, where I gave classes in physics (rotational motion and pinhole cameras) for middle school children. I serve as a referee for several journals and am helping organize a national conference in Santa Fe for DAMOP. I gave a talk to the Seratoma Club.

Meetings:
I attended a DOE Atomic Physics Program Workshop in Lexington, Ky, an Atomic Physics Meeting (Invited paper) in Rancho Galindo, Mexico, and a DAMOP meeting in Toronto.

Writing:
I am hopelessly behind in the writing of two chapters I have promised to write. I published a note on continued fractions in the American Journal of Physics.

Summary:
I have been pretty busy this year.

Prof. Chandler's excellent work in Nuclear Theory continues although he was on sabbatical leave during the year. His report on the work done in Australia follows.

The calendar year 1994 was divided between full-time service at UNM (spring semester) and sabbatical leave (summer and fall semester), the later partially supported by a special supplementary grant from the U.S. National Science Foundation and by the Australian-American Educational Foundation (Senior Fulbright Fellowship).

The bulk of my teaching effort during the spring semester was invested in the course on mathematical methods of physics and in reviewing the dissertation of Lon Waters, a student of Prof. Archie Gibson (Mathematics & Statistics) jointly supervised by me. I had no regular teaching duties during my sabbatical leave, though I gave colloquia and research seminars at the Atomic Physics Institute in Debrecen, Hungary, at University of New South Wales in Sydney, Australia, and at the Flinders University of South Australia in Adelaide, Australia, where I was based.

Research during the year continued to be concerned with the mathematical theory of quantum scattering theory. Posters were presented at the Fourteenth International Conference on Few-Body Problems in Physics, three papers were published, and two papers were accepted for publication. One month of the summer was spent in Budapest working (with the support of the U.S. National Science Foundation and the Hungarian Academy of Sciences) with Gyula Bencze on Problems of mutual interest. A substantial part of my time in Australia was devoted to learning about research fields that are new to me--atomic physics and pi-meson physics at low energies.

Prof. Finley continues his role as one of the doyens of General Relativity.

I received a grant from CONACyT, the Mexican version of NSF, to travel to Mexico City, to work with Dr. Jerzy Plebański, which occurred in October. Following that we work together via e-mail. I received support from CAS to bring a visitor, Dr. Mikhail Saveliev from the Theoretical Nuclear Research Center, at Protvino, south of Moscow; he was here for the month of September. As well, Dr. Mark Hickman, from the U. of Canterbury in New Zealand returned briefly during that time-he had been visiting the spring semester of 1994, supported through departmental part-time teaching efforts. As well, the Proceedings of the International Conference on Aspects of General Relativity and Mathematical Physics, being in celebration of the Sixtyfifth Birthday of Professor Jerzy Plebański was published, containing my article with A. Price, entitled "The Involutive Prolongation of the (Complex) Twisting, Type-N Vacuum Field Equations." A publication created jointly with J. Plebański and Maciej Przanowski, entitled "Third-order ODE's for twisting type-N vacuum solutions," was published by Classical and Quantum Gravity during; this time.

I taught two essentially new courses during the year: 2 subsequent semesters of Methods of Theoretical Physics, P. 466-7. Physics 466 was new because it had a heavy emphasis on the use of computer algebra systems, and several innovations in technique; 467 had never been taught before by me, and I spent about 6 weeks with some material from a summer school I taught a few years, which went reasonably well. Because of the computer emphasis, I had interactions with the graduate-student computer committee, and helped them put in a proposal for funding from the Legislature, which netted them $10,000 to purchase new computer facilities. Separately, I put in a proposal to Intel for new Pentiums for their use, which was turned down; another proposal, to the Teaching Allocations Subcommittee of the university, for a single Pentium for graduate student use was successful, resulting in $2,500 for that purpose. In a different direction, my graduate student, Andrew Price received his Ph.D. in December of 1994.

As the chairperson of the departmental hiring committee for new theoretical faculty in optics, we winnowed about 150 applications, brought in 5 very good candidates, and successfully hired Dr. Ivan Deutsch, who will join us in the fall. As chairperson of the departmental undergraduate curriculum committee, I successfully led through the system useful changes in the undergraduate B.S. degree in Astrophysics. We also received faculty approval, and eventually A&S approval, for a (new) B.A. degree in Physics/Astrophysics, which still must be approved by higher levels of authority.

There are, of course, many other stories "out there" but space does not permit including everyone.

One of the major impacts of the high-quality work being done in the department is the

pressure on space. I believe everyone in the world has heard our complaints by now. We are grateful for some relief provided by the two trailers currently being converted into our desperately needed North Wing. And this, finally, brings us to the pessimistic note of this year, The University of New Mexico Hospital. In the most high-handed of manners, they have "decided" to build a 6 story parking structure 10 meters from our building. This will have devastating effects on our work. The grudging purchase of isolation tables (which they now claim will remain their property and they may reclaim them) may help. They should send us to Maui for a month as a Department for a retreat from the hell they create!

Students receiving a B.S. in the 1994/95 Academic Year...
Physics and Astrophysics (*) Major

Gregory Ross Hays
Brian D. Priddy *
Steven Anthony Schula
Phillip M. Villella **
Steven Lee Nutter
Russell Rowland
Christopher Patrick Sharp

** summa cum laude

Three students minored in Physics

Christopher M. Cheatum, Chemistry Major
Michael Schriber, Math Major
Bryce Roth, Math Major

Students receiving the M.S. Physics in the 1994/95 Academic Year

Ines Caffier
Mark Russell Endicott
Robert James Kunkle
Srikanth Raghavan
Claudia Weidensteiner
Cary Bernard Collett
Christopher Paul Haines
Christina Kaye Lacey
Andreas Thon

Students receiving the Ph.D. degree in the 1994/95 Academic Year in Physics or Optical Sciences (*) (dissertation advisor) ...

Meliassa Rae Douglas
(Nebojsa Duric)
Shawn Mark Gordon
(Nebojsa Duric)
Edward Patrick MacKerrow
(Stephen Gregory)
Lian-Cheng Zou *
(Kevin Malloy)
Michael Monroe Fikani
(Harjit Ahluwalia)
Michael Kempe *
(Wolfgang Rudolph)
Donna Marie Siergiej
(David Wolfe)

Sponsored Research or Other Projects

a. During the year, there were 21 new proposals submitted and funded by outside agencies.

b. Altogether 21 faculty members (75%), six research faculty and one Adjunct faculty were actively involved in outside-sponsored research on 87 separately funded grants or contracts. These research projects are performed by the Department of Physics and Astronomy and come either directly under our jurisdiction or under the aegis of several other organizations such as the Center for Advanced Studies, the Center for High Technology Materials, the Center for Micro-Engineered Ceramics, or the Institute for Astrophysics.

c. Over $3 million were expended on research projects supported by external grants and contracts that were filed through the College of Arts and Sciences or the other centers mentioned above.

Department of Physics and Astronomy
Schedule of Classes and Seminars

Fall 1994

COURSE #	COURSE NAME	ENROLL	SCH
101-001	Intro to Astronomy	273	819
101-002	Intro to Astronomy	132	396
101-003	Intro to Astronomy	59	177
111-ALL	Astronomy Lab	137	137
270-001	General Astronomy	30	90
272L-001	General Astronomy Lab	14	14
423-001	Radio Astronomy	11	33
455-ALL	Problems	1	3
537-001	Topics, Astro & Space Physics	14	42
102-001	Intro to Physics	29	87
102-002	Intro to Physics	159	477
106-001	Light and Color	87	261
112L-ALL	Physics Laboratory	30	30
116L-ALL	Light and Color Lab	34	34
151-001	General Physics	234	702
151-002	General Physics	121	363
152-001	General Physics	62	186
152-002	General Physics	42	126
153L-ALL	General Physics Lab	155	155
154L-ALL	General Physics Lab	62	62
157-ALL	Problems in General Physics	72	72
158-ALL	Problems in General Physics	16	16
160-001	General Physics	145	435
160-002	General Physics	28	84
161-001	General Physics	129	387
162-001	Exploring Physics	12	12
163L-ALL	General Physics Lab	19	19
167-ALL	Problems in General Physics	69	69
168-ALL	Problems in General Physics	40	40
262-001	General Physics	111	333
264L-ALL	General Physics Lab	6	6
267-ALL	Problems in General Physics	22	22
301-001	Heat and Thermodynamics	13	39
303-001	Analytical Mechanics	16	48
400-ALL	Seminar	47	47
405-001	Electricity/Magnetism	19	57
452-ALL	Research Methods	2	6
463-001	Advanced Optics I	18	54
464-001	Laser Physics I	15	45
466-001	Methods/Theoretical Physics	25	75
476L-ALL	Exper. Techniques/Optics	15	45
491-001	Contemporary Physics	12	36
493L-001	Cont.Physics Lab	5	15
496-001	Contemporary Physics Honors	1	3
498L-001	Cont.Physics Honors Lab	1	3
500-ALL	Advanced Seminar	7	21
503-001	Mechanics	17	51
511-001	Electrodynamics I	25	75
522-001	Quantum Mechanics II	18	54
534-001	Plasma Physics I	2	6
543-001	Selected Topics in High Energy	5	15
551-ALL	Problems	8	19
522-ALL	Problems	2	6
566-001	Selected Topics in Quantum Opt	8	24
576-001	Statistical Mechanics II	6	18
599-ALL	Thesis	2	6
650-ALL	Research	9	45
699-ALL	Dissertation	42	321
		2695	6823

Spring 1995

COURSE #	COURSE NAME	ENROLL	SCH
101-001	Intro to Astronomy	262	786
101-002	Intro to Astronomy	118	354
101-003	Intro to Astronomy	34	102
101-440	Intro to Astronomy	25	75
111-ALL	Astronomy Lab	137	137
271-001	General Astronomy	23	69
273L-001	General Astronomy Lab	13	13
424-001	Extragalactic Astron. & Cosmol.	7	21
537-001	Topics, Astro & Space Physics	10	30
102-001	Intro to Physics	18	54
102-002	Intro to Physics	154	462
105-001	Physics and Society	20	60
108-001	Musical Acoustics	77	231
112L-ALL	Physics Laboratory	23	23
118L-ALL	Musical Acoustics Lab	26	26
151-001	General Physics	103	309
151-002	General Physics	59	177
152-001	General Physics	214	642
152-002	General Physics	56	168
153L-ALL	General Physics Lab	81	81
154L-ALL	General Physics Lab	107	107
157-ALL	Problems in General Physics	47	47
158-ALL	Problems in General Physics	47	47
160-001	General Physics	178	534
160-002	General Physics	24	72
161-001	General Physics	124	372
162-001	Exploring Physics	7	7
163-ALL	Problems in General Physics	31	31
167-ALL	Problems in General Physics	60	60
168-ALL	Problems in General Physics	22	22
262-001	General Physics	87	261
264L-ALL	General Physics Lab	10	10
267-001	Problems in General Physics	28	28
302-001	Optics	8	24
304-001	Analytical Mechanics	10	30
308L-001	Junior Laboratory	4	12
330-002	Atomic-Nuclear Physics	24	72
400-001	Seminar	31	31
405-001	Electricity -Magnetism	20	60
406-001	Electricity -Magnetism	14	42
430-001	Intro to Solid State Physics	13	39
451-ALL	Problems	2	4
452-ALL	Research Methods	1	1
467-001	Methods/Theoretical Physics II	8	24
477L-ALL	Exper. Techniques/Optics	12	36
492-001	Contemporary Physics	16	48
495-001	Special Relativity	6	18
500-ALL	Advanced Seminar	12	12
505-001	Statistical Mechanics	24	72
512-001	Electrodynamics II	19	57
521-001	Quantum Mechanics I	27	81
531-001	Atomic Structure	6	18
535-001	Plasma Physics II	4	12
551-ALL	Problems	34	79
552-ALL	Problems	7	19
554-001	Advanced Optics II	16	48
599-ALL	Thesis	5	21
650-ALL	Research	7	32
699-ALL	Dissertation	49	384
		2611	6694

Annual Report of the

Department of Political Science

July 1, 1994 - June 30, 1995

Neil J. Mitchell, Chairperson

1. Significant developments during the academic year, 1994-1995

a. Undergraduate program

The department graduated 143 majors. The department hosted its annual commencement ceremony in the Grand Ballroom. Over 500 students and parents attended, and the Honorable Mayor Martin Chavez gave the commencement address.

b. Graduate program

The department awarded eight (8) MA degrees and three (3) Ph.D. degrees this year.

The number of graduate students, counting 1995 incoming students, is 45.

The department approved new rules and procedures for qualifying exams.

The department and Sandia National Laboratories continued its program for graduate students and advanced undergraduates to work part-time at Sandia. Seven students in the externship program are involved in projects of mutual interest, principally in the areas of international conflict and international security.

Department graduate students, in collaboration with economic students, secured $10,000 in funding from Graduate Studies for graduate student computers. A new Mac and PC-equipped computing center for political science and economics graduate

students is now housed in a room provided by the economics department.

The department revised the graduate student handbook and developed an informational brochure on the graduate program.

c. Institute for Public Policy

The institute completed its seventh year of quarterly state-wide surveys. This year there were special features on the immigration to New Mexico, electoral polls, abortion, range reform, and water use in New Mexico. The results are published as the *Quarterly Profile of New Mexican Citizens*.

The institute has grown so much that it moved into a new building located at 1805 Sigma Chi, NE, on campus.

Funded research activity conducted by the IPP passed the $1,800,000 mark for the year. Current projects include a nation-wide study of public perceptions of the risks of transporting radioactive materials and public acceptance of transportation policies in order to better understand citizens' concerns about radioactive waste transport programs and to target outreach and communications programs.

d. Speakers

The department initiated a Department Colloquium series in the Fall 1994 semester. Professor David Soherr-Hadwiger coordinated talks by the following faculty members and graduate students:

Professor Bill Stanley, "International Tutelage and Domestic Political Will: Lessons from the Demilitarization of

Internal Security in El Salvador."

Professor Peter Lupsha, "Some Observations and Field Notes of a Veteran of the Drug Wars: Reflections on the Analysis of a Public Policy and Studying Gray Area Phenomena."

Kerry Herron, Graduate Student, "Full Spectrum Antiproliferation: Integrating Nuclear Proliferation Theory and Policy for the Future."

Gilbert St. Clair, Graduate Student, "Environmental Politics in the Nuclear Age: Legislative Representation in Colorado and New Mexico."

Professor Gregory Gleason, "Democracy and Decolonization in the Newly Independent States."

Professor David Soherr-Hadwiger, "Base Closings."

The Department of Political Science-Sandia Seminar Series in International Relations continued:

Graham Allison, Kennedy School of Government, Harvard University, "US Counter-Proliferation Policy."

Dina A. Zinnes, University of Illinois, Urbana-Champaign, "Thinking Theoretically about Politics."

Shai Feldman, University of Cairo, "Prospects for Regional Security in the Middle East."

J. David Singer, University of Michigan, "Conflict Research, the Security Dilemma, and Learning from History."

The department, with its own Directions of the Discipline Lecture Series, sponsored the following speakers:

Walter Murphy, the McCormick Professor of Jurisprudence

at Princeton University, "Constitutional Politics."

Chalmers Johnson, President of the Japan Policy Research Institute, "Trends in Asian Economic Development."

Peter Brandt Evans, Department of Sociology, UC Berkeley, "Reconceptualizing the State's Role: Embedded Autonomy and Industrial Transformation."

e. Internships

In addition to the Sandia opportunities, political science students were involved in a number of internship programs in political campaigns and with various New Mexico congressional offices.

The department placed twelve undergraduate students in internships with the New Mexico State Legislature working under the close supervision of Professor David Soherr-Hadwiger.

f. Curriculum Development

The following courses were taught for the first time:

Research Seminar International Relations, "US National Security."

Research Seminar Comparative Government/Politics, "The Modern Left in Europe and Latin America."

g. The Dorothy I. Cline Memorial Fellowship and Scholarship was established this year for both graduate and undergraduate students. One graduate fellowship and two undergraduate scholarships were awarded this year.

2. SIGNIFICANT PLANS

a. Recruitment

The department will initiate the recruitment of a new member of the faculty to strengthen its American politics program.

3. APPOINTMENTS TO STAFF

Wendy L. Hansen, Assistant Professor, effective August 15, 1995.

Marina Oborotova, appointed Visiting Professor of Political Science.

Loyola O. Chastain, Department Administrator, effective November 1, 1994.

Robin Tropper, Staff Assistant, effective July 5, 1994.

4. SEPARATION FROM STAFF

Harry P. Stumpf, Professor, effective December 31, 1994.

Marina Oborotova, Visiting Professor, effective May 12, 1995.

Mary Boughton, Department Administrator, effective October 31, 1994.

5. PUBLICATIONS

In an analysis of publications in the most visible refereed journals in political science for the period 1986-1994, the UNM Department of Political Science ranked third, behind Iowa and Kentucky and a little ahead of Harvard. The comparison group is UNM's peer universities plus five of the more prestigious departments of political science in the country (Harvard, Princeton, U.C. Berkeley, Wisconsin, Yale). The ranking is based on a ratio of total articles published to the number of full-time faculty members.

COLEMAN, KENNETH M.

"Neoliberal Economic Policies and the Potential for Economic Change in Mexico," Mexican Studies/Estudios Mexicanos, 10, 2 (Summer 1994), pp 341-370. Co-authored.

GARCIA, F. CHRIS

New Mexico Government (Third Edition) - University of New Mexico Press. (Co-authored/edited).

"To Get Along or Go Along? Pluralistic Accommodation Versus Progress in New Mexico Politics and Government." Chapter 2 in Contemporary New Mexico 1940-1990. Edited by Richard W. Etulain. University of New Mexico Press, pp 25-59.

"Mexican Immigrants, Mexican Americans and American Political Culture." In Immigration and Ethnicity: The Integration of America's Newest Arrivals. Washington DC: Urban Institute Press, 227-250. Co-authored.

GLEASON, GREGORY

"Chelovek, Zakon, Obschestvo" (Individual, Law, and Society). In S. Zlotnikov, ed., Affirming Kazakhstan's Third Sector (Almaty: Interlegal, 1995), pp. 42-43.

"Corruption, Decolonization, and Development in Central Asia," The European Journal on Criminal Policy and Research Vol. 3, 2 (1995).

"Dynamics of National Independence in Central Asia: Implications for Russo-American Cooperation." In Sharyl Cross and Marina Oborotova, eds., The New Chapter in United States--Russian Relations (Praeger, Westport CT, 1994), pp. 193-210.

"The Politics of National Independence in Uzbekistan," In Ian

Bremmer and Raymond Taras, eds., Nations and States 2nd edition, (Cambridge: Cambridge University Press, 1995).

HANSEN, WENDY L.

"Nation-State vs. Pluralistic Decision Making in Trade Policy: The Case of the International Trade Administration." Wendy L. Hansen and Kee Ok Park, International Studies Quarterly, 39: 181-211, (1995).

"The Road Most Traveled: The Rise of Title VII Protection," Wendy L. Hansen and Thomas J. Prusa, The World Economy, 18: 295-313, (1995).

HARRIS, FRED

In Defense of Congress, (New York: St. Martin's Press, 1995).

JENKINS-SMITH, HANK C.

"Perceived Risk and Uncertainty of Nuclear Waste: Differences Among Science, Business, and Environmental Group Members," Risk Analysis, 14(5):851-856. 1994. Co-authored.

"Evaluating the Advocacy Coalition Framework," Journal of Public Policy, 1994. Co-authored.

"Ideology, Culture, and Risk Perception," in Politics, Policy, and Culture, 1994. (Coyle, D and R. Ellis, editors) Co-authored.

LUPSHA, PETER

"Mexican Narco-trafficking: The Dark Side of NAFTA," ENCUENTROS, Fall 1994, (vol.1 no.1) pp 9-11.

"Nets of Affiliation in the Political Economy of Drug Trafficking and Transnational Crime," Conference Report, Economics of the Narcotics Industry, November 21 & 22, 1994, (Washington DC. US

Department of State, 1994) n.p.

"Narco Investments in Domestic Economies. Mexico: An Example of Narco Democracy?" Conference Report, Economics of the Narcotics Industry, November 21 & 22, 1994 (washington DC: US Department of State, 1994) n.p.

"Transnational Narco-Corruption and Narco Investment: A Focus on Mexico," Peter A. Lupsha, Transnational Organized Crime, Vol.1, No.1, pp.84-101, (1995).

MITCHELL, NEIL J.

"The Global Polity: Foreign Firms' Political Activity in the United States," Polity (Spring 1995).

PECENY, MARK

"The Inter'American System as a Liberal Pacific Union?: A Review Essay of Recent Literature in the Field of Inter-American Relations," Latin American Research Review, Vol. 29, No. 3, Fall 1994: 188-201.

"Culture Congress and the Promotion of Democracy in Reagan's Policy Toward El Salvador," Journal of Low-Intensity Conflict and Law Enforcement, Vol. 3, No. 1, Summer 1994: 80-103.

PHELAN, SHANE

"The Space of Justice: Lesbians and Democratic Interests," in A Simple Matter of Justice?, ed. Angelia Wilson, Cassell, 1995:193-220.

Getting Specific: Postmodern Lesbian Politics (University of Minnesota Press, 1994)

"Feminist Theory and Political Practice," Women/Politics: The

Newsletter of the Organized Section for Women and Politics Research, 7/1 (1995): 8-9.

ROBERTS, KENNETH

"Renovation in the Revolution? Dictatorship, Democracy, and Political change in the Chilean Left," working paper #203, Helen Kellogg Institute for International Studies, Notre Dame University.

SIERRA, CHRISTINE

"Chicanas as Political Actors: Rare Literature, Complex Practice," National Political Science Review, Vol. 4 (1994): 297-317. Co-authored.

"Women and Public Policy," in Threads of Diversity, The Fabric of Unity, Proceedings of the Congressional Hispanic Caucus, National Issues Conference, Washington, DC: Congressional Hispanic Caucus Institute, 1994, pp. 135-157.

STANLEY, WILLIAM

"From Vigilance to Public Safety: The Transformation of International Security in El Salvador," Centroamerica entre democracia y desorganizacion, Rene Poitevin and Gils Batallon, Eds. Guatemala: FLASCO, 1994, pp. 115-164.

WATERMAN, RICHARD

Bureaucratic Dynamics: The Role of A Bureaucracy In Democracy. (Westview Press) 190 pages. Co-authored.

6. NOTEWORTHY OUTSIDE PROFESSIONAL ACTIVITIES OF FACULTY

KENNETH M. COLEMAN served as Chair of the Graduate Committee.

F. CHRIS GARCIA served as Vice President of the American Political Science Association for 1994-1995.

GREGORY GLEASON returned from his leave serving as Director for U.S. Aid "Rule of Law" program in the five State of Central Asia for the Spring semester; served as Chair of the Undergraduate Committee.

HANK C. J-SMITH served as a member of the Editorial Board for the American Journal of Political Science.

MARK PECENY coordinated the UNM/Political Science/Sandia National Labs Externship Program; coordinated the UNM/Political Science/Sandia National Labs Joint Seminar Series on Nuclear Proliferation.

KAREN REMMER served as chair for the Social Science Research Council Selection Committee for Dissertation Fellowships in Latin America and the Caribbean.

CHRISTINE M. SIERRA was appointed to the US Good Neighbor Environmental Board, a national policy making board established by the US Congress to assist the President and Congress in developing policy for the US-Mexico border region.

7. OUTSIDE-SPONSORED RESEARCH

HANK C. JENKINS-SMITH: Sandia National Laboratories - $180,000 - PURPOSE: Conduct a systematic national survey to determine how the general public perceives US nuclear weapons policies and national and international security issues, nuclear surety in the former Soviet republics, and opportunities for the transfer of selected technologies and expertise from the National laboratories to private industry. 4/12/95 - 9/30/96.

HANK C. JENKINS-SMITH: Sandia National Laboratories - $35,000

- PURPOSE: Conduct targeted surveys to determine public perceptions of the national laboratories and attitudes toward technology transfer. 4/1/95 - 3/31/96.

HANK C. JENKINS-SMITH: Sandia National Laboratories - $40,000 - PURPOSE: Conduct quarterly statewide surveys to determine public perceptions of the Laboratory. 4/1/95-3/31/96.

HANK C. JENKINS-SMITH: Los Alamos National Laboratory - $52,257 - PURPOSE: Conduct statewide Laboratory survey and perform time-series analysis of selected attitudinal and demographic data. 10/1/94 - 9/30/95.

HANK C. JENKINS-SMITH: Georgia Institute of Technology - $62,386 - PURPOSE: Develop options for the Army to environmental and financial sustainability while using heavy metals in training and weapons testing. 9/30/94 - 9/29/95.

HANK C. JENKINS-SMITH: Sandia National Laboratories - $133,000 - PURPOSE: Develop a decision-analysis framework to address the issues of high level nuclear waste management policy. 1/31/95 - 10/31/95.

HANK C. JENKINS-SMITH: Sandia National Laboratory - $430,000 - PURPOSE: Develop a baseline of data and research findings regarding public perceptions of the risks of transporting radioactive materials and public acceptance of transportation policies. 9/8/94 - 2/24/96.

HANK C. JENKINS-SMITH: Army Environmental Policy Institute - $55,000 - PURPOSE: Conduct an ecological risk assessment study for the purpose of improving decisions in Army combat training and

natural resource rehabilitation. 6/30/94 - 9/30/95.

HANK C. JENKINS-SMITH: Kettering Foundation - $28,585 - PURPOSE: Conduct a study on the nature of deliberation. 4/1/95 - 10/1/95.

HANK C. JENKINS-SMITH: New Mexico Division of Vocational Rehabilitation - $21,600 - PURPOSE: Conduct a state-wide survey of New Mexico households with individuals having disabilities for the purpose of evaluating the rehabilitation needs of New Mexicans with disabilities. 6/23/94 - 9/30/95.

MARK PECENY: Sandia National Laboratories - $29,991 - PURPOSE: Seminar series on applications of contemporary international relations theory. 2/10/95 - 2/9/96.

DEPARTMENT OF PSYCHOLOGY

STATEMENT OF MISSION

The Department of Psychology shares with other academic departments at the University its raison d'etre: the discovery and dissemination of knowledge. It shares with other science departments a commitment to empirical research as the means of validating that knowledge. The distinguishing feature of this purpose for a psychology department is that the knowledge being sought concerns the individual organism, and most typically the behavior of the individual person.

Because of its particular historical development, composition, and geographical location, the UNM Psychology Department embraces a number of goals which serve to give the program a distinctive flavor. These are reflected in the mission of the department which is to:

- Create an environment in which those faculty and students associated with the Department are encouraged to achieve their maximum potential as scholars.
- Promote active research programs within the department.
- Maintain a distinctive emphasis on the psychology of learning, broadly defined, in our programs. (That is, those areas of psychology concerned with the scientific study of changes in behavior as a result of experience will be emphasized, which includes, among others, the areas of human and animal learning, memory, cognition and information processing.)
- Place particular emphasis on teaching and cultivate a reputation as a department consisting of unusually effective teachers, both in communicating psychology to undergraduates as a critical part of a liberal arts education and in training graduate students at a professional level.
- Train all graduate students in general experimental psychology in such a way that they will be well prepared for professional positions in academic or applied settings.

- Ensure graduate students in all areas are well trained in methodology appropriate for their effective functioning as researchers and professionals.

- Make available educational opportunities which enable students to understand the development and operation of psychology in the context of the larger culture and its application in the culture of the Southwest in particular.

- Be actively involved in service to the University, the community and the profession.

- Evaluate, in an on-going fashion, our performance as a department with respect to our mission, and the potential need to revise this Statement of Mission to accommodate to changing situations.

Adopted: October 18, 1985

ANNUAL REPORT

1994 - 1995

DEPARTMENT OF PSYCHOLOGY

TABLE of CONTENTS

STATEMENT OF MISSION i

I. DEPARTMENT INFORMATION AND ACHIEVEMENTS 1

A. Departmental Administration and Structure 1
B. Undergraduate Education 6
C. Graduate Education 9
D. Faculty 11
E. Department Clinic 15
F. Staff 15
G. Space 17

II. FUTURE PLANS AND COMMENT 18

APPENDICES:

Appendix A - Committee Assignments 20
Appendix B - Department of Psychology Summary 22
Statistics and Extramural Grants 23
Appendix C - Department of Psychology Course Offerings 25
Appendix D - Part-Time Faculty Hired During AY 1994 - 1995 31
Appendix E - Senior Honors Theses 32
Appendix F - Doctoral Degrees Awarded 34
Appendix G - Master's Degrees Awarded 35
Appendix H - Graduate Students Accepted for AY 1995 - 1996 36
Appendix I - Psychology Faculty Interests 37
Appendix J - Persons Holding Professional Titles in Psychology 1994 - 1995 44
Appendix K - Department of Psychology Colloquia 50
Appendix L - Annual Report 1994 - 1995 Department of Psychology Clinic 53
Appendix M - Department of Psychology Support Staff 58
Appendix N - New Policies Adopted by Faculty, 1994-95 61

ANNUAL REPORT

1994 - 1995

DEPARTMENT OF PSYCHOLOGY

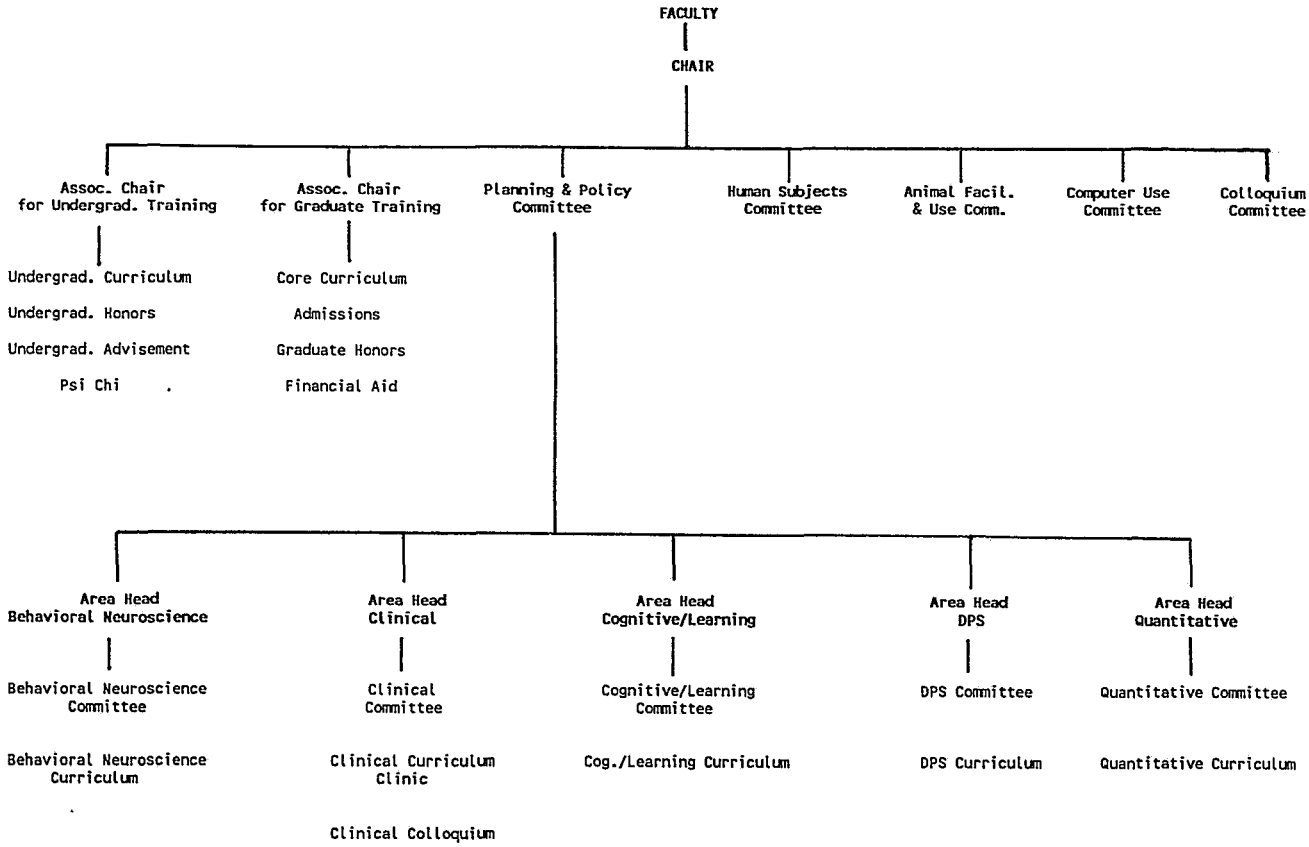
Michael J. Dougher, Chair

I. DEPARTMENT INFORMATION AND ACHIEVEMENTS

A. Departmental Administration and Structure.

In May of 1993, Dean Gordon appointed Michael Dougher to a four-year term as Chair of the department beginning July 1, 1994. Shortly after the beginning of the academic year, the department adopted a new administrative structure. An organizational chart of this new structure is presented on the following page.

The new organizational structure represents two major changes from the previous structure. First, each of the five substantive areas in our department, behavioral neuroscience, cognitive/learning, clinical, developmental-personality-social, and quantitative is represented by an elected area head who, along with the Associate Chairs for Graduate and Undergraduate education, serves on the Planning and Policy Committee. Serving as the respective area heads this year were: Rob Sutherland, Peder Johnson, Dick Harris, Jane Smith, and Harold Delaney. Ron Yeo served as Associate Chair for Graduate Training, and Harold Delaney served as Associate Chair for Undergraduate Training. Under the direction of the area heads, each of the areas is responsible for developing its own curriculum and its own course and teaching schedule for each semester. Modifications to


FACULTY
CHAIR
Assoc. Chair for Undergrad. Training
Assoc. Chair for Graduate Training
Planning & Policy Committee
Human Subjects Committee
Animal Facil. & Use Comm.
Computer Use Committee
Colloquium Committee
Undergrad. Curriculum
Undergrad. Honors
Undergrad. Advisement
Psi Chi
Core Curriculum
Admissions
Graduate Honors
Financial Aid
Area Head Behavioral Neuroscience
Area Head Clinical
Area Head Cognitive/Learning
Area Head DPS
Area Head Quantitative
Behavioral Neuroscience Committee
Clinical Committee
Cognitive/Learning Committee
DPS Committee
Quantitative Committee
Behavioral Neuroscience Curriculum
Clinical Curriculum
Clinic
Clinical Colloquium
Cog./Learning Curriculum
DPS Curriculum
Quantitative Curriculum

existing curricula must be approved by the Policy and Planning Committee and, ultimately, by the faculty, but the organization does give more autonomy to the areas and recognizes their diverse emphases and training needs.

The second major change was the implementation of a Planning and Policy Committee. As its name implies, the committee's function is to set policy and establish procedures by which those policies are enacted. The committee is advisory to both the Chair and the faculty, which ultimately decide all policy issues in the department. Having representatives from each of the department's substantive areas was intended to ensure breadth of representation on the committee. Having the representatives elected by vote was intended to let the faculty choose those individuals who are seen as having the experience, dedication and values to best represent the respective areas in the context of what is best for the department as a whole.

The Committee took on several important and difficult issues this year. Among them were new departmental procedures for evaluating candidates up for promotion and tenure, new procedures for allocating faculty raises, deciding upon the areas in which we would seek to hire new faculty, a new policy on mentoring privileges for adjunct faculty, and a policy on faculty research, teaching and service contribution (see Appendix N). To say the least, these are very tough and sensitive issues, and I am indebted to the members of the committee for their hard work, insight, sensitivity, intelligence and dedication to the

department.

As in past years, the governance of the department relied heavily on a number of faculty who served effectively on other - departmental committees. A listing of the committee memberships for the 1994-1995 academic year is given in Appendix A. Particularly noteworthy was the very important and time-consuming work of the Graduate Admissions Committee. This committee was faced with the task of selecting the very best applicants from a pool of almost 300 applications. Outstanding graduate students are the lifeblood of any good research department, and this committee is to be commended for their excellent work.

A Teaching Enhancement Committee was appointed this year consisting of Gordon Hodge (Chair), Harold Delaney, John Gluck, and Kathy Stansbury. The committees mission was to develop ways to: a) enhance the teaching of our faculty in general, b) to enhance the teaching mentoring of our junior faculty; and c) to recognize outstanding teachers in our own department. The committee has worked hard and well to develop a set of procedures to accomplish these goals. Among these are: a) at the beginning of their first semester, junior faculty will be assigned teaching mentors who will periodically observe the faculty member's teaching and offer constructive feedback to facilitate the development of the faculty member's teaching abilities; b) During the second year, the teaching mentor will conduct an informal review of the faculty member's teaching. The review will be shared only with the faculty member and will otherwise remain

confidential; c) At the time of the mid-probationary review, two senior faculty (one selected by the faculty member and the other appointed by the chair) will conduct a formal evaluation of the faculty member's teaching. The review will include an unannounced visit to the faculty member's classroom and the evaluation will not be available to the faculty member; d) All faculty who come up for promotion and tenure will undergo a formal teaching evaluation and will prepare a teaching portfolio to which is to be made part of the tenure and/or promotion record. The portfolio will consist of student evaluations, a statement of teaching philosophy and goals, student letters, and any other information the faculty member deems appropriate; e) At the end of every year, the teaching enhancement committee will award a department Teacher of the Year Award. The award will be given in alternate years to the best undergraduate and graduate teachers. The winners will be determined by polling recent graduates. A formal presentation will be made to the faculty for their approval next year.

The department again benefitted this year from the Quad-L Trust, which was endowed through the UNM Foundation by University Professor Emeritus Frank Logan. The Quad-L Library supported by this Trust not only facilitated the study of the psychology of learning, but also constituted a meeting place for students' defenses of their graduate degrees. This year the Quad-L Trust supported the visit of James McClelland, Professor of Psychology at Carnegie-Mellon University, who delivered the 8th annual Quad-

L lecture. Rob Sutherland, who serves as faculty advisor to the Quad-L, coordinated the selection process for the Quad-L Lecture and arranged for Professor McClelland's visit.

The endowed trust established by the New Mexico Psychological Association and the department to honor the memory of Professor Sidney Rosenblum sponsored the seventh annual Sidney Rosenblum Award. This year's scholarship support went to Lynn Farmer and Anne Hahn-Smith.

A third endowed trust at the UNM Foundation was established by the parents of Barbara Goldman Garland in her memory. The fifth annual Barbara Goldman Garland Award, which is awarded to a Psychology graduate student who is interested in working clinically with teenaged children, was presented to Susanna Chang.

The department hosted a commencement convocation for its graduating students for the seventh consecutive year. The convocation was conducted by the Chair. The commencement address, delivered by Professor Kristina Ciesielski, was entitled "Hunky Punky in the Canadian Winter, or the Valley and the Mountain." This continued a tradition begun in 1989 of the commencement address being given by a senior faculty member in the department. Previous addresses had been delivered by Frank Logan, Bill Gordon, Sam Roll, John Gluck, Henry Ellis, and Bill Miller. Arrangements for the convocation were handled by Administrative Assistant Candace Blashak. Because of the very large number of graduates and the interest on the part of their

families and friends, this has become a major departmental effort and service to the University involving several hundred people and entailing expenses to the department of over $3,000.

B. UNDERGRADUATE EDUCATION. Stated succinctly, the undergraduate education productivity of the department's faculty and staff is enormous and unsurpassed. The department offers a wide variety of courses, ranging from introductory psychology to human neuropsychology. Students are exposed, not only to some of the best lecturers at the University, but also to advanced laboratory courses requiring creative experimental design development and "hands-on" contact with human and animal subjects.

Although the overall popularity of Psychology courses has remained very high and in fact has slightly increased over the last decade (total undergraduate enrollment in our classes now exceeds 10,000 students per year), our department's enrollment patterns have shifted rather dramatically in recent years. Whereas in 1986-87 our freshman-level introductory psychology offerings accounted for the majority of our total undergraduate enrollment, these courses now account for only about 30% of our total head count. While our overall undergraduate enrollment has grown by just 6%, this is the net effect of a 36% decline in freshman enrollments being more than offset by an increase of over 50% in our 200-level and above enrollment in the past seven years. Similarly, our graduating majors have more than doubled over this period. The fact that our FTE faculty has declined

from 24.34 to 21.27 during this time indicates the critical need the department has for additional faculty. Appendix B presents summary statistics for the department for the 1994-1995 academic year along with the same statistics for the preceding four years. Actual enrollment counts per course for each 1994-1995 semester are enumerated in Appendix C.

The only way we have been able to address the increases in our number of majors has been by using large numbers of part-time and graduate student instructors in our undergraduate program. Part-time instructors hired during the 1994-95 academic year are listed in Appendix D. During this past year, we have had 58 courses (excluding lab courses) taught by non-regular faculty, the majority of these by our graduate students. Since we offer about 100 undergraduate course sections per year (excluding labs, and problems courses), this means approximately half of these courses are taught by other than regular faculty. Although we are now using full-time faculty to teach our large introductory sections, we still feel it is critical that our regular faculty teach most of our upper-division courses for majors, thus, the courses our faculty teach are generally our smaller enrollment, advanced classes. This means that the majority of undergraduate student credit hours being generated by our department are by our part-time instructors and graduate students. Much of our part-time instructor budget this year came from the Evening and Weekend Degree Program. Thus, we made a concerted effort to increase our course offerings in the evening and weekend hours as

part of the College's effort to better serve nontraditional students.

It would appear, indeed, that our department will be kept quite busy educating psychology majors over the next few years. Data for the Fall 1994 semester show that there were approximately 750 undergraduate Psychology majors in the College of Arts and Sciences. This makes Psychology by far the most popular major in the College.

Psychology's teaching effort has reached the saturation level. Although Psychology leads the College in elective SCH, undergraduate majors, and bachelor's degrees granted, it accomplished this task with less than 22 FTE. In terms of the teaching productivity index, which is the ratio of full-time equivalent students to full-time equivalent faculty (FTE student/FTE faculty), Psychology ranks first.

In attempting to deal with this imbalance between numbers of students and budgeted teaching personnel, two trends have developed over the past few years. First, our department has maximized its class sizes at the 100 and 200 levels. Appendix C clearly shows that class sizes in excess of 100 students are now commonplace in lower division courses in our department with many class sizes exceeding 200 students. Our major sections of introductory psychology have 500 or more students. Second, as noted above, we have begun to rely more heavily on the participation of part-time visiting professors and teaching associates to staff some of our lower-division courses. Neither

of these trends is ultimately acceptable. In the first case, one-on-one contact with students and faculty is sharply curtailed. In the second, undercompensated faculty with access to minimal amounts of department resources (e.g., lab space) become increasingly responsible for undergraduate education and professional influence.

The flagship for quality education in psychology remains our Psychology Honors Program, which has been in existence for over 25 years. This program, which culminates in the student completing a year-long research project, has been especially attractive to Psychology majors who go on to pursue graduate work in Psychology. Appendix E lists our 1994-1995 honors students along with the titles of their research theses, the names of their faculty supervisors, and the level of honors awarded to them by the department.

C. GRADUATE EDUCATION. The department this year experienced its third year with its modified core curriculum which was approved in 1991-1992. Basically, the faculty had decided to reduce the number of courses required of first-year graduate students and expand opportunities for research. The plan seems to be having the desired effect, in that graduate students are proposing and defending their master's theses more promptly than in the past.

During this 1994-1995 academic year, the department awarded 8 Ph.D. degrees. The names of these degree recipients, along with the titles of their dissertations and the names of their

faculty advisors can be found in Appendix F. This brings the total of Ph.D. degrees awarded by this department to 226.

In addition to Ph.D. degrees, the department awarded 12 Master of Science degrees this year. Inasmuch as the department offers no terminal master's degrees, it can be anticipated that these latter students (listed specifically in Appendix G, along with the titles of their theses and faculty advisors) will achieve their Ph.D.'s in the next two to three years.

Our graduate students continued to distinguish themselves in their research and teaching. Space permits mention of only selected award recipients. One student was selected during the 1994-95 year to receive the department's highest graduate student award in recognition of his outstanding research. Michael Markham delivered the 1994 Benjamin Franklin Haught lecture on April 14, 1995. In terms of teaching, Lisa Sethre-Hofstad received campus-wide recognition as recipients of the "UNM GSA Outstanding Student Teacher Award." Her award was one of only five given campus-wide. Krista Zimmermann and Erica Miller received departmental awards for Outstanding Teaching Associate and Outstanding Teaching Assistant, respectively.

One change which we have made in our graduate program is the decision to financially support all of our students who request aid and are in good standing. Happily, we were able to do that this year. What this entails, however, is that we adjust the number of admissions to our graduate program in line with the financial support available to us. Largely due to the amount of

extramural support in the department, we were still able to admit twelve graduate students out of an applicant pool of 278 to our Ph.D. program for Fall 1995 (see Appendix H for a listing of these students and their advisors). It is still the case, however, that our GA/TA stipends are lower than those of our peer institutions, and this hampers our efforts to recruit the very best graduate students. Also, while we are able to support our students, the number of stipends we are able to offer is too low and results in a heavier work load per student than is desirable. We are in dire need of at least three more GA/TA positions.

The department continues to receive nearly one-third of all graduate applicants to the College and to have an acceptance rate which is markedly below the average acceptance rate for the College. The result is that admission to the Department of Psychology Doctoral Program is highly competitive and results in our being able to select students who are not only highly qualified but who represent good matches to the research interests of our faculty.

D. Faculty. At the beginning of the academic year the department had 23 voting faculty, including Bill Gordon who is now serving as Dean of Arts and Sciences, and Eligio Padilla, who is serving as an Associate Dean of Graduate Studies and Director of the Southwest Hispanic Research Institute. John Gluck (Fall and Spring) and Holly Waldron (Spring) were on sabbatical leave during the 1994-95 year.

Faculty Hiring. Early in the year, two job ads drafted by the Planning and Policy Committee were approved. One was for an assistant professor in clinical psychology, and one was a for an assistant professor in cognitive-neuroscience. The clinical search committee, which was chaired by Jane Smith and included Bill Miller, Sam Roll and Ron Yeo, sorted through over 100 applications. We were fortunate to conclude that search by hiring Jack Blanchard. Jack received his Ph.D. from the State University of New York at Stoney Brook and in 1991 was working in a post-doc position at the Medical College of Pennsylvania where he was actively engaged in research on schizophrenia. He has an excellent publication record for such a junior investigator and has already secured an NIMH grant, which he was able to bring with him to UNM.

The cognitive neuroscience search committee was co-chaired by Peder Johnson and Rob Sutherland, and included Paul Amrhein, Kathy Haaland and Piyadasah Kodituwakku. The committee reviewed nearly 100 applications from some outstanding candidates. We had the good fortune of completing that search by hiring Rob Egly who took his Ph.D. from Arizona State in 1990. Rob has completed a postdoc at the University of California, Davis, and spent a year at the University of Oregon on a National Institutes of Health National Research Service Award before we hired him. Rob's research area is the neuropsychology of cognitive processes. We are very pleased with the results of our hiring process and we look forward to a long and productive association with both of

our new faculty members.

Tenure and Promotion. The department recommended the promotion to full professor of Rob Sutherland, the tenure of Kristina Ciesielski, who was already at the rank of associate professor, and the tenure and promotion to associate professor of Paul Amrhein. The recommendations regarding all were supported by the Dean, the Associate Provost and the Provost. Gina Agostinelli's appeal of her negative tenure and promotion decision was denied, and she served her final year with the department. The department has requested that we be able to hire her replacement.

Appendix B shows that the size of our department has remained constant over the past five years despite our continuing need for more faculty. Given the high student demand for our courses, the heavy workload of the faculty, and the need to maintain excellence in research and scholarly productivity, it is imperative that we be able to hire two full-time graduate faculty as soon as possible. We are somewhat concerned with our increasing reliance on part-time and graduate student instructors in simply to carry out our basic curriculum. A department can only achieve teaching excellence by establishing a first-rate, full-time research faculty.

Professional Appointments. In addition to the part-time faculty who served the department this year (listed in Appendix D), there were a number of other people within UNM and the professional community of Albuquerque who made major

contributions to our teaching, training and research missions. Based on their service to the department, these individuals were awarded Professional Titles in Psychology. The 1994-1995 list of professional appointments is included as Appendix J. The department is grateful to these individuals for their unselfish support and productive assistance.

A number of psychologists from other universities and the private sector further enriched our educational programs by presenting research colloquia to our faculty and students. Appendix K presents a record of this colloquium series. Special thanks go to the Colloquium Committee, Rob Sutherland and Mark McDaniel, for the efforts in arranging for an outstanding colloquium series.

The research activities of the faculty are summarized in Appendix B. It is particularly noteworthy that our extramural support, which exceeded $2 million for the last 2 years, came very close to that figure ($1,965,401) this year. Nearly $2 million in extramural funding for three years running is certainly an outstanding accomplishment. No detailed commentary regarding faculty research will be presented here since these data have been given in detail in each faculty member's Annual Biographical Supplement. It should be pointed out, however, that our faculty continue to excel in their research activities and to be productive in terms of publishing and presenting their work.

Indeed, by whatever metric one might wish to apply, the faculty of the Department of Psychology is an excellent one. A

persistent threat to this excellence is the salary structure in the department, which for some faculty falls as much as 20% below national and regional norms. While this problem is fully acknowledged by the College and while the Dean has made several recent efforts to enhance the salary of our faculty, much more remains to be done in order to insure the stability of the current faculty.

There should be no doubt that a high priority for the department is to see Psychology faculty salaries increased in the immediate future to the level of regional norms and in the near future to the level of national norms. Only by doing this will the excellence of our department be preserved.

E. DEPARTMENT CLINIC. A separate Annual Report for the Department of Psychology Clinic is presented in Appendix L. Once again this year the Clinic met its primary goals of providing quality training to our Clinical graduate students and affordable, high quality psychological services to the community. The report shows that the Clinic provided over 1300 hours of therapy and intakes, and involved approximately 50 graduate students in the provision of those services.

In addition, for the sixth consecutive year, the Clinic was able to operate in the financial black. This is a tribute to the able and caring leadership of Dan Matthews and the support of his excellent staff.

F. STAFF. The Department of Psychology continues to benefit from an extremely competent support staff. This staff numbered

13 during the 1994-1995 academic year. So as better to inform those who may not be familiar with the important duties of the staff in our department, Appendix M presents a brief job description of each administrative, instructional, research, and clinical support staff member. It should be mentioned that this staff is not rigidly bound by these formal descriptions, and willingly share and take on new responsibilities in an effort to serve the needs of the department.

The department was fortunate this year to hire Terri Nicholson as Staff Assistant. Terri's competence and enthusiasm are a welcome addition to the department. Robyn Santillanes was given a richly deserved upgrade to Department Administrator III. Candace Blashak continued as the Chair's Administrative Assistant and as office manager, Nancy Shea continued as our Editorial Assistant II, Lois Kennedy continued as our student advisor, and Dee Ann Quintana completed her third year as Project Coordinator for Grants. These individuals form what must surely be one of the most efficient and able administrative staffs on our campus.

The recent successes of the Psychology Clinic are due in large measure to the administrative skills of Dan Matthews, who completed his seventh year as Clinic Staff Director this spring. Dan continues to be effectively assisted in his duties by Wanda Sharts, the Clinic Staff Assistant.

Our research support staff again included Patrick Sharp, Shop Supervisor whose reclassification was still pending at year's end; Ector Estrada and Gilbert Borunda, Laboratory Animal

Technicians; and our Veterinarian Michael Richard, DVM. In addition, we were fortunate to add DeLaine King as a Laboratory Animal Technician II, who provides some much needed technical support to our behavioral neuroscience labs. The outstanding efforts of these individuals clearly facilitated a wide range of research activities in our department.

It is impossible to overestimate the contributions made by the staff. For this reason, the entire department continues to deplore the low salaries paid to our staff personnel.

G. SPACE. As has been highlighted in the department's Annual Report for the past ten years, our department is not accommodated by its current space allocation. We need a new building. Currently, we have insufficient staff space in order to function optimally and are unable to house all of our faculty in faculty offices. Furthermore, during the past few years we have had to continue to convert graduate student offices into faculty research space. Even at this, we do not have sufficient, suitable research space in the building to accommodate the high level of faculty research activity that has been attained in recent years. Although our need for additional faculty is well documented and while our extramural funding and research output is rising dramatically, the size of our current building places severe limitations on our ability to grow and to reach our full potential as a department.

The department's request for a new building is now acknowledged on the University's Capital Projects list. However,

there is little indication that funds will become available to initiate this project in the foreseeable future.

The department continues to need financial support in order to initiate a furniture replacement program that would replace 20% of its classroom and laboratory furniture per year over the next five years. The majority of our current furniture was issued as part of the original building's furnishings more than 20 years ago and it has become increasingly worn and has fallen into disrepair. Clearly there is a need for the systematic replacement of this original furniture in our building.

II. Future Plans and Comment. The names and the faces in the department have changed over the years, but what has remained constant is the department's commitment to excellence and its outstanding faculty. The recent additions to our faculty make me confident that this tradition of excellence will continue. But we need to move forward, and for that to happen we will need the contributions of all of our faculty and the support of the university administration. At the departmental level, we need to work together to capitalize on our existing strengths and to make wise decisions about the directions we should take as we strive to be even better. At the administrative level, we need a tangible commitment to enhance the quality of what is clearly among the very best departments on campus. Quite simply, we need the resources to hire an outstanding senior scientist in addition to the junior replacements for which we are already in line. The administration has been vocal in its desire to enhance the

academic reputation of the university. One easy way to do that is to invest wisely in its existing areas of strength. By any measure this department is an area of strength.

My first year as chair was both gratifying and humbling. There are many things one learns in graduate school; how to be a chair is not one of them. Now that the insomnia is under control and I have finally figured out how to read a budget, I am looking forward to what we can do next year. I very much appreciate the commitment of all those in the department who were willing to devote their time and talent to the common good. Some individuals went way beyond the call of duty and deserve special thanks. They are Harold Delaney, Jane Smith, Rob Sutherland, and Ron Yeo. Thanks to all who served so well on critical department committees especially the members of the Planning and Policy Committee, the Search Committees, and the Admissions Committee. The staff have been just excellent. Until you work closely with these people it is hard to know just how very good they are at what they do. I doubt very seriously that there is a better staff on campus. Mike Richard is another departmental asset whose expertise and dedication generally goes unrecognized but whose contributions are invaluable. I am lucky to serve under an exceptional Dean who also happens to be an old and valued friend. Finally, I am especially grateful for the wise counsel and helpful suggestions from my colleagues and friends.

APPENDIX A

COMMITTEE ASSIGNMENTS AY 1994 - 1995

Undergraduate Education	Faculty (CHAIR in caps)
1. Curriculum	DELANEY
2. Honors	DELANEY, Amrhein
3. Psi Chi	GANGESTAD
Graduate Education	
4. Admissions	GANGESTAD, Amrhein, Ciesielski, McDaniel, Roll Sutherland, Yeo
5. Financial Aid	GOLDSMITH, Agostinelli, Hodge, Stansbury, Waldron
Departmental Affairs	
6. Promotion/Tenure	JOHNSON, Hodge, McDaniel, Roll
7. Policy & Planning	DOUGHER, Delaney, Harris, Johnson, Smith, Sutherland, Yeo
8. Human Subjects	AMRHEIN, Harris, Hodge, Stansbury
9. Subject Pool Coordinator	AGOSTINELLI
10. Animal Facilities & Use	RICHARD, Feeney, Hodge, Sutherland
11. Methodology/Computer Use	HARRIS, Amrhein, Delaney, Goldsmith
13. Commencement	DOUGHER, Stansbury
14. Clinical Search	SMITH, Miller, Roll, Yeo
15. Cognitive/Neuroscience Search	JOHNSON, Amrhein, Haaland, Kodituwakku, McDaniel, Sutherland
16. Colloquium Committee	SUTHERLAND, McDaniel

Area Committees

1.	Clinical	SMITH, Arroyo, Ciesielski, Dougher, Gangestad, Gluck, Miller, Padilla, Roll, Ruebush, Waldron, Yeo
2.	Cognitive/Learning	JOHNSON, Amrhein, Delaney, Dougher, Ellis, Goldsmith
3.	Developmental/Personality/ Social	COFER, Agostinelli, Gangestad, Gluck, Harris, Roll, Ruebush, Stansbury
4.	Psychobiology	HODGE, Ciesielski, Feeney, George, Sutherland, Yeo
5.	Quantitative/Methodology	HARRIS, Amrhein, Delaney, Gangestad, Goldsmith

1010

APPENDIX B
- Part 1 -

DEPARTMENT OF PSYCHOLOGY SUMMARY STATISTICS

	AY 1990-91	AY 1991-92	AY 1992-93	AY 1993-94	AY 1994-95
Faculty Information					
Voting faculty (total)	23.5	25	23	25	24
Professors	10	10	10	11	11
Associate Professors	4	7	7	7	7
Assistant Professors	9.5	8	7	7	6
Budgeted FTE Faculty	22	24	22.1	22.27	21.27
Undergraduate Education					
Introductory Psychology	3,148	2,400	2,608	2,417	2,141
Introductory Labs	686	387	618	784	720
Advanced Psychology	4,606	4,693	6,600	6,899	6,847
Advanced Labs	134	163	169	147	212
Graduating Majors	139	173	193	152	175
Number of Faculty Involved	24	25	23	25	23
Graduate Education					
Graduate Enrollment	663	689	716	670	702
Graduate Assistants	30	32	30	37	32
Research Assistants	22	26	32	14	20
Fellows and Trainees	8	6	0	6	6
Master's Degrees	6	11	14	15	12
DoctoralDegrees	11	5	12	8	8
Applications Received	293	386	416	362	278
Offered Admission	31	24	29	29	26
Accepted Admission	15	15	14	13	12
Graduate Students	98	101	101	105	108
No. of Faculty Involved	24	25	23	25	21.27
Research Activities					
Books and Articles	60	84	51	63	66
Lectures and Reports	69	71	88	108	56
*Extramural Support (000)	857	1,400	2,140	2,063,495	1,965,401
General Information					
FTE Staff	10.25	10.25	11.35	11.25	12.25
Department Budget (000)	1,437	1,554	1,520	1,665	1,623

*Extramural funds budgeted for expenditure during a single AY.

APPENDIX B
-Part 2-

DEPARTMENT OF PSYCHOLOGY CURRENT OUTSIDE-SPONSORED RESEARCH AMOUNTS FUNDED FOR THE CURRENT GRANT YEAR

William Miller - Principal Investigator

NIH Research Scientist Award, NIAAA; $85,268 - 8/94-7/95

Alcohol/Drug Faculty Development Program, NIAAA; $227,031 - 9/94-8/95 (Drs. Waldron, Agostinelli, Smith, Arroyo & Padilla)

Alcohol & Drug Abuse Prevention and Treatment Evaluation, NIAAA, Predoctoral National Research Service Award (NRSA); $108,990 - 7/94-6/95

Strategies for Matching Clients to Treatments, NIAAA, $191,432 - 9/94-8/95

Unilateral Family Intervention for Drug Problems, NIDA; $203,985 - 7/94-6/95

Clinical Trial of Interventions with Significant Others, NIAAA, $324,739 - 5/94-4/95

Craig Noonan - Principal Investigator

Group Motivational Interviewing Prior to Treatment, NIAAA, $11,998 - 4/95-3/96

Lauren Aubrey - Principal Investigator

Motivational Induction for Adolescents Seeking Treatment, NIAAA; $13,956 - 3/95-2/96

Tim Goldsmith - Principal Investigator

Analysis and Training of Cognitive Skills in a Line-Oriented Flight Training Program, FAA; $304,267 - 3/95-3/96

Examining Cognitive Structures of Air Force Fighter Pilots, University of Dayton (USAF); $18,334 - 7/93-1/95

Holly B. Waldron - Principal Investigator

Families of Alcohol Abusing Adolescents, NIAAA; $294,832 - 8/94-7/95

Drug Abuse Treatments for Adolescents, NIDA; $294,832 - 9/94-8/95

APPENDIX B, Part 2 (continued)

Rob Sutherland - Principal Investigator

Hippocampal Plasticity Induced by Kindling, University of Western Ontario; $42,276 - 9/92-8/95

Mark McDaniel - Principal Investigator

A Componential Analysis of Prospective Memory & Aging, NIA, Furman University; $68,118 - 4/94-3/95

Harold Delaney - Principal Investigator

The Alcohol Self-Control Program, NIAAA; $15,409 - 10/94-9/95

Michael J. Dougher - Principal Investigator

Assessment & Evaluation of Court Clinic Cases, Second Judicial District Court; $52,000 - 8/94-7/95

APPENDIX C

DEPARTMENT OF PSYCHOLOGY COURSE OFFERINGS
AY 1994-1995

SUMMER 1994

# OF COURSE	TOTAL TITLE	SECTS	ENROLLMENT	SCH
105	General Psychology	2	95	285
200	Statistical Principles	2	92	276
220	Child Psychology	1	51	153
230	Adjustment & Interpersonal Relations	1	19	57
231	Psychology of Human Sexuality	1	66	198
240	Brain and Behavior	1	34	102
260	Psych. Learning & Memory	1	30	90
265	Cognitive Psychology	1	33	99
321	Intro Child Research	1	23	69
322L	Child Research Lab	1	13	26
331	Psychology of Personality	1	93	279
332	Abnormal Behavior	1	90	270
400	History of Psychology	1	35	105
437L	Alcoholism Lab II	1	2	4
447	Psychopharm. Drug Abuse	1	21	63
471	Attitude Processes	1	27	81
499	Undergrad Problems	13	36	89
551	Graduate Problems	3	3	8
599	Masters Thesis	3	3	7
699	Dissertations	3	5	34
		Total	771	2,295

FALL 1994

COURSE	TITLE	# OF SECTS	TOTAL ENROLLMENT	SCH
105	General Psychology	5	1,120	2,184
106L	General Psychology Lab	22	353	353
109	Coping with College	1	39	39
200	Statistical Principles	3	175	525
220	Child Psychology	3	401	1,203
230	Adjustment and Interpersonal Relations	1	121	363
231	Psychology of Human Sexuality	1	118	354
232	Clinical Psychology	1	118	354
240	Brain and Behavior	3	206	618

FALL 1994 (Continued)

COURSE	TITLE	# OF SECTS	TOTAL ENROLLMENT	SCH
260	Psychology of Learning & Memory	1	138	414
265	Cognitive Psychology	1	99	297
271	Social Psychology	1	108	324
300	Intermediate Statistics	1	22	66
302	Psychological Research Tech.	1	41	123
325	Psychology of Infancy	1	96	288
331	Psychology of Personality	1	87	261
332	Abnormal Behavior	2	357	1,071
333L	Abnormal Behavior Lab - Part 1	1	13	26
337	Family Psychology	1	161	483
361	Human Learning and Memory	1	44	132
362L	Human Learning and Memory Lab	1	14	28
363	Psychology of Perception	1	41	123
367	Psychology of Language	1	10	30
375	Psychology of Women	1	117	351
391	Junior Honors Seminar	1	15	45
411	Cross Cultural Psychology	1	21	63
413	Industrial-Organizational Psychology	1	20	60
415	Environmental Psychology	1	119	357
420	Adv. Developmental Psychology	1	24	72
421L	Adv. Developmental Psychology Lab	1	11	22
432	Child Psychopathology	1	44	132
436L	Alcoholism Lab I	1	5	10
437L	Alcoholism Lab II	1	2	4
440	Adv. Physiol. Psychology	1	18	54
441L	Adv. Physiol. Psy. Lab	1	8	16
450	Spec. Topics: Uncons. Process	1	2	6
450	Spec. Topics: Psychology & Religion	1	1	3
473	Social Interaction	1	22	66
491	Senior Honors Seminar	1	16	48
499	Undergraduate Problems	17	93	219
501	Advanced Statistics	1	14	42
503L	Advanced Statistics Lab	1	14	14
520	Seminar in Developmental Psychology	1	6	18
523	Seminar in Social Dev/Child	1	6	18

FALL 1994 (Continued)

COURSE	TITLE	# OF SECTS	TOTAL ENROLLMENT	SCH
531	Prof and Cult Issues	1	10	30
532	Seminar Psychopathology	1	10	30
533	Psy Eval:Cog/Neuro-Psychology	1	11	33
538	Seminar in Ego Psychology	1	5	15
540	Biol. Bases Behavior	1	13	39
551	Graduate Problems	21	44	104
563	Seminar on Human Memory	1	6	18
569	Seminar in Language & Thought	1	2	6
572	Theories of Personality	1	6	18
599	Masters Thesis	14	27	77
600L	Practicum	2	17	20
631L	Prac. Psych. Adults I	1	35	105
637L	Family Pathology	1	10	30
641	Seminar in Physiological Psychology	1	4	12
650	Spec. Topics: Learning	1	16	48
650	Spec. Topics: Uncon. Process	1	9	27
650	Spec. Topics: Teaching Psychology Lab	16	6	
650	Spec. Topics: Research Seminar	1	13	13
650	Spec. Topics: Program Evaluation	1	2	6
650	Spec. Topics: Attitude/ Persuasion	1	16	48
650	Spec. Topics: Psychology & Religion	1	5	15
650	Spec. Topics: Unix and Internet	1	6	6
650	Spec. Topics: Univ. Teaching	2	26	26
699	Dissertations	20	46	316
	Total		4,803	13,499

SPRING 1995

COURSE	TITLE	# OF SECTS	TOTAL ENROLLMENT	SCH
105	General Psychology	5	926	2,778
106L	General Psychology Lab	22	367	367
200	Statistical Principles	4	219	657

SPRING 1995 (Continued)

COURSE	TITLE	# OF SECTS	TOTAL ENROLLMENT	SCH
220	Child Psychology	2	332	996
230	Adjustment of Inter-personal Relations	1	190	570
231	Psych. Human Sexuality	1	266	798
232	Clinical Psychology	1	68	204
240	Brain and Behavior	3	228	684
260	Psychology of Learning Memory	1	56	168
265	Cognitive Psychology	2	101	303
271	Social Psychology	1	98	294
300	Intermediate Statistics	1	18	54
302	Psychological Research Techniques	1	33	99
310	Psychological Testing	1	20	60
321	Intro Child Research	1	41	123
322L	Child Research Lab		117	34
325	Psychology of Infancy	1	67	201
331	Psychology of Personality	1	167	501
332	Abnormal Behavior	2	313	939
334L	Abnormal Behavior Lab - Part 2	1	13	26
337	Family Psychology	1	115	345
361	Human Learning & Memory	1	68	204
362L	Human Learning & Memory Lab	1	17	34
392	Junior Honors Seminar	1	9	27
411	Cross Cultural Psychology	1	22	66
415	Environmental Psychology	1	145	435
420	Advanced Developmental Psychology	1	12	36
430	Alcoholism	1	132	396
432	Child Psychopathology	1	37	111
433L	Child Psychopathology Lab	1	13	26
434	Behavior Therapies	1	25	75
435L	Behavior Therapies Lab	1	17	34
436L	Alcoholism Lab I	1	7	14
437L	Alcoholism Lab II	1	5	10
440	Advanced Physiological Psychology	1	12	36
441L	Advanced Physiological Psychology Lab	1	11	22
442	Neur. Plast. & Behavior	1	9	27
444	Human Neuropsychology	1	21	63

SPRING 1995 (Continued)

COURSE	TITLE	# OF SECTS	TOTAL ENROLLMENT	SCH
450	Spec. Topics: Visual Cognition	1	4	12
450	Spec. Topics: Child/ Adolescent Media	1	5	15
450	Spec. Topics: Emotional Development	1	4	12
450	Spec. Topics: Ethical Issues	1	4	12
450	Spec. Topics: Bio. Bas. Psychopathology	1	3	9
450	Spec. Topics: Adol. Psychology	1	54	162
467	Science of Intelligent Systems	1	7	21
468L	Science of Intelligent Systems Lab	1	3	6
472	Social Cognition	1	27	81
473	Social Interaction	1	25	75
475L	Social Psychology Lab	1	25	50
492	Senior Honors Seminar	1	15	45
499	Undergrad Problems	20	100	222
502	Design & Analysis of Experiments	1	12	36
504L	Design & Analysis Expt. Lab	1	11	11
535	Eval Person. Function	1	11	33
536L	Practicum Psych. Evaluation	1	9	27
547	Psychopharm. Ther. Drg.	1	17	51
551	Graduate Problems	20	43	107
561	History & Systems/Psy.	1	14	42
599	Masters Thesis	12	22	68
600L	Practicum	2	10	14
601	Multiple Measures	1	4	12
632L	Practicum in Psycho-therapy with Adults II	1	28	84
633	Systems of Psychotherapy	1	8	24
634	Seminar in Treatment of Children, Adolescents and Families	1	3	9
635	Child Assessment Practicum	1	5	15
641	Sem. in Physiological Psychology	1	4	12
648	Bio. Basis Psycho-pathology	1	2	6

SPRING 1995 (Continued)

COURSE	TITLE	# OF SECTS	TOTAL ENROLLMENT	SCH
650	Spec. Topics: Visual Cognition	1	9	27
650	Spec. Topics: Micro-comp. Lab	1	7	21
650	Spec. Topics: Child/ Adol./Media	1	4	12
650	Spec. Topics: Applied Cognition	1	7	21
650	Spec. Topics: Adv. Person. Assess.	1	5	15
650	Spec. Topics: Research Seminar	1	8	8
650	Spec. Topics: Emotional Development	1	4	12
650	Spec. Topics: Ethical Issues	1	1	3
650	Spec. Topics: Memory & Amnesia	1	3	9
650	Spec. Topics: Teaching Psych. Lab	1	8	8
699	Dissertations	19	47	338
	Total		4,796	13,555

APPENDIX D

PART-TIME FACULTY HIRED DURING AY 1994 - 1995

Name	Course Number & Title		
Fall 1994			
Jerald Belitz, Ph.D.	Psychology	531-001	Professional & Cultural Issues in Clinical Psychology
Connie Callahan, Ph.D.	"	231-001	Psychology of Human Sexuality
Henry Ellis, Ph.D.	"	551-004	Graduate Problems
		699-004	Doctoral Dissertation
Jaclyn Gerstein, Ph.D.	"	337-001	Family Psychology
Michael Hillard, Ph.D.	"	105-002	General Psychology
Robin Jacobvitz, Ph.D.	"	220-400	Child Psychology
Robert McDonald, Ph.D.	"	440-001	Advanced Physiological Psychology
Stephen Rokicki, Ph.D.	"	415-001	Environmental Psychology
Almaron Wilder, Ph.D.	"	413-002	Industrial and Organizational Psychology
Spring, 1995			
Henry Ellis, Ph.D.	Psychology	551-004	Graduate Problems
		650-004	Studies in Applied Cognition
Jaclyn Gerstein, Ph.D.	"	337-400	Family Psychology
	"	450-010	Studies in Adolescent Psychology
Michael Hillard, Ph.D.	"	105-001	General Psychology
Robin Jacobvitz, Ph.D.	"	325-001	Psychology of Infancy
Adrienne Larkin, Ph.D.	"	310-001	Psychological Testing
Robert McDonald, Ph.D. Physiological	"	440-001	Advanced Psychology
Robert Osterhouse, Ph.D.	"	232-001	Clinical Psychology
Stephen Rokicki, Ph.D.	"	415-400	Environmental Psychology
Verner Westerberg, Ph.D.	"	547-001	Psychopharmacology: Therapeutic Drugs

APPENDIX E

SENIOR HONORS THESES

Department of Psychology

AY 1994 - 1995

Student	Thesis	Faculty Sponsor
Barnes, Alexis[a]	Competitive NMDA Antagonist CGP-39551 Blocks Hippocampal Long-Term Potentiation but not Place Learning	Robert Sutherland
Anderson, Linda[a]*	Cognitive Structures of Algebra: Symbolic vs. Verbal Forms	Timothy Goldsmith
Chavez, Geri M.P.[c]	The Influences of Implicit Knowledge on Direct Test Performance	Jon Reed & Peder Johnson
Erbes, Chris[a]	Evaluating the Orthogonal Cultural Identification Scale: Issues of Subjectivity	Judith Arroyo
Floyd, Tim. E.[b]	Perceived Norms as a Possible Standard in a Self-Regulation Model of Problem Perception	Gina Agostinelli
Hagan, Matthew C.[a]	The Behavioral Effects of a Toxic Dose of Methamphetamine With or Without Fluoxetine Pretreatment	Gordon Hodge
Johnson, Donny[c]	The Effects of Symmetry on Ratings of Attractiveness, Intelligence and Healthiness	Steve Gangestad
Kalich, Linda[c]	Factors Relating to Affiliation with Alcoholics Anonymous	Scott Walker

Student	Thesis	Faculty Sponsor
Krieble, Ina[b]	Identifying Misconceptions Within Structured Knowledge Assessments	Timothy Goldsmith
Lunsford, Shannon[c]	Coping Patterns of College Males With and Without Histories of Child Sexual and Physical Abuse	Tracy Simpson & Judith Arroyo
McCluskey, Matt[b]	The Relationship of Social Support to Supportive and Non-supportive Parental Behaviors	Kathy Stansbury
Rahal, Selwa[a]**	Behavioral Effects of Kainic Acid-Induced Seizures on Hippocampal Dependent and Independent Tasks	Robert Sutherland
Sanchez, Rodney J.[b]	Effects of Insulin Administration after Traumatic Sensorimotor Cortex Contusion in Rats	Dennis M. Feeney
Zader, Joshua[b]	Comparing Conceptual Structure of High- and Low-Self-Esteem Subjects	Timothy Goldsmith

[a]Summa Cum Laude
[b]Magna Cum Laude
[c]Cum Laude
*Recipient of Best Honors Thesis Award
**Recipient of the Outstanding Honors Student Award

APPENDIX F

DOCTORAL DEGREES AWARDED

Department of Psychology

AY 1994 - 95

NAME	TITLE OF DISSERTATION	ADVISOR
Janice Brown	Alcohol Involvement and Self-Regulation in Male Alcoholics: A Comparison of Three Ethnic Groups	Miller
Allen Eugene Butt	The Role of the Nucleus Basalis Magnocellularis in Learning & Memory: Evidence for a Dissociation of Configural and Simple Association	Hodge
Mark Hawley	Psychosocial Mediators of Post-Surgical Pain and Medication Use with Patient-Controlled Analgesia	Dougher
Michael R. Markham	Transfer of Operant Discrimination and Respondent Elicitation Functions Via Emergent Relations of Compound Stimuli	Dougher
Beth Melka	Numbing Symptoms in Combat-Related Post-Traumatic Stress Disorder: Lack of Existential Resolution	Roll
Henry A. Montgomery	Alcoholics Anonymous Involvement After Inpatient Treatment for Drinking Problems	Miller
Jill Kathryn Nelson	Acute Alcohol Intoxication and Specific Impairments in Planning and Memory	Miller
Tanya Payne	Configurality in Human and Neural Network Face Recognition	Goldsmith

APPENDIX G

MASTERS OF SCIENCE DEGREES AWARDED

Department of Psychology

AY 1994 - 1995

NAME	TITLE OF THESIS	ADVISOR
Janet C'de Baca	Quantum Changes in Human Behavior	Miller
Susanna W. Chang	Hispanic and Anglo Attributions Related to Ethnic Labels in New Mexico	Arroyo
Jennifer Jo Eldridge	Attributions of Feeling and Life to Animals, Plants, and Inanimate Objects	Gluck
Lucianne Hackbert	The Effects of Altering Stimulus Equivalence Class Membership	Dougher
Dina E. Hill	Neuropsychological and Neuroanatomical Correlates of Long-Term Memory in Survivors of Childhood Leukemia	Ciesielski
Philip M. Kragnes	Differential Effects of Quasi-Random Feedback on Explicit and Implicit Learning	Johnson
Shannon A. O'Brien	Cognitive-Motor Learning Deficits in Parkinson's Disease	Yeo
David R. Perkins	A Double-Edged Sword: A Comparison of Affective Familial Presence for Chicano Students vs. Anglo Students	Roll
Ronald J. Prince	Event Related Potentials and Behavioral Measures of Selective Inhibition in Humans	Ciesielski
Francisco P. Sanchez	Ethanol-Reinforced Behavior in Fast and Slow Selectively Bred Mice	George
Douglas Warner	Modeling of an Air Combat Expert: The Relevance of Context	Goldsmith
Vernon Keith Westphal	Overeaters Anonymous: Who Goes, and Who Succeeds?	Smith

APPENDIX H

GRADUATE STUDENTS ACCEPTED FOR

AY 1995-96

NAME	ADVISOR	AREA
Alfredo Aragon New Mexico	Gluck	Clinical
Faith Barrington California	Sutherland	Behavioral Neuroscience
Seth Brown Maryland	Blanchard	Clinical
Angela Caswell New York	Ciesielski	Clinical
Kraig Finstad California	McDaniel	Cognitive/Learning
Margaret Johnston New Mexico	Smith	Clinical
David Ley Maryland	Ruebush	Clinical
Nicklos Lucas California	Delaney	Quantitative/ Methodology
Sherri Provencal Rhode Island	Amrhein	Clinical
Margaret Rice Missouri	Stansbury	Clinical
Debra Stibick New Jersey	Feeney	Clinical
Denise Walker Washington	Miller	Clinical

APPENDIX I

THE FACULTY
DEPARTMENT OF PSYCHOLOGY
UNIVERSITY OF NEW MEXICO

AMRHEIN, PAUL C.
Assistant Professor. Ph.D. University of Wisconsin-Madison, 1987.
Cognitive psychology: psycholinguistics; picture-word processing; aging, cognition and motor control. Current language research concerns the representation and function of pragmatic, semantic and syntactic information in discourse. Ongoing picture-word processing research concerns the development of 'hybrid' models that account for cognitive processes involved in episodic and semantic memory-production tasks (i.e., drawing, writing, speaking) in monolinguals and bilinguals. Current aging research concerns age- and dementia-based changes in cognitive processes that pertain to the preparation and execution of movements, and picture-word processing.

ARROYO, JUDITH A.
Assistant Professor. Ph.D. University of California, Los Angeles, 1989.
Clinical psychology. Primary interests are in minority mental health, and community psychology. Current research involves measurement of acculturation among New Mexican Hispanics; developing an orthogonal model of adaptation to Mexican and non-Hispanic white culture; and the mental health implications of this model for substance use, violence in the family, and eating disorders.

BLANCHARD, JACK J.
Assistant Professor. Ph.D. State University of New York at Stony Brook, 1991.
Clinical psychology. Research interests involve adult psychopathology with a focus on schizophrenia. Current research includes the assessment and characterization of emotion in schizophrenia, the role of emotion in the social dysfunction of this disorder, and neuropsychological models of symptoms in schizophrenia. Relatedly, this research program seeks to identify individual differences in emotion, social functioning and neuropsychological impairment that are predictive of clinical outcome in schizophrenia. Additional interests include the study of comorbid substance use in psychosis.

CIESIELSKI, KRISTINA T.
Associate Professor. Ph.D. Polish Science Academy (Nencki Institute of Experimental Biology), 1978.
Cognitive/clinical neuropsychology; brain event-related potentials; brain imaging; developmental brain disorders.

Research is aimed at elucidating brain mechanisms of cognitive processes in normal and abnormal populations and currently focuses on attentional and memory deficits in autism and dyslexia in survivors of childhood leukemia and in cases with frontal brain lesions. My approach is based on information-processing models and neuropsychological models of cognition, and integrates neurobehavioral, electrophysiological and neuroimaging and modelling techniques. A major goal is to describe the normal and pathological development of the prefrontal brain in humans and to differentiate disorders according to cognitive and neurophysiological subsystems.

COFER, LYNETTE FRIEDRICH

Professor. Ph.D. Cornell University, 1965.
Developmental psychology, human circadian rhythmicity as a mediator of personality development and cognitive performance, social development and gender differences, mediation of television effects, analyses of theoretical and empirical approaches to applied developmental research and family public policy. Current research interests include human circadian rhythmicity and parent-child relations and school performance, media portrayals of youth and families, processing of TV news content and environmental issues.

DELANEY, HAROLD D.

Professor and Associate Chair for Undergraduate Education. Ph.D. University of North Carolina, 1975.
Methodology, quantitative. Current research is in statistical methods, particularly those that are useful in investigations involving individual difference variables. Issues in experimental design and philosophy of science are also of interest. Interests in substantive areas include the psychology of religion, and individual differences in values and in cognition.

DOUGHER, MICHAEL J.

Professor and Department Chair. Ph.D. University of Illinois at Chicago, 1980.
Experimental and clinical behavior analysis. Primary research focuses on the experimental analysis of complex human behavior including stimulus equivalence and rule-governed behavior. Other interests include contextualistic methods of psychotherapy and psychotherapy research, and integrative psychotherapies.

EGLY, ROBERT

Assistant Professor. Ph.D. Arizona State University, 1990.
Cognitive neuroscience. My research focus is on understanding the cognitive processes and neural systems of visual attention and perception. A major component of my research program is the use of neurological patients (e.g., stroke, tumor, trauma) to identify the brain structures that control attending and perceiving in normal cognition, and to examine how various neuropathologies affect attending and perceiving.

HAALAND, KATHLEEN Y.
Associate Professor. Ph.D. University of Rochester, 1972.
Clinical and experimental neuropsychology. Motor deficits are a common outcome of brain damage (e.g., stroke, Parkinson's disease, Huntington's disease, normal aging). My research program focuses upon understanding the different cognitive processes (e.g., motor programming; encoding, storage and retrieval of motor programs; scheduling movements) which produce complex motor deficits after damage to different areas of the brain. We have emphasized the dominance of the left hemisphere for controlling movements in both hands and the importance of the basal ganglia. We study the changes in motor processes in (1) stroke patients with focal damage to different parts of the left hemisphere using structural imaging to relate area of brain damage and behavior; (2) patients with Parkinson's disease; (3) patients with Alzheimer's disease; and (4) patients with cerebellar damage. In our laboratory strong emphasis is placed on the integration of cognitive and neuropsychological approaches.

HARRIS, RICHARD
Professor. Ph.D. Stanford University, 1968.
Experimental social psychology, game theory, equity theory. Primarily interested in relatively formal (mathematical and computer simulation) models of social psychological phenomena, with emphasis so far on post-decision dissonance reduction, experimental games, and equity theory. A secondary interest is in the development of multivariate statistical techniques.

HODGE, GORDON K.
Presidential Teaching Fellow and Associate Professor. Ph.D. University of California, Los Angeles, 1977.
Psychopharmacology, behavioral neuroscience. Research is directed toward revealing underlying neurotransmitter systems responsible for impairments in learning, memory, and cognition in rats. By carefully observing and measuring complex behaviors prior to and following lesions or drug administration in rats, we hope to better understand how disorders in humans originate and develop, to identify neurotransmitter systems involved, and to develop pharmacological methods of attenuating the behavioral impairments.

JOHNSON, PEDER J.
Professor and Associate Chair of Experimental Training. Ph.D. University of Colorado, 1965.
Cognitive processes, knowledge representation, human performance, attention, and encoding processes. Current research includes knowledge elicitation and representation, implicit learning, units of visual encoding, sensitivity to contextual information, and mechanisms of priming.

MC DANIEL, MARK A.
Professor. Ph.D. University of Colorado, 1980.
Cognitive. Major research interests center on how encoding and

FEENEY, DENNIS M.

Professor (and Professor of Physiology). Ph.D. University of California, Los Angeles, 1968.
Behavioral neuroscience, brain injury, recovery of function and epilepsy. In my laboratory we are conducting interdisciplinary studies of experimental brain injury in animals using a variety of methods, including electrophysiology, liquid chromatography, pharmacology, histological and behavioral measurements. Our goal is to understand and enhance behavioral recovery after brain damage in humans, and determine what commonly prescribed drugs may slow behavioral recovery.

GANGESTAD, STEVEN W.

Associate Professor. Ph.D. University of Minnesota, 1986.
Evolutionary psychology; social/personality psychology. General interests concern the ways in which humans' current psychological design is a product of evolutionary selection. Current research generally concerns this issue in regard to phenomena that occur within close relationships such as sexual relationships, friendships, and familial relationships. Other research concerns the developmental expressions of adaptations. Additional interests include individual differences, behavior genetics, psychometric theory, and philosophy of science.

GLUCK, JOHN P.

Professor. Ph.D. University of Wisconsin, 1971.
Clinical psychology, developmental psychology. Interests include value changes during psychotherapy and the effects of early experience on development. In addition, I am very interested in the general area of bioethics, particularly professional clinical conduct and the ethics of human and animal research.

GOLDSMITH, TIMOTHY E.

Assistant Professor. Ph.D. New Mexico State University, 1984.
Applied cognitive psychology, human factors, computer modeling. The general theme of my research centers on assessing and representing knowledge and skill. Some specific areas of my current work include: network models of structural knowledge, methods of eliciting and representing human expertise, and computational models of real-time decision making.

GORDON, WILLIAM C.

Professor and Dean of the College of Arts & Sciences. Ph.D. Rutgers University, 1973.
Animal learning and memory, cognitive processes in animals. Current research focus is on analysis of associative structures in Pavlovian conditioning situations. Additional research interests involve the role of context in learning
and retrieval, the rules governing pretest cuing or reminder effects, and memory construction in animals.

retrieval processes influence learning and memory. Current projects are focused on 1) text processing and memory; 2) hypermnesia; 3) investigating prospective memory in younger and older adults; 4) understanding how people learn functional relations between stimulus and response variables; and 5) investigating causal concept learning in multivariate environments.

MILLER, WILLIAM R.

Professor (and Professor of Psychiatry) and Director, Research Division, Center on Alcoholism, Substance Abuse, and Addictions. Ph.D. University of Oregon, 1976.
Treatment, prevention, and assessment of addictive behaviors; program evaluation research; cognitive-behavior therapies and brief interventions; the psychology of change, motivation, and self-regulation; psychology and spirituality.

PADILLA, ELIGIO R.

Associate Professor (and Associate Professor of Psychiatry); Associate Dean of Graduate Studies and Director, Southwest Hispanic Research Institute. Ph.D. University of Washington, 1974.
Clinical, cross-cultural and community. Current work focuses on the validity of traditional instruments for the assessment of psychopathology and intelligence among minority populations, differences and similarities between Chicanos and American Indians and the majority along various attitudinal, informational and behavioral dimensions, sexual function and dysfunction in a cross-cultural context and the evolution of health and mental health programs.

ROLL, SAMUEL

Professor (and Professor of Psychiatry). Ph.D., ABPP, ABFP. Pennsylvania State University, 1968.
Clinical psychology, developmental psychology, forensic psychology. Using a psychoanalytic framework as a base, I am exploring cultural influences on the development of personality and cognition. This involves work in the area of dreams, early memories, cognitive assessment, personality assessment and psychotherapy. My research involves Anglo, Chicano, American Indian and South American subjects.

RUEBUSH, BRITTON

(Primary appointment is outside the psychology department.)
Professor (and Professor of Psychiatry). Ph.D. Yale University, 1960.
Clinical, child development, family therapy. Research interests include evaluation of clinical programs and services; the effects of child-rearing methods and other family variables on child and family behavior; and the relationship between personality variables such as anxiety and defensiveness, and cognitive, learning and physical functions.

1031

SMITH, JANE E.

Associate Professor and Director of Clinical Training Program. Ph.D. State University of New York at Binghamton, 1985. Clinical psychology. Research interests: psychophysiological assessment, assessment and treatment of eating disorders (bulimia, obesity and anorexia), alcoholic homeless individuals, dual diagnosis (substance abuse and chronic mental illness) and implosive (flooding) therapy.

STANSBURY, KATHY

Assistant Professor. Ph.D. University of California, Los Angeles, 1990.
Developmental psychology; social and emotional development. My work focuses on developmental competencies and individual differences in social and emotional domains during the preschool period. More specifically, how do children learn to regulate their emotional states and what impact does this process have on later-developing skills? In creating and testing a model of these developmental processes, I have made use of several different paradigms, such as children's entry into new peer and social situations, and commonly occurring frustration situations, and studied a variety of systems that may be contributing to or involved in the development of emotion regulation, including primary caregiver relationships, temperamental differences, psychophysiological factors (primarily hypothalamic-pituitary-adrenocortical hormones), behavioral-risk contexts, and differences in linguistic skills. I am also interested in prenatal influences on brain development and later behavior, depression and neurohormones in mothers and children, and developmental psychoneuroimmunology, as well as basic theoretical questions in the area of emotion in humans.

SUTHERLAND, ROBERT J.

Associate Professor. Ph.D. Dalhousie University, 1980
Behavioral neuroscience, neuropsychology, learning and memory. Primarily interested in exploring the relationship between brain and mind, especially the anatomical and functional organization of memory and related cognitive processes. The research includes combinations of behavioral analyses, electrophysiological recording, neurotoxins, and neuropharmacological techniques. Other goals are to understand in detail the function of the hippocampal formation, the nature of amnesic symptoms in Alzheimer's disease, Korsakoff's syndrome, epilepsy, cerebral trauma, and other disorders. We also explore potential factors related to cognitive recovery after brain damage.

WALDRON, HOLLY B.

Assistant Professor. Ph.D. University of Utah, 1987.
Clinical psychology. Research interests focus on family interaction patterns, child and adolescent psychopathology and treatment, and family therapy process and outcome. Specific research topics include juvenile delinquency and adolescent substance abuse.

APPENDIX J

PERSONS HOLDING PROFESSIONAL TITLES IN PSYCHOLOGY
1994 - 1995

Name and Address	Phone	Professional Title
Julia C. Barker, M.A. 4600-A Montgomery, NE Suite 102 Albuquerque, NM 87109	883-0100	Clinical Associate
Patricia Boham, Ph.D. 1502 Harvard Ct. NE Albuquerque, NM 87106	848-5122	Clinical Associate
Charles Cofer, Ph.D. 3600 Vista Grande NW Albuquerque, NM 87120		Professor (PT)
Phillip W. Day, D.V.M. Director, Animal Resource Facility University of New Mexico School of Medicine Basic Med. Sci. Bldg. G32 Albuquerque, NM 87131	277-3936	Assistant Professor (PT)
Peter DiVasto, Ph.D. Family Practice/ Psychiatry 307 Albuquerque, NM 87131	277-4257 277-2165	Clinical Associate
Susan Eissele, Ph.D. 4300 Carlisle NE, Suite 1 Albuquerque, NM 87107-4811		Clinical Associate
Charles H. Elliott 403 Dartmouth SE Albuquerque, NM 87106	843-2190	Clinical Associate
Roger Enfield, Ph.D. 4300 Carlisle NE, Suite 1 Albuquerque, NM 87107-4811	884-2302	Clinical Associate
Clara Farah, Ph.D. 715 Grande NE Albuquerque, NM 87102	881-8666	Clinical Associate

Name and Address	Phone	Professional Title
Al Fedoravicius, Ph.D. Behavioral Medicine Veterans Administration Medical Center 2100 Ridgecrest Drive SE Albuquerque, NM 87108	265-1771 ext.2425	Adjunct Assistant Professor
William E. Foote, Ph.D. 4308 Carlisle NE Suite 208 Albuquerque, NM 87107-4849	255-9494	Clinical Assistant Professor
Therese Goetz 1925 Juan Tabo NE Suite B Albuquerque, NM 87112		Associate
Kathleen Haaland, Ph.D. Psychology Services Veterans Administration Medical Center 2100 Ridgecrest Drive SE Albuquerque, NM 87108	265-1711 ext. 2440	Associate Professor (Secondary, nonproba- tionary appointment)
Nancy Handmaker, Ph.D. P. O. Box 1013 Corrales, NM 87048		Research Assistant Professor
Deborah Harrington, Ph.D. Veterans Administration Medical Center 2100 Ridgecrest Drive SE Albuquerque, NM 87108	265-1711	Associate
Mary Harris, Ph.D. Educational Foundations University of New Mexico Albuqerque, NM 87131	277-2925	Professor (Secondary appointment)
Reid Hester, Ph.D. 4300 San Mateo NE Albuquerque, NM 87110	884-3002	Clinical Associate
Bobby Holstead, Ph.D., 4300 San Mateo NE Albuquerque, NM 87110	884-3002	Clinical Associate

Name and Address	Phone	Professional Title
Ben Klein, Ph.D. Psychology Program Director St. Joseph Rehabilitation Ctr. 500 Walter NE Albuquerque, NM 87102		Clinical Associate
Frances Koenig, Ph.D. 121 Wellsley SE Albuquerque, NM 87106	242-0439	Clinical Associate
P. W. Kodituwakku, Ph.D. P. O. Box 4820 Albuquerque, NM 87196	272-1981	Clinical Associate (PT)
Marcia Landau, Ph.D. Suite 805 300 San Mateo Blvd. NE Albuquerque, NM 87108	266-8488	Clinical Associate
Milton Lasoski, Ph.D. 1817 Morningside Dr. NE Albuquerque, NM 87110	266-3070	Clinical Associate
A. Lane Leckman, M.D. 11000 Candelaria NE Suite 110 West Albuquerque, NM 87112	841-1031	Clinical Associate
Jeffrey Lewine, Ph.D. Magnetic Source Imaging Facility, Bldg. 49 VA Medical Center 2100 Ridgecrest Drive SE Albuquerque, NM 87108	256-5744	Research Assistant Professor (PT)
George Luger, Ph.D. Professor Dept. of Computer Science University of New Mexico Albuquerque, NM 87131	277-3204	Professor (Secondary appointment)
Edward Maclin, Ph.D. 727 Morningside Drive, NE Albuquerque, NM 87110	268-7043	Research Assistant Professor (PT)
Ron McGowan, Ph.D. 801 Encino Pl. NE Albuquerque, NM 87102	842-1995	Associate

Name and Address	Phone	Professional Title
Charlene McIver, Ph.D. 4600 A Montgomery NE 102 Albuquerque, NM 87109	265-8800	Clinical Associate
Theresa Moyers, Ph.D. Psychology Service VA Medical Center 2100 Ridgecrest Drive SE Albuquerque, NM 87108	265-1711	Adjunct Clinical Assistant Professor
Ruth Shore Mondlick, Ph.D. 1605-C2 Carlisle Blvd. NE Albuquerque, NM 87110	881-0618	Clinical Associate
Jean Newman, Ph.D. Associate Professor of Linguistics Humanities 526 University of New Mexico Albuquerque, NM 87131	277-7414	Associate Professor (Secondary appointment)
Stephen R. Perls, D.Ed. Department of Psychiatry University of New Mexico School of Medicine 2400 Tucker NE Albuquerque, NM 87131	256-0500	Associate Professor (Secondary appointment)
Bruce Porch, Ph.D. Communicative Disorders University of New Mexico 901 Vassar NE Albuquerque, NM 87106	277-4753	Associate Professor (Secondary appointment)
Richard Reed, Ph.D. 7520 Montgomery NE Albuquerque, NM 87109	881-6665	Clinical Associate
Michael Richard, D.V.M. Professor Department of Psychology University of New Mexico Albuquerque, NM 87131	277-5009	Adjunct Assistant
Steve Rokicki, Ph.D. P.O. Box 345 Corrales, NM 87048		Associate

Name and Address	Phone	Professional Title
Karen Ruebush, Ph.D. 1513 Harvard Drive NE Albuquerque, NM 87106	268-5240	Clinical Associate
Elizabeth Roll, Ph.D. 120 Vassar Dr. SE Albuquerque, NM 87106	266-2631	Clinical Associate
Doris Sahd, Ph.D. 9804 Aztec NE Albuquerque, NM 87111	298-7551	Clinical Associate
Will Scofield, Ph.D. 1502 Harvard Ct. NE Albuquerque, NM 87110	265-8455	Clinical Associate
Rene Silleroy, Ph.D. 8100 Constitution Pl. NE Albuquerque, NM 87110	292-3776	Clinical Associate
Edward W. Snyder, Ph.D. Psychology Service Veterans Administration Medical Center 2100 Ridgecrest Drive SE Albuquerque, NM 87108	265-1711 ext. 2270	Clinical Associate
Frank Spring, Ph.D. 708 Marquette Ave. NW Albuquerque, NM 87102	243-3751	Clinical Associate
Tim Strongin, Ph.D. 5816 Nugget NE Albuquerque, NM 87111	298-1477	Clinical Assistant Professor
Jerry Sue Thompson, Ph.D. 1301 Manzano NE Albuquerque, NM 87110		Associate
Maryann Thompson, Ph.D. 8100 Constitution Pl. NE Albuquerque, NM 87110	292-3776	Clinical Associate
Scott Tonigan, Ph.D. 4800 Royene NE Albuquerque, NM 87110	768-0266	Research Assistant Professor

Name and Address	Phone	Professional Title
Albert V. Vogel, M.D. Department of Psychiatry University of New Mexico School of Medicine 2400 Tucker NE Albuquerque, NM 87131	277-4763	Associate Professor (Secondary appointment)
Carolina Yahne, Ph.D. 791 Encino Pl. NE B-10 Albuquerque, NM 87102	242-6705	Clinical Associate

APPENDIX K

DEPARTMENT OF PSYCHOLOGY COLLOQUIA
AY 1994 - 1995

Colloquium Presented By	Colloquium Title
Dr. Jerome R. Busemeyer Professor of Psychology Purdue University	"Extrapolation: The Sine Qua Non of Abstraction" October 3, 1994
Jeffrey D. Lewine, Ph.D. MSI Facility, VAMC Department of Radiology	"Clinical Magnetoencephalography in Multimodal Imaging" October 7, 1994
Dr. James L. McClelland Professor of Psychology Carnegie Mellon University	• Eighth Annual Quad-L Lecture • "Why There are Complementary Learning Systems in the Brain: Insights for the Successes and Failures of Connectionist Models of Learning and Memory" November 4, 1994
Johannes Engelkamp, Ph.D. Professor of Psychology University of Saarlandes	"Memory for Performed and for Intended Actions" November 15, 1994
Bruce L. McNaughton, Ph.D. Professor ARL Division of Neural Systems, Memory and Aging University of Arizona	"Ensemble Recording from Hippocampal Neurons: Sleep & Memory" December 9, 1994
Dr. Derek van der Kooy Professor of Anatomy University of Toronto	"Making a New Brain: A New Clinical Frontier" January 19, 1995
Nancy Docherty, Ph.D. Department of Psychiatry Yale University	"Affective Reactivity of Language in Schizophrenic Patients and Their Parents" February 14, 1995
Eric F. Wagner, Ph.D. Brown University	"Coping-Based Models of Adolescent Substance Abuse" February 16, 1995

1039

Colloquium Presented By	Colloquium Title
Robert Egly, Ph.D. University of California-Davis	"Cortical Substrates of of Space- and Object-Based Covert Orienting" February 22, 1995
Jack J. Blanchard, Ph.D. Medical College of Pennsylvania at the Eastern Pennsylvania Psychiatric Institute Philadelphia, PA	"Hedonic Capacity: Implications for Understanding Schizophrenia" March 2, 1995
Raymond P. Kesner, Ph.D. Professor Department of Psychology University of Utah	"Neurobiology of an Attribute Model of Memory: Role of the Hippocampus in Animals and Humans" March 3, 1995
Barbara Knowlton, Ph.D. Department of Psychiatry University of California-San Diego	"Category Learning in Amnesia" March 6, 1995
Bryan Kolb, Ph.D. Professor of Psychology University of Lethbridge Lethbridge, Alberta, Canada	"Developmental Neuroplasticity: Behavioral Recovery from Brain Damage Sustained Early in Life" April 21, 1995
David Hovda, Ph.D. Associate Professor of Surgery & Anatomy Director of Research Division of Neurosurgery UCLA	"What is a Psychologist Doing in Neurosurgery?" May 12, 1995
Mary R. Wood, Ph.D. Associate Professor of Psychology St. Mary's College Notre Dame, IN	"The Role of Emotion in Autobiographical Memory: A Preliminary Analysis"
Dr. Bernard Guerin Social Psychologist The University of Waikato New Zealand	"Social Factors and Language" June 16, 1995

COLLOQUIA COSPONSORED BY CASAA

Colloquium Presented By	Colloquium Title
M. Jean Gilbert, Ph.D. Senior Researcher, Cultural Diversity Specialist Kaiser Permanente, Southern California Region, Pasadena, California	"Alcohol, Acculturation and Access: Findings on Alcohol Use in a Sample of Latinas in Los Angeles" July 28, 1994
Harvey Skinner, Ph.D. Professor and Chair Behavioural Science Faculty of Medicine University of Toronto	"Hide and Seek: Intervening with Alcohol Problems in Primary Care Settings" October 13, 1994
Matthew R. Sanders, Ph.D. Director, Behaviour Research and Therapy Centre Department of Psychiatry University of Queensland, Australia	"Advances in Behavioral Family Interventions" November 16, 1994
Danaiel D. Savage, Ph.D. Professor of Pharmacology Preclinical Research Coordinator CASAA Research Division University of New Mexico	"Impact of Moderate Alcohol Consumption During Pregnancy on Learning and and Memory in Offspring" January 10, 1995
Stephen T. Higgins, Ph.D. University of Vermont	"Outpatient Behavioral Treatment for Cocaine Dependence" March 10, 1995
Melanie E. Bennett, Ph.D. Medical College of Pennsylvania at the Eastern Pennsylvania Psychiatric Institute Philadelphia, PA	"Identifying and Treating Young Adult Substance Abusers" March 17, 1995
Avram Goldstein, M. D. Professor Emeritus of Pharmacology Stanford University Palo Alto, CA	"Albuquerque Heroin Addicts 23 Years Later: A Follow-up Study" April 6, 1995
Harold Holder, Ph.D. Prevention Research Center Berkeley, CA	"The Relationship of Alcohol Availability, Drinking, and Alcohol-Involved Problems" April 19, 1995

1040

APPENDIX L

ANNUAL REPORT

DEPARTMENT OF PSYCHOLOGY CLINIC

1994-95

The Department of Psychology Clinic continues to be a valuable and challenging part of the psychology department's educational environment. On the one hand, it is a fully functioning outpatient mental health clinic, providing quality therapeutic and assessment services to the Albuquerque community. At the same time, it is a training facility where graduate students in clinical psychology receive practical experience in this area. The challenge is to keep both missions functioning at a high level of excellence; neither training nor services can be seen as secondary if the clinic is to fulfill its function.

The nature of the challenge may be seen in the fact that the clinic's approximately 1360 student-clinicians' therapy hours plus intakes and assessment are the equivalent of a reasonable work load for a clinic with three full-time staff. Here, however, these services are provided by 52 clinicians (with different responsibilities, depending on their place in the program). All of them must follow normal standards of practice. The reason this is possible is the academic preparation provided by the department's faculty, especially the clinical faculty, and the on-going supervision donated by supervisors from the professional community. Each student-clinician, carrying a caseload of two or more cases, receives at least one hour of face-to-face supervision per week, usually individually and sometimes in small groups. Because of bright and responsible graduate students, competent educational preparation, and dedicated faculty and outside supervisors, the clinic is a place where both of its missions can be carried out without contradiction.

Services

Individual adult therapy remains the primary service of the clinic, with a client population that is varied in terms of age, ethnicity, employment status, education, and presenting problems. Generally, the severity of referral issues is from mild to moderate. There is a frequent misperception that we serve primarily a university population, but our referrals from other agencies and practioners, the court, and self-referrals provide a cross-section of the community. Because of a sliding fee scale ($10 to $60 per hour), we do have a selection factor toward low-

income individuals, but even this is not universal. Increasingly over the past four years, the clinic has had more involvement in family, child, and couples therapy. This has been due to the influences of Jane Smith and Holly Waldron, who have increased the number of students who are knowledgeable in family dynamics and treatment; of Britton Ruebush, as more students have been involved in classwork and practica at the Albuquerque Family and Child Guidance Center; and of Dan Matthews, with his background in child and family practice particularly in the area of divorce.

The closing of outpatient therapy services by the New Mexico Hospital Mental Health Center in 1990 produced an apparently permanent waiting list of referrals, changing our intake procedures and, to some extent, affecting our services. Since we cannot serve all those desiring therapy with us (and it is not our specific mission to do so) we have tried to maintain our previous commitment to long-term therapy as a valuable service and training modality. Larger numbers can be served with group treatment, and group experience is likewise valuable to our student clinicians. This year, group therapy was provided by Jim Story and Luci Hackbert under Michael Dougher's supervision.

The contract with the Metropolitan Court Probation Department for dispositional assessments was carried out this year by Jim Story with assistance late in the fiscal year from Rick Perkins and Anner Eliot under Dan Matthews' supervision. Six of our student clinicians, Ann Waldorf, Rick Perkins, Tracy Simpson, Jim Story, Anner Eliot, and Susanna Chang have begun the fourth year in the assessment and group or individual treatment of couples who have been involved in domestic violence incidents. A project of the Family Court Clinic, this effort has been supervised by Lou Kodituwakku, Ph.D. (a UNM psychology department graduate), Paula Brown, M.A. and Beth Roth, M.A. of the Court Clinic and Dan Matthews. In the coming year, Bob Thoma and Lorraine Torres will replace Jim and Susanna on this project.

Personnel

The staff of the clinic consists of Dan Matthews, director (since fall 1988); Wanda Sharts, office manager (who moved from the department in June 1991); Yvette Obregon, work-study student; and Jim Story, evaluator for the Metropolitan Court Probation Division.

Wanda's reorganization of the clinic continues to provide a steady foundation for our work here. She has provided not only an increase in the efficient operation of the clinic, but also a calm and quieting presence that facilitates all our efforts in a sometimes stressful work environment.

Jim has strong assessment and writing skills, and he received more than the usual number of referrals from metropolitan

probation officers. He was able to significantly assist Dr. Matthews in the evaluation of UNM Campus Police applicants in another small contract we fulfill. Rick Perkins and Anner Eliot will work together to fulfill these functions in the coming year.

I, Dan Matthews, am close to completing my seventh year as clinic director. I continue to enjoy the interviewing and case formulation practica for first year students, and group as well as individual supervision of student clinicians. For the second time, I am meeting with second-year students an hour per week to discuss general issues of therapy. I am increasingly involved in work with other agencies through contracts such as those with metropolitan probation and the Court Clinic. With Governor Johnson's desire to change the licensing system for psychologists, my role as legislative chair for the New Mexico Psychological Association includes ongoing demands for time and effort.

This is the time each year that we experience the loss of our "senior staff"--those who have graduated or are leaving for internship. Jim Story, Anne Hahn-Smith, Natasha Jaderlund and Loren Aubrey have left for internships in settings that were top choices for them. Ann Hammond, a Fielding Institute student who provided therapy for several clients this year has also gone to a desirable internship placement. Although he is not clinical, James Grice was a frequent presence at the clinic as well. Their work in the clinic and contact in conversation and supervision will be missed.

Finally, the quality of our services depends critically on the efforts of our clinical faculty and adjunct faculty who supervise cases and support the knowledge, professional development and personal growth of the student therapists. These individuals deserve special thanks (they are listed elsewhere in this report, and need not be individually named here).

Finances

Although our contracts have been fewer this year and our fees per hour lower, we have maintained a positive balance financially, even after expenditures for testing materials and improvements of the building and equipment.

Physical Setting

Owing to the remodelling when the clinic moved to its present location over ten years ago, plus the furniture and fittings provided by American Furniture, the clinic is a comfortable and pleasing environment for clinicians, clients, and staff. Five pleasant therapy rooms are available, and there is office/work space for the students, the staff assistant, and the clinic

director. We find times that all therapy rooms are in use, but expansion is not in the works at the present time.

Due to the efforts and grant support of Holly Waldron and Bill Miller, we have improved our observation and videotaping capabilities this year. Dr. Waldron conducted family therapy research at the clinic this past year, but has moved her research setting this summer. Her grant, however, funded the construction of an observation room and camera settings which will allow for permanent use of that room in a fuller way. Dr. Miller included video equipment in a recent grant on supervisor training in alcohol and substance abuse, allowing us to continue two-camera, split-screen videotaping in Room 107. It is our intent to permanently leave a fifth room clear of video equipment for those therapists and supervisors who adhere to the notion that recording is an intrusion on the therapeutic space.

Research

Almost continuously over the past three years, students and faculty are using the clinic facilities for their research. Dr. Waldron's family therapy research has utilized clinic rooms and also enhanced our space, as mentioned above. We plan in this coming year to set up a system of data collection that will allow analysis of outcomes for clinic cases.

These current and projected research efforts add to the contribution of the clinic to the community and to the body of clinical research. Continuation of such work in this setting is greatly encouraged and appreciated.

Summary

As the year ends and begins, Jane Smith has completed over two years as Associate Chair for Clinical Training, and Michael Dougher one year as Chair. Dr. Dougher has been faculty director of the clinic in the past and has maintained an active involvement as therapist and supervisor in the clinic. Dr. Smith has helped the clinic by seeing clients here for many years and continuously supervising students. She has organized case conferences on a regular basis, adding to the opportunities for students to both teach and learn. She also arranged a day-long conference on sexual issues in therapy presented by Will Scofield and Pat Boham, two of our clinical associates. These conferences have been a very successful addition to the coursework of the students. We look forward to continued interaction with and direction from Dr. Dougher, Dr. Smith, and the entire clinical committee.

The Department of Psychology Clinic continues to be a pleasant and supportive environment for providing psychological services to the Albuquerque community. It is a congenial setting to

develop the experience and skill to be a therapist and psychological evaluator. Through the efforts of faculty, student clinicians, supervisors and staff, an atmosphere is maintained that is supportive of this sometimes stressful work. It is a good place to work, learn, and grow.

Prepared by

Dan Matthews, Ph.D., Clinic Director
and his assistant, Wanda Sharts

APPENDIX M

SUPPORT STAFF

DEPARTMENT OF PSYCHOLOGY
1994 - 1995

ADMINISTRATIVE SUPPORT STAFF

Department Administrator, III: Robyn Santillanes, MPA
Assists the Department Chair; administers all personnel and budgetary decisions necessary to execute University policies and policies set by the Department Chair and faculty; has fiscal responsibility for all budgetary activities in the Department; assists in hiring and supervision of all staff, students, and technical personnel; coordinates with various University administrators on a variety of complex matters, including faculty contracts, student financial aid, staff compensation, and other matters; drafts policies, procedures, correspondence for the Chair; takes minutes at faculty meetings.

Administrative Assistant: Candace Blashak
Works in support of Department Chair. Responsibilities include front office management, supervision and hiring of office clerical and student employees, responsible for building key security, preparation of a variety of administrative and instructional documents, faculty recruitment, tenure & promotion files, coordination of the department convocation activities, departmental receptions, and other special events.

Program Specialist II: Lois Kennedy
Serves as department's graduate admissions coordinator; primary liaison with public and prospective graduate and undergraduate students; responsible for administering student degree checks, counsels and advises graduate and undergraduate students in Psychology program regarding policies, requirements, academic standing, and related matters; maintains all graduate student files and records; coordinates comprehensive examinations and thesis and dissertation defenses; interfaces with Graduate Studies Office in policy areas; coordinates with Scheduling Office, Continuing Education Office, regarding department class schedules; assists top administration with hiring part-time faculty; is official liaison between department and visiting faculty; coordinates with Graduate Studies Office, College of Arts and Sciences, Curriculum Change Committee, and Office of Scheduling regarding revisions for University catalogs; prepares reports for outside agencies such as the American Psychology Association as requested. Performs other duties as requested by the department chair.

Editorial Assistant II: Nancy M. Shea
Edits and word processes complex manuscripts and grant proposals; provides word processing for department faculty; prepares department annual report; writes and edits department quarterly newsletter; prepares information for "Faculty Publications and Creative Works"; serves as department representative for the United Way drive; is a bookholder with back-up duties for department administrator and is a paymaster.

Staff Assistant: Terri Nicholson
Represents the department as first point of public contact; directs telephone callers and foot traffic as appropriate; has responsibility for maintaining supplies inventory, security of classroom equipment inventory, and maintenance of office copier; backup for Prgram Speiclist II, backup for Editorial Assistant for typing of syllabi, exams and correspondence; maintains department classroom schedule, and supervises two student employees.

Project Coordinator for Grants: DeeAnn Quintana
Coordinates all phases of extramural funding requests; examines all proposals for accuracy; trains and supervises project personnel; monitors and reports on direct and indirect costs associated with research grants; department liaison to the Office of Research Administration and Contract and Grant Accounting.

RESEARCH SUPPORT STAFF:

Shop Supervisor II: Patrick Sharp
Supports faculty, staff and graduate students with computer needs; responsible for electronic design, fabrication, troubleshooting, installation, computer upgrades, consulting, repair, and preventive maintenance for a vast assortment of electronic equipment; fabricates wood and metal products using a variety of equipment; responsible for annual department equipment inventory; advises Chair and department faculty regarding purchase, installation and maintenance of electronic equipment.

Laboratory Animal Technician IV: Ector Estrada
Supervises the daily operations of the Psychology Department's animal colony, including animal husbandry and environmental control; functional supervisory responsibility for the other Animal Technician IV and two student employees; works with department's veterinarian in treatment of laboratory animals and in monitoring compliance with the Animal Welfare Act; works under general supervision of Department Chair, Veterinarian, and Chair of Animal Care and Use Committee.

Laboratory Animal Technician IV: Gilbert Borunda
Under limited supervision, maintains and breeds laboratory animals and functions as a section leader of student assistants; primarily responsible for daily care and preparation for surgery of laboratory animals; assists department veterinarian in all animal treatment; back-up for senior Laboratory Animal Technician IV.

Laboratory Animal Technician V: DeLaine King
Reports directly to the main campus veterinarian; implements histological processing of neural tissue; photographs neural tissue; performs neurosurgical procedures on rats; administers anesthesia; provides for routine care and postoperative maintenance of rats; conducts behavior testing, research, and retraining of rats; analyzes data and records experimental research and data tabulation; directs and trains graduate students in laboratory techniques; prepares chemical solutions; maintains chemical and supply inventories; helps maintain and repair equipment as needed.

Veterinarian: Michael Richard, DVM (and Adjunct Assistant Professor of Psychology and Biology)
Provides preventive, acute and on-call medical treatment to a variety of departmental laboaratory animals; provides professional management of animal research facility and monitors compliance with the Animal Welfare Act; provides relevant instruction to faculty, graduate and undergraduate students concerning care and treatment of laboratory animals; reports to Department Chair and Chair of Animal Use and Care Committee.

PSYCHOLOGY CLINIC SUPPORT STAFF:

Clinic Director: Daniel Matthews, Ph.D.
Has overall administrative and fiscal responsibility for the Clinic and executes Clinic policies as set by the Department faculty; reports to the Department Chair through the Associate Chair for Clinical Training. Duties include triage of referrals to the Clinic, supervision of doctoral students, report writing, community relations and some direct clinical services, including assessment.

Staff Assistant: Wanda Sharts
Works under general supervision and in support of Psychology Clinic Director, Psychology Department Chair, and Academic Support Aide. Assists in the formulation of Clinic policies and procedures; performs a wide variety of duties in the areas of budget, personnel, payroll, and related matters, and performs administrative work at the paraprofessional level; supervises student employee.

1048

APPENDIX N

NEW POLICIES ADOPTED BY FACULTY (Part 1)

AMENDMENT TO POLICY ON REQUIREMENTS FOR GRADUATE STUDENTS
Adopted September 16, 1994

1. The defense of the master's thesis has been moved to the end of the first semester of the third year. This replaces the current policy which requires the defense of the master's thesis at the end of the second year.

2. The deadline for the comprehensive exam will be the first semester of the fourth year. This replaces the current policy which requires the comprehensive exam at the end of the third year.

APPENDIX N

NEW POLICIES ADOPTED BY FACULTY (Part 2)

POLICY ON TENURE AND PROMOTION COMMITTEE
Adopted September 23, 1994

The purpose of establishing a tenure and promotion committee is to have a mechanism in place to collect the best information available regarding candidates for tenure and promotion and to have the best unconstrained discussion possible.

The committee will consist of two faculty: the first will be elected by the area, but need not be confined to the area; the second member will be selected by the chair after consultation with the committee and the candidate. The candidate will have the option of disclosing to the chair, in confidence, any faculty with whom he or she is in conflict and therefore wishes to have excluded from the committee. The charge to this committee will be to collect as much information as possible to present to the faculty. Students will be invited to write signed statements, which will be kept confidential, if they so choose.

APPENDIX N

NEW POLICIES ADOPTED BY FACULTY (Part 3)

POLICY ON MENTORING PRIVILEGES FOR AFFILIATE FACULTY
Adopted October 28, 1994

A decision to make an appointment in the categories: 1) research professorship or 2) secondary appointment for tenure-track faculty from other departments, if the appointment includes mentoring graduate students, shall be made in accordance with the following procedures:

1. The relevant area will review the candidate's curriculum vitae, reprints, and at least two letters of reference. The area will make a recommendation to the Policy and Planning Committee, which will then bring it to the full faculty.

2. At the invitation of the faculty the candidate will present a departmental colloquium and will participate in an interview with the faculty.

3. The candidate will teach at least one course with evaluations.

4. The Policy and Planning Committee will make a recommendation to the voting faculty concerning an appointment.

5. A majority vote of psychology faculty will be required.

6. The appointment will be renewed annually based upon fulfilling expectations.

7. Affirmative action committee assent is required for research professorships.

Rights

1. Normally there will be a four-year cycle of admission of one student, and not more than two students should be working under the supervision of the affiliate. In cases of low student recruitment this could be adjusted by recommendation of the Admissions Committee to the Planning and Policy Committee. The affiliate will be listed in departmental recruitment brochures.

2. Non-voting at department faculty meetings, but expected to attend and participate. No participation in salary, tenure or promotion committees.

NEW POLICIES ADOPTED BY FACULTY (Part 3) (continued)

3. Excepting the above-mentioned cases, committee service as a member will be expected. May cochair thesis and dissertation committees with a regular faculty member.

4. Teaching expectations: Graduate research problem hours.

APPENDIX N

NEW POLICIES ADOPTED BY FACULTY (Part 4)

POLICY ON UNDERGRADUATE LAB REQUIREMENT
Adopted November 18, 1994

Although an upper-division lab is still required for B.S. majors, it is no longer required for B.A. majors. The number of credit hours required for the B.A. major, however, remains the same at 33. To achieve the requirement, the student will have the option of taking nine lecture courses above Psych 200 instead of eight, and an upper division lab.

APPENDIX N

NEW POLICIES ADOPTED BY FACULTY (Part 5)

CHANGES IN COGNITIVE COURSES AND REQUIREMENTS
Adopted January 27, 1995

Cognitive Area Majors:

Students will be expected to complete 15 credit hours in cognitive, including two graduate core courses and three electives. The core courses will follow a lecture format with exams.

These two core courses will replace the three seminars (Psych 563, Psych 568, or Psych 564 [Bill Gordon's 650 class]) that were required in the past. By going to the lecture format it is believed that the basic material can be covered more efficiently.

Students who are currently in the program may use the previously required seminars they have taken to meet the above requirements. For example, if a student has taken Psych 568 and Psych 563 she/he will not be required to take the new courses. However, beginning fall 1995, if only one of the previously required seminars has been taken, the student will be required to take one of the new courses.

Cognitive Minor:

The minor will continue to require nine hours. Beginning fall 1995, students will be required to take their choice of one of the core courses as well as two electives.

Cognitive Science Minor:

The minor remains unchanged. Students are required to take 15 hours, selecting from committee-approved courses in computer science, linguistics, neuroscience, philosophy, and quantitative.

APPENDIX N

NEW POLICIES ADOPTED BY FACULTY (Part 6)

CHANGES IN COGNITIVE COURSES AND REQUIREMENTS
Adopted January 27, 1995

The name of the psychobiology area is changed to behavioral neuroscience. This name better describes the nature of the area.

APPENDIX N

NEW POLICIES ADOPTED BY FACULTY (Part 7)

CHANGES IN COGNITIVE COURSES AND REQUIREMENTS
Adopted March 3, 1995

A Teaching Effectiveness Committee of four members was formed for the following three-fold purpose:

1. To make recommendations to improve peer review of the teaching process, the purpose of which process is for the development of better teaching skills.

2. To set the criteria for a new yearly department teaching award. Alumni will be contacted to glean their impressions of psychology faculty as teachers.

3. ICES procedures will be examined to determine whether changes should be made in the questions being asked of students on the ICES forms.

APPENDIX N

NEW POLICIES ADOPTED BY FACULTY (Part 8)

DETERMINATION OF FACULTY PRODUCTIVITY FOR USE BY SALARY COMMITTEE
Adopted March 3, 1995 on a two-year trial basis

Minimal productivity for use by the Salary Committee will be determined in three separate areas: research, teaching, and service. The level of productivity in each area will be determined as presented in the following narrative.

Research Productivity: The name of the game here is making a contribution to the field. Having work published in peer-reviewed journals is certainly a contribution to the literature, but books, chapters and edited volumes also make a contribution. It is important not to confuse productivity with effort, merit, or value. It may, for example, take ten times the effort to get a grant funded than it does to get a paper published in a journal. And, the quality of work in a grant proposal or technical report may be greater than that in a journal article. Nevertheless, the issue here is making a contribution to the field, and the way to do that is by having our work published. So the definition of research productivity is restricted to published work. Although other research efforts are valued they will not count toward the present definition of minimal productivity.

Having defined the kind of work that counts toward productivity, the next issue is quantity, which is agreed to be two refereed publications or one authored book in a three-year period. Edited volumes and chapters may count toward this requirement if the salary committee deems it appropriate. Junior faculty will not be held accountable to this standard until they have been in the department for at least three years. After that, they are included.

If a faculty member fails to meet this minimal criterion, he or she may take one of two options. They may submit to the chair an outline for how they intend to increase their productivity over the next year and if, in consultation with the Policy and Planning Committee, the proposal is approved, the faculty member would have a year to meet the criterion. The other option is for the faculty member to opt to teach three courses per semester, in which case the faculty member would not be held to the research requirement and the salary committee would not give them a rating for research productivity for purposes of merit determination. Instead, only their teaching and service would be rated. The option to teach three courses is available only to tenured faculty; untenured faculty do not have this option.

Teaching: Faculty who meet the minimal research requirement would be required to teach two courses per semester. Faculty holding extraordinary service burdens (e.g., journal editing, chairing a particularly

time-consuming committee) may negotiate with the chair for a reduction in the teaching load.

Service: All faculty are expected to participate in general department functions (e.g., faculty meetings, area meetings, convocation, activities involved
in hiring candidates, etc.) and to participate in departmental committees. Senior faculty are expected to take a more active role in departmental governance (e.g., be willing to stand for election as area head or appointment as an associate chair, etc.)

APPENDIX N

NEW POLICIES ADOPTED BY FACULTY (Part 9)

DETERMINING FACULTY SALARY INCREASES
Adopted March 3, 1995 on a two-year trial basis

Salary increases will be determined on a 100 percent merit basis. Basic merit is defined as meeting the definition of minimal productivity as described in Appendix N, Part 8. Regardless of how one chooses to satisfy the minimal requirements, all who do so will receive an equal percentage of the basic merit pool. Those who do not meet the minimal requirements will not be eligible for a portion of this pool, and their raises will be determined by the chair in consultation with the salary committee.

The basic merit pool will consist of 80 percent of the salary money given to the department. This percentage is used because this amount minimizes the extent to which those at the low end of the merit scale fall behind inflation in those years where raise monies are meager, while always allowing for some money to be allocated to those who are high in the merit scale. The remaining 20 percent will be split into two equal pools, one going to extra merit and the other to compaction. Merit will be determined as it has been in the past; that is, a salary committee (to be elected by the faculty) will rank the faculty on the basis of their research, teaching and service. The basis of the rating system will be as it has been in the past, and will be made known to the faculty. Here all research, teaching and service activities will be counted. The extra merit money will then be distributed in proportion to the Salary Committee's ratings. Compaction will be determined by comparing an individual's salary to the national average for year in rank at the quartile determined by the salary committee. The compaction pool will then be distributed in proportion to degree of compaction.

College of Arts and Sciences

Department of Sociology

July 1, 1994 - June 30, 1995

Gary LaFree, Chair

I am pleased to submit this report covering my fourth year as department chair. The front office was characterized by stability this fiscal year. Emily Griffith continued as Administrative Assistant, Rose Muller as Staff Assistant, and Karen Majors as CSV.

The 1994/95 academic year witnessed several important developments with respect to our faculty. Most notably, Associate Professors Beverly Burris, Susan Tiano and Bert Useem were all promoted to Full Professor this year. In addition, Professor Miguel Korzeniewicz successfully completed his code-three review. The Department was also able to add a new faculty member this academic year, Professor Richard Wood from the University of California at Berkeley.

Among the achievements and accomplishments of the Sociology Department in 1994/1995, there are several of which we are especially proud:

- Initiated a new national recruitment campaign for our graduate program including the development of new brochures, posters and advertising on the world-wide web.

- Completed an exhaustive self-study of our graduate program, including data on every

graduate student who entered the program since 1975.

- Substantially increased the number of graduate students funded either entirely or partially from extramural research funds.

- Initiated a new undergraduate honors program that features junior- and senior-level seminars.

- Initiated a new graduate-level course to prepare graduate students for teaching assignments.

- Increased the graduate-level methods and statistics requirements to a total of four.

- Developed a departmental mission statement.

- Published the second annual Sociology Graduate Student Working Papers Series.

- Published the fourth annual Sociology Department Newsletter and distributed to all alumni.

A. Significant Achievements

To open Fall 1994 semester, the Department and the Sociology Graduate Student Association sponsored a reception on September 2 in the Department Commons for new graduate students. The Department faculty also scheduled a half-day retreat at the Institute for Social Research (ISR) on September 9, 1994. The main purpose of the retreat was to prepare for the upcoming fall review of the graduate program. The retreat began with a faculty tour of the new facilities at 2808 Central SE by Robert Fiala, ISR Director. A monthly faculty meeting was conducted by the Chair and a catered lunch from the Student Union Catering Services was held in the mid-afternoon. The afternoon was spent preparing for the graduate review team visit. The faculty and Sociology Graduate Student Association (SGSA) representative broke into small groups to discuss strengths and weaknesses of the graduate program.

The Graduate Unit Review of the Department of Sociology was a major departmental event this year. This was the first review since 1983. The graduate review team included Professor Bill D'Antonio, George Washington University; Professor Joan Moore, University of Wisconsin - Milwaukee; Professor Everett Rogers, University of New Mexico; and Professor Jim Short, Washington State University. The team members conducted their work in the Department during the week of September 21-24, 1994. The full agenda included visits with the Department Chair (Gary LaFree), members of the Graduate Committee, representatives from the ISR and the Society for the Advancement of Socio-Economics (SASE), members of the SGSA, Criminology/Sociology of Law Task Force members, Comparative Southwest Task Force members, Research Methods and Statistics Task Force members, the Director (Gil Merkx) and

representatives from the Latin American Institute (LAI), the Director (Nelson Valdes) and representatives from the Latin American Database (LADB), and the Director (Phil May) and representatives from the Center on Alcohol, Substance Abuse and Addictions (CASAA).

The review team's conclusions were summarized in thirteen specific recommendations. After receiving the report, the Sociology Department set out immediately to respond to the specific suggestions. Our response to ten of the recommendations was presented to the Senate Graduate Committee in a December 1994 report. The remaining three recommendations were discussed extensively at the Department's Fall 1995 retreat. The Executive Committee is now formulating a set of policy changes to present to the faculty that will be responsive to the final three review team suggestions.

The visit by the review team culminated in a report presented to the Provost and a follow-up discussion in the Springer Conference Room at the Office of Graduate Studies (OGS) with participation from the Dean of Graduate Studies (Ellen Goldberg), the Dean of Arts and Sciences (Bill Gordon), the Chair of the Senate Graduate Committee (Virginia Seiser), the Chair of Sociology (Gary LaFree), and the Graduate Committee Chair (Robert Fiala).

The Department with cooperation from the Centro de Investigaciones Penales y Criminológicas (CENIPEC), University of the Andes, Merida, Venezuela offered a summer session on "Crime and Justice in the Americas" (Soc 418/519) during the second session of summer classes. The

course was co-instructed by Gary LaFree, Christopher Birkbeck and Luis Geraldo Gaboldon in both English and Spanish. The course included ten New Mexican and ten Venezuelan students. The Department is considering similar summer seminars in the future.

The Sociology Convocation was held in the Student Union Ballroom on Saturday, May 14th at 3:00 p.m. A total of 169 graduates were awarded diplomas by Sociology with the following substantive breakdown: 68 Sociology majors, 91 Criminology majors, 10 Criminal Justice majors. An estimated 700 persons were in attendance including family and friends. The Department heard the presentation "Facing the Future," from District Judge Diane Dal Santos, who also received the 1995 Sociology distinguished alumni award. The Department also awarded honors certificates to the two students in each major with the highest overall GPAs. Masters degrees were awarded to Rebel Aitchison, Jude Cisneros, Marie Clevenger, Carlotta Klimas, Karen McGruder, Cliff McNary, Wayne Pitts, and Lisa Weber. Karren Baird-Olson received a Ph.D.

List of Faculty Publications, Research, Committee Participation

Tomas Atencio

Research:

1994 - presentation: "Mainstream Hispanic Protestantism." Perkins School of Theology, Southern Methodist University.

Recent Publications:

"The Politics of Tourism in New Mexico." Chicano Politics in the 90s. David Montejano, editor. University of New Mexico Press, Albuquerque, in press.

University Committees:

1994 Department representative to College Minority initiative. Steered the revision of Department Honors Program; 1989-present, Undergraduate Committee, Sociology.

Community Organizations and volunteer work:

1994 - Initiator and Coordinator of Rio Grande Institute's Resolana Learning Centers and Resolana Electronica, linked with UNM College of Education, SalsaNet.

Beverly Burris

Recent Publications:

"Technocracy, Patriarchy, and Management," forthcoming in Management and Men (D. Collinson and J. Hearn, eds.). Newbury Park, CA: Sage Publications.

"Braverman, Taylorism, and Technocracy," forthcoming in Labor and Capital in the Late Twentieth Century (M. Wardell, P. Meiksens and T. Steiger, eds.). Albany, New York: SUNY Press.

University Committees:

1995 - Director of Graduate Studies, UNM Sociology Department

Conference Activities:

"Braverman, Taylorism, and Technocracy." Paper presented at the 1994 Society for the Study of Social Problems meeting, Los Angeles, California, August 5, 1994.

"Technocracy and the Future of Work." Invited paper presented at the 1994 American Sociological Association meeting, Los Angeles, California, August 7, 1994.

Richard Coughlin

Recent Publications:

Edited Books:

In the Eye of the Beholder: Opinions on Welfare and Justice in

Comparative Perspective (Stockholm: Bank of Sweden Tercentenary Foundation, in press). With Stefan Svallfors.

Book reviews:

Contemporary Sociology 24 (1994).

Honors and Awards:

Fulbright Senior Scholar Award, Sweden, 1993-94

Other Professional Activities:

Program Committee, Pacific Sociological Association, 1994-95.
Program Committee, Society for the Advancement of Socio-Economics, 1993-94
Executive Director, Society for the Advancement of Socio-Economics, 1993-Present
Executive Council, Society for the Advancement of Socio-Economics, 1992-95
Senior Member, Executive Committee, Department of Sociology, University of New Mexico, 1991-94

University Committees:

Co-Chair, Computer Use Committee, University of New Mexico, 1991-93; Committee member, 1985-88; 1990-94
Computer Information and Policy Board, University of New Mexico, 1991-94
Co-editor, Journal of Socio-Economics, 1993-Present
Faculty Senator, University of New Mexico, 1982-84, 1992-94

Robert Fiala

University Committees:

Graduate Adviser, 1989-1995

Director, Institute for Social Research, University of New Mexico, 1993-Present

Recent Publications:

Under Revision (1995) "Maquila Employment and Fertility in Northern Mexico: A Study of Productive and Reproductive Relations." Social Forces. With Susan Tiano.

Work in Progress:

"Higher Education and Professional Employment: A Study of the Institutional Effects of Education." Drafts presented at professional meetings. Near completion.

Book length study: "The Dynamics of Labor Force Structure in the International System." This work would bring together and extend ongoing research. Cornell University Press and International Labor Relations Press have asked if I would be interested in doing the book.

Westview Press (book on Multinational Corporations)

Other Professional Activities:

Organizer and Presider of Session on Comparative Political Sociology, and Violence and States in the Modern World. Annual Meeting of the Pacific Sociological Association, 1995.

Organizer and Presider of Session on Global Culture. Annual Meeting of the Pacific Sociological Association, 1994.

Phillip Gonzales

Recent Publications:

Phillip B. Gonzales. "The Ethnopolitics of Affirmative Action: The Case of the University of New Mexico." In Chicano Politics and Society in the Late Twentieth Century. Edited by David Montejano. University of Texas Press.

Review of The Hispano Homeland by Richard Nostrand in Contemporary Sociology.

More Lessons From the Hispano Homeland Debate, to Aztlan. (Submitted for publication).

Work in Progress:

Phillip B. Gonzales. "Categorical Awareness: Aspects of Identity Among a Set of Blue-Collar Spanish Americans."

Phillip B. Gonzales. "The Stock of Prejudice: Accounting for Spontaneous Ethnic Protest."

"The History of Hispanic Mobilization in New Mexico." American Sociological Association Annual Meeting. Los Angeles, California. September 1994.

Jane Hood

Recent Publications:

Jane C. Hood and Patsy L. Duphorne, "To Report or Not to Report: Nurses' Attitudes Towards Reporting Co-workers Suspected of Substance Abuse," accepted for special issue of The Journal of Drug Issues, Paul Steele and Harry Trice, (eds). (Expected publication date: April, 1995).

Presentations:

"Bending the Rules: Nurses Strategies for Dealing with Workplace Substance Abuse," refereed roundtable session, American Sociological Association meetings (Washington, D.C., August 19, 1995).

Organizer and presider: Session on Sociology of Work, Pacific Sociology Association meetings (San Francisco, CA, April 7, 1995).

Work in Progress:

Review of Young Unwed Fathers, edited by R. Lerman and Theodora Ooms. Contemporary Sociology.

Perspectives on Gender, an edited anthology for teaching sociology of gender, under contract with Wadsworth Publishing company.

"Work and Family," a review essay to be published in the McGraw-Hill Primus series.

"The UNM library incident: An interpretive account," an account of the November library incident involving gender studies journals as Zimmerman library invited by Claire Renzetti for the first issue of Violence Against Women.

Commentary on Kathleen Gerson's, No Man's Land. Invited by Michael Kimmel for Masculinities.

Other Professional Activities:

Member, Society for Social Problems Committee on Committees 1991-94; Chair, 1992-94

(elected office).

Editorial Board Member, The Sociological Quarterly, 1994- Manuscript and proposal reviews for: Social Problems, Gender Society, American Sociological Review, Sex Roles, NSF, Journal of Marriage and the Family, Family Issues, Contemporary Ethnography, Qualitative Sociology among others.

University Committees:

Co-chair, Media Subcommittee of the Teaching Enhancement committee 1994-1995 (revamping media services for the UNM campus and developing a plan to improve instructional support services of all kinds).

Member, Academic Freedom and Tenure Committee (1994-1996)

Member, Curriculum Committee (1994-95)

Member, Graduate Committee (1993-94)

Miguel Korzeniewicz

Recent Publications:

"Commodity Chains and Global Capitalism", Edited by Gary Gereffi and Miguel Korzeniewicz. Westport, CT: Greenwood Press, 1994.

"The Political Economy of Globalization: A Response." Newsletter of the Political Economy of the World-System Section of the American Sociological Association. Spring, 1994.

Presentations:

"Uncertainty and Innovation: Emerging Agendas in the Political Economy of Latin America." Paper to be presented at the 19th Political Economy of the World System Annual Conference. Miami, Florida. April 20-22, 1995.

"Commodity Chains and the Global Athletic Footwear Industry." (co-authored with Victoria Carty) To be presented at a Political Economy of the World System Roundtable. American Sociological Association Meetings. Washington, D. C. August 19-23, 1995.

Gary LaFree

Recent Publications:

"The Effect of Changes in Income Polarization and Educational Attainment on Changes in African-American and White Crime Rates, 1957-1991." Gary LaFree and Kriss A. Drass. American Sociological Review (forthcoming).

"Race and Crime Trends in the United States, 1946-1990." Gary LaFree. Pp. 170-193 in Ethnicity, Race and Crime: Perspectives Across Time and Place, edited by Darnell F. Hawkins. New York: SUNY Press (1994).

Review Essay:

"Just Deserts or Injustice: The Controversy Over Racial Bias in Criminal Justice Processing," review essay on Race and the Jury (by Hiroshi Fukurai et al.) and Race and Sentencing (by Roger Hood). Contemporary Sociology (1994) 23:358-59.

Research:

"An Evaluation of the Albuquerque D.A.R.E. Program." Gary LaFree. City of Albuquerque. (1995) $19,000.

"Criminal Justice Statistics Analysis Center." Gary LaFree. Bureau of Justice Statistics, Department of Justice. (1994) $50,000.

Honors and Awards:

G. Paul Sylvestre Award for outstanding achievements in advancing criminal justice statistics, Bureau of Justice Statistics, 1994.

Phillip Hoke National Award for Excellence in Analysis, Justice Research Statistics Association, 1994.

Other Professional Activities:

International Outreach Committee, American Society of Criminology, 1994-1995.

Planning Committee, Justice Research Statistics Association, 1993-1994.

Governor's Task Force on Criminal Justice Records, 1993-1994.

Editorial Boards:

Criminology (1992-)

American Journal of Sociology (1993-)

Work in Progress:

"Mediation versus Adjudication in Civil Cases," (with Michele Hermann, Christine Rack and Mary Beth West); under review, Law and Society.

"Determinants of Juvenile Homicide (with Michelle Hussong and Ray Liedka).

"Sentencing and Race in New Mexico" (with Victor Larragoite and Jacqueline Bergdahl).

Presentations:

"Race, Crime and Political Protest," invited lecture at the University of Canterbury, New Zealand and the University of Melbourne, Australia, 1994.

"The Decision to Call the Police: A Comparative Study of the United States and Venezuela," (with Christopher Birkbeck and Luis Gerardo Gabaldon), presented at the eighth International Symposium on Victimology, Adelaide, Australia, 1994.

University Committees:

Chair, Department of Sociology, University of New Mexico, August 1991-present.

Patrick McNamara

Recent Publications:

"Teaching the Sociology of Religion as a Reflective Enterprise," Social Compass, 41, 3 (September, 1994), 329-338.

"Assumption, Theories and Methods in the Study of Latino Religion After 25 Years," in Anthony Stevens-Arroyo and Gilbert Cadena, eds, Old Masks, New Faces: Religion and Latino Identities. Volume II, Paral Series. New York: City University of New York Press. 1995.

Grants:

Lilly Endowment grant for the study of congregational giving, 1993-1995. Grant Funding:

$110,000.

David Arthur Rhodes

Recent Publications (Under Review):

"Decision Frames: Parental Education and Four-Year College Entry." Sociology of Education.

"The Mommy-Daddy Scholarship: The Increasing Importance of Parental Contributions to College." 1995 Annual American Sociological Association Meetings, education session.

John M. Roberts Jr.

Recent Publications:

"Predicting Similarity in New Guinea Villages from Propinquity and Language; A log-linear Approach" (with discussion). Current Anthropology (Co-authors C.B. Moore & A.A. Romney). 1994

"Fit of Some Models to Red Deer Dominance Data." Journal of Quantitative Anthropology. 4: 249-258. 1994.

Larry Ross

Honors and Awards:

Outstanding scholarship award, for Confronting Drunk Driving: Social Policy for Saving Lives. Society for the Study of Social Problems, Crime and Delinquency Division, 1994.

Grants:

U. S. Department of Transportation, research contracts, 1980, 1991-92, 1994-95.

Recent Publications:

(With Katherine Stewart and Anthony Stein), "Vehicle-Based Sanctions: An Overview," in Barry M. Sweedler (ed.) Strategies for Dealing with the Persistent Drunk Driver, Transportation Research Circular 437 (February 1995), pp. 49-51.

(with Hans Klette). "Abandonment of Mandatory Jail for Impaired Drivers in Norway and Sweden." Accident Analysis and Prevention, Vol. 27, #2 (1995), pp. 151-157.

"Causes and Consequences of Implied Consent Test Refusal." Alcohol, Drugs and Driving, Vol. 11, Issue 1 (1995).

"Sobriety Checkpoints, American Style." Journal of Criminal Justice, Vol. 22, #5 (1994), pp. 437-444.

"Abandonment of Mandatory Jail for Impaired Drivers in Norway and Sweden." Accident Analysis and Prevention, Vol. 27, #2 (1995).

"Drunk Driving," in Social Problems, published electronically by the McGraw-Hill Book Company, New York, 1994.

Other Professional Activities:

Alcohol, Drugs and Driving, Editorial Advisory Board, 1985-1995.

International Committee on Alcohol, Drugs, and Traffic Safety, 1984-1995.
Board of Directors, 1989-1995.

National Safety Council: Committee on Alcohol and Drugs, 1972-1995; Executive Committee, 1983-86; Emeritus, 1995 - .

The Prevention Researcher, Editorial Board, 1995 - .

Susan Tiano

Honors and Awards:

Regent's Lectureship Award, UNM, 1994

Recent Publications:

Patriarchy on the Line: Gender, Labor, and Ideology in the Mexican Maquiladora Industry, Temple University Press, 1994.

"Maquila Employment and Fertility in Mexicali: A Study of the Dynamics of Productive and Reproductive Relations," with Robert Fiala, under review at Social Forces.

"Fertility, Selective Recruitment, and the Maquila Labor Force." Ester Chow and Catherine Berheide (eds.) Women, the Family, and Policy: A Global Perspective. SUNY Press, 1994, pp. 209-234.

Paul Steele

Grants:

New Mexico Human Services Department, Medical Assistance Division, "Evaluation of Primary Care Network and Other Special Services." February, 1995.

State of New Mexico, Department of Corrections, "Evaluation of Adult Community Corrections Clients." February, 1995.

Office of Minority Health, "Evaluation of Minority Male Health Services: DWI Program for the Navajo Nation." July, 1994.

New Mexico Human Services Department, Medical Assistance Division, "Evaluation of Primary Care Network and Other Special Services." October, 1994.

City of Albuquerque, "Research on DWI Prevention and Elimination." October, 1994.

National Institute on Drug Abuse, "Measuring the Relationship Between Drug Abuse and Workforce Participation Through Analysis of the National Household Survey of Drug Abuse." Approved, with Gary Zarkin, Ph.D., Research Triangle Institute, July, 1994.

Navajo Nation, "Evaluation of Impaired Driving and Pedestrian Behavior Program." July, 1994.

Presentations:

Steele, P.D. and S. McMurphy, "Getting Tough on Crime? Criminal Justice Response to Youthful Offenders in New Mexico." Annual conference of the Southwestern Social Science Association, Oakland, CA April 26, 1995.

Steele, P.D. "Developments and Innovations in Child Abuse Intervention: An Outlook for New Mexico. Meeting of the New Mexico Professional Society on the Abuse of Children, Albuquerque, NM, February 6, 1995.

Steele, P.D., "Findings of a National Survey of Employee Assistance and Substance Use Testing Programs in the United States." Annual conference of the Employee Assistance Professionals Association, Boston, MA, November 20, 1994.

Steele, P.D., "Prevalence of Drug and Alcohol Testing in the U.S." Annual Conference of the American Public Health Association, Washington, D.C., October 28, 1994.

Steele, P.D., "Multidisciplinary Responses to Child Sexual Abuse: Planning and Monitoring Programs." Conference on Coordinated Responses to Child Sexual Abuse," Traverse City, MI, June 6, 1994.

Technical Reports:

Steele, P.D. and E. Gilliland, "Evaluation of the Albuquerque Gang Prevention/Intervention Program." Evaluation report for the New Mexico Children, Youth and Families Department, June, 1994.

Work in Progress:

Steele, P.D., The Problems Business: Interdependence of the Modern Anti-alcoholism Movement and the Workplace since 1935. (working title), ILR Press.

Hartwell, T., P.D. Steele, M.R. French and N.F. Rodman. "Prevalence of Drug and Alcohol Testing Programs in the United States." (being prepared for submission.)

Potter, F., K. Boyle, P. Steele, M. French and M. Rush, "Social correlates of Employee Assistance Programs in the United States." (being prepared for submission).

Steele, P.D. "Issues in the Development of Children's Advocacy Centers." (being prepared for submission).

Steele, P.D., "From Good Ideas to Implementation: The Process of Translating New Approaches to Child Abuse into Widespread Practice." (being prepared for submission).

Bert Useem

Recent publications:

Maximum Security Resolution: Strategy and Outcome of U.S. Prison Riots. Bert Useem, with George Camp and Camille Camp Book. Oxford University Press, 1994.

Work in Progress:

"Riot Control and the Los Angeles Riot of 1992."
Bert Useem.
Unpublished manuscript, 1993.

Nelson Valdes

Other Professional Activities:

Developed two computerized on-line newsletters, the Central American Update and the Latin America Debt Chronicle. Both began (electronic) publication during January 1986. Both are available via commercial database services (Newsnet and Compuserve). They are also available via Bitnet.

Signed agreement with Centro de Estudios de la Economía Mundial, a research center in Havana, to electronically reproduce and archive their economics newsletter (June 1993). The newsletter will be available as a service of the Latin America Data Base in January 1994.

Created Cuba-L listserver with over 200 world wide subscribers, June 1993-present.

Signed agreement (July 1993) with the Instituto de Investigaciones Económicas of Havana, Cuba to make available through the Latin America Data Base the materials the institution produces on the Cuban economy. The materials will be on line by June 1994.

Created Sociological Theory Bulletin Board, BESTNET, January 1994.

Received $260,000 from the Agency for International Development for the Latin America Data Base (1994-1995).

B. Graduate Program

List of Graduate Publications

Huskin, Ronald M.

LaFree, Gary, Larragoite, V., and Huskin, R. Sentencing Disparity in New Mexico. (in progress).

Huskin, Ronald M. Acculturation and Substance Abuse: A Comparison of Three New Mexico Tribes. (in progress).

"Technocracy, Patriarchy, and Management in U.S. Corporations." In D. Collinson and J. Hearn

(eds.) Managements and Men (Newbury Park CA: Sage, forthcoming).

Pitts, Wayne

.Tourism in Chiapas, Mexico: Zapata Lives - Tourism Falters.. in Tourism, Crime and International Security Issues. Edited by Abe Pizam and Yoel Mansfield. London, England: Wiey & Sons, Inc., 1995.

.New Mexico Indian Gaming in the Central Rio Grande Valley: Expansion of the Tourism Economy Among Three Indian Pueblos.. (With Paul Guerin) in Tourism and the Native Peoples of North America. Edited by Alan Lew and George Van Otten. Pittsburgh, Pennsylvania: University of Pennsylvania Press, Forthcoming - 1995.

.Settings, Organizations and Consumption: A Commodity Chains Approach to the Mexican Tourism Industry.. (With Miguel Korzeniewicz) in The Political Economy of Latin American Tourism. Edited by Wayne J. Pitts. Pittsburgh, Pennsylvania: University of Pennsylvania Press, Forthcoming - 1996.

.An Evaluation of Cochiti Lake Recreation Area: Economic Development of Cochiti Pueblo. (With Paul Guerin) in Tourism and the Native Peoples of North America. Edited by Alan Lew and George Van Otten. Pittsburgh, Pennsylvania: University of Pennsylvania Press, Forthcoming - 1995.

Grey, Joanna

.White Law in Indian Country: A Historical Examination of Indian Legal Systems, adopted for use in Criminal Justice 480, Northern Arizona University Fall, 1995.

.A Safe Haven: Sheltering and Intervention for Urban Indian Youth, presented at the Pacific Sociological Association Conference San Francisco, CA, April, 1995.

Review of Social Problems: A Critical Approach 3rd Edition McGraw-Hill Publishers, December 1994.

Awarded Dissertations, Theses
Sociology Department/Summer '94/Fall '94/Spring '95

Author	Title
Rebel Aitchison, MA	"Evaluation of Self-Efficacy Model in Alcohol and Substance Abuse Prevention Program (ASAP)

	Demonstration Grant."
Paul Almeida, MA	"The Sociology of the Production and Distribution of Environmental Costs in the USA: The Case of Plastics, Incinerators and Hazardous Waste Landfills."
Sylvia Bagge, MA	"Religious Change in Nigeria and Kenya."
Karren Baird-Olson, PhD	"Reservation Violence: The Victimization of Plains Indian Women."
Marie Clevenger, MA	"The Inequality of the Biomedical Model for Defining and Treating a Behavioral Disorder: The Case of Attention Deficit Hyperactivity Disorder."
Kathryn Daily, MA	"The Relationship Between Verbal Language Abilities and Specific Criminal Characteristics of Adjudicated Adolescent Males."
Bridget Doyle, MA	"Ecological Model of Spousal Violence."
Leo Griego, MA	"Comparative Analysis of the Development of the Franciscan Order in the 13th Century to Liberation Theology in Latin America in the 20th Century."
Carlotta Klimas, MA	"Motivation for Espionage."
Karen McGruder, MA	"A Phenomenological Approach to Crime: Literature Review of Jack Katz."
Cliff McNary, MA	"Informal Justice on Trial: Alternative Dispute Resolution and its Role in Procedural, Racial and Gender Bias."
Michael Norris, MA	"From Moratorium to Multiple Execution: Two Decades of Research on the Marshall Hypothesis in Light of Recent Data."
Patrick O'Day, PhD	"Mobilization of Victimization: The Case of Black Power."
Alexis Padilla, PhD	"The Numbers Game in the Enforcement of Quantitatively Standardized Rules: The Cases of Driving While Intoxicated, Housing, and Water Pollution."

Wayne Pitts, MA	"Political Violence and Tourism: A Case Analysis of Chiapas, Mexico."
Bill Robinson, PhD	"Low-Intensity Democracy: Hegemony, Global Society, and U.S. Intervention in the New World Order."
Lisa Weber, MA	"Prejudice as a Sense of Group Position: Racial Attitudes Among Middle-Class Whites."

The graduate program in Sociology continues to expand with 23 new admissions for 1994/95. Of the 23 students admitted, 8 students have joined the program with 4 being supported during their first semester on GA/TA assistantships. The Sociology Graduate Student Association (SGSA) remained active with Past President Glori Gavia finishing her term and Shannon Morrison beginning a new term.

The third annual departmental graduate student conference was held on April 21, 1995 at 3:00 p.m. in the Sociology Commons. The conference included presentations by: Jude Cisneros, Bridget Doyle, Michelle Hussong, Carlotta Klimas, Glori Gavia and Kim Wallace.

C. Appointments

Dr. Richard Wood was hired as a full-time Assistant Professor beginning Spring 1996. Dr. Wood obtained his Ph.D. from the University of California - Berkeley. Dr. Wood will be teaching in the areas of criminology, the sociology of religion, theory and collective behavior.

Dr. Raymond Liedka was renewed as a full-time Visiting Assistant Professor in Fall 1995. Dr.

Liedka obtained his Ph.D. from Cornell University. Dr. Liedka will continue teaching sociological methods and statistics courses. This appointment fills the two-year vacancy created by Associate Professor Keiko Nakao's leave of absence to Tokyo Metropolitan University.

Dr. Robert Fiala and Dr. Beverly Burris jointly chaired the Department's Graduate Committee in 1994/95.

Dr. Susan Tiano served as Associate Chair for the Department in Fall 1994 and Spring 1995.

Dr. Robert Fiala served as Acting Chair in July 1995.

Dr. Robert Fiala served as the Director of the Institute for Social Research (ISR) for the academic year 1994/95.

Dr. Richard Coughlin served as the Executive Director for the Society for the Advancement of Socio-Economics.

Dr. Gil Merkx served as the Director of the Latin American Institute.

Dr. Nelson Valdes served as the Director of the Latin American Data Base.

Dr. Phil May served as the Director of the Center on Alcoholism, Substance Abuse and Addictions.

D. Leaves of Absence, Sabbaticals

Professor Phillip Gonzales was granted a one-year sabbatical for the Spring and Fall of 1995. During this time, Professor Gonzales plans to write a book provisionally titled, "Hispanic Ethnopolitical Consciousness, Organizing and Action in New Mexico."

Associate Professor Keiko Nakao continued her two-year leave of absence to teach in the Department of Sociology at Tokyo Metropolitan University in Japan. She is expected to return to UNM in the Fall of 1996.

Professor Larry Ross was granted a six-month sabbatical for the Fall of 1994. During his sabbatical leave, Professor Ross completed a manuscript on the enforcement of housing codes.

Professor Art St. George was granted an additional one-year leave from the Department to direct the Computing and Research section of the National Science Foundation in Washington, D.C.

Professor Nelson Valdes was granted a six-month sabbatical for the Fall of 1994 to teach two graduate-level courses at the University of Havana.

Visiting Faculty

Professor Ronald L. Breiger from Cornell University visited the Department during the summer session of 1995. Dr. Breiger worked on research with Assistant Professor John M. Roberts Jr. on network interpretations of log-linear models.

Professor Isabel Martinez Benlloch visited the Department during July and August 1995. She did a seminar presentation on the topic of "Gender Studies and the Status of Female Academics in Spain." and worked on research in the library.

E. Colloquia Series

Dr. Carol R. Sullivan, Anthropologist from the Torrance County Detention Center presented: "The Cause and Manner of Jail Suicide: New Mexico Findings," on Wednesday, November 9, 1994 in the Sociology Commons Room.

Dr. Joel Best, Sociologist from Southern Illinois University at Carbondale, presented: "Manufacturing Victims: Ideology, Institutions and the Victim Industry," on Monday, May 1, 1995 in the Sociology Commons Room.

F. Report of the Institute for Social Research

The Institute for Social Research (ISR) was reorganized under the Sociology Department on July 1, 1992. The ISR incorporated the offices, projects and personnel of the former Institute

for Criminal Justice Studies (ICJS) located in Onate Hall. The ICJS was formed in 1987 as a freestanding research center specializing in criminal justice issues and criminology. During its five year-existence, the ICJS attracted over one million dollars in grants from federal, state and local government agencies. The new ISR is an administrative division of the Department of Sociology. The ISR has broadened its mission to include basic and applied research in sociology and related disciplines.

The ISR is governed by an Executive Committee, that includes all principal investigators, the Director and a representative from the Sociology Department. In August 1992, the Executive Committee voted to create an administrative unit, overseen by the ISR Director and Staff Assistant. The administrative unit provides clerical and accounting services for projects affiliated with the ISR.

Within the ISR are three research centers. Most projects are within one of the centers, although several projects also operate autonomously within the ISR.

ISR personnel and centers in 1994/1995 were as follows:

1. ISR Director - Robert Fiala
2. Administrative Unit - Robert Wilson, Staff Assistant
3. Centers:
   a. New Mexico Statistical Analysis Center

Gary LaFree, Director

Nora Wilson, Program Specialist

Michelle Hussong, Analyst

b. Center for Applied Research & Analysis

Paul Steele, Director

Paul Guerin, Target Cities Project Director, Albuquerque Gang Intervention Project Director

Kristine Komula, Evaluation of the National Children's Advocacy Center

Pamela Koster, DWI Evaluation Project, Milagro Project

Lisa Weber, Navajo/Hopi DUI Program, NM Medicaid Evaluation Project

Wayne Pitts, Adult Community Corrections Evaluation Project, Juvenile Community Corrections Evaluation Project

Mary Forbes, The Los Pasos Project

c. Center for Criminal Justice Studies

Peter V. DiVasto, Director

4. Research Associate, Edward Gilliland

5. Other Principle Investigators

Patrick McNamara, Congregational Giving Project

H. Laurence Ross, License Plate Revocation Project

Miguel Korzeniewicz, Economic Growth and Democratization in Latin America Project

6. Sociology Department Representative on Executive Committee

Susan Tiano

7. Research Assistants

As of October 1994, ISR employed 16 graduate and 18 undergraduate research assistants. Most were enrolled in programs at the Department of Sociology.

The ISR has a Criminal Justice Steering Committee composed of approximately 20 representatives from state and local agencies. The Steering Committee met on May 19, 1995 to hear reports on current research projects, and to provide suggestions for future research projects.

Notably, the Statistical Analysis Center (SAC) within the ISR won an unprecedented three national awards at the Annual Meeting of the Bureau of Justice Statistics and the Justice Research Statistics Association in Atlanta, Georgia. Dr. Gary LaFree, Director of the New Mexico SAC, received the G. Paul Sylvestre Award for Outstanding Achievement in Advancing Criminal Justice Research and the Use of Criminal Justice Statistics in the United States. "Crime in New Mexico, 1989-1991," a report published by the SAC in early 1994, won the Phillip Hoke Award for Excellence in the Statistical Management Category. "Citizens Attitudes and Perceptions: The Impact of Crime on New Mexico Communities," published by the SAC in 1993, won a second Phillip Hoke Award, this time for Excellence in the Research Policy and Analysis Category. Accompanying Dr. LaFree as Principle Investigator for the award-winning projects was Dr. Christopher Birkbeck, former Associate Professor of Sociology at UNM and

Associate Director of the SAC. Dr. Birkbeck is currently a full professor at the University of the Andes and Professor of Criminology with the Center for Investigation of Penology and Criminology in Merida, Venezuela.

Research Activity

1. New Mexico Statistical Analysis Center (SAC)

The New Mexico SAC was founded in 1988 to conduct and disseminate criminal justice research in the state. The SAC was supported in 1994/95 by a grant from the Bureau of Justice Statistics. The SAC also received grants from the Albuquerque Police Department and the New Mexico Department of Public Safety. Major SAC research projects completed during the year were:

* A statewide survey of citizen's perception of crime in their neighborhoods.
* A survey on citizen satisfaction with the Albuquerque Police Department.
* A Report on Crime and Criminal Justice in New Mexico.

2. Center for Applied Research & Analysis (CARA)(formerly YRAC)

YRAC was founded in 1990 to conduct and disseminate research on juvenile justice and human service programs, with special emphasis on project evaluation. In June 1994, the name of the Center was changed to reflect the broader scope of activity that had evolved over the past four years. CARA research projects completed and/or continued during the year include:

* Evaluation of access, delivery, outcome and costs of services in the New Mexico State Medicaid Program. [Funded by the New Mexico Human Services Department.]

* Evaluation of services provided to drug-exposed infants through the Los Pasos Project. [Funded by the Children's Bureau of the Federal Agency for Children, Youth and Families.]
* Evaluation of services provided to drug-addicted mothers and pregnant women through the Milagro Project. [Funded by the Center for Substance Abuse Prevention.]
* Evaluation of services provided to substance abusers in the Target Cities Program (Albuquerque). [Funded by the Albuquerque Human Services Department.]
* Evaluation of the Children's Safehouse of Albuquerque. [Funded by the New Mexico Children, Youth and Families Department.]
* Evaluation of the National Children's Advocacy Center (Huntsville, Alabama) National Training Program on Effective Treatment Approaches. [Funded by the National Children's Advocacy Center.]
* Evaluation of the Albuquerque Gang Intervention Project. [Funded by the New Mexico Children, Youth and Families Department]

3. Center for Criminal Justice Studies

* Determination of stress factors in the nuclear courier force. [Funded by the U.S. Department of Energy.]
* Testing and assessment of correctional officer applicants to the New Mexico Department of Corrections. [Funded by the New Mexico Department of Corrections.]
* Provision of psychological and counseling services to the Albuquerque Police

Department. [Funded by the City of Albuquerque.]

4. Other Projects

* Evaluation of the Navajo/Hopi DUI Program. [Funded by the Navajo/Hopi Land Commission.]
* Congregational Giving. This study is part of a national project funded by the Lilly Endowment to examine patterns of giving in five religious denominations. The ISR is responsible for data in three study sites in the Southwest.
* License Plate Confiscation in DWI Cases. This project is funded by the Insurance Institute for Highway Safety to examine the effectiveness of programs designed to immobilize DWI offenders by confiscating their vehicle license plate. Research began in May, 1993, in Minnesota and will also be conducted in Iowa.

DEPARTMENT OF SPANISH AND PORTUGUESE

Chair: Erlinda Gonzales-Berry
Department Administrator: Rosario Johnson

ANNUAL REPORT
JULY 1, 1994-JUNE 30, 1995

I. TEACHING FACULTY AND STAFF

A. Permanent Faculty

Spanish

Bergen, John	Professor
Bills, Garland	Professor
Cárdenas, Anthony	Professor
Gerdes, Dick	Professor
Gonzales-Berry, Erlinda	Professor
Lipski, John	Professor
Rodríguez, Alfred	Professor
Tolman, Jon	Professor
Lamadrid, Enrique	Associate Professor
Rebolledo, Tey Diana	Associate Professor
Higgins, Antony	Assistant Professor
López, Kimberle	Assistant Professor
Fernández, Rosa	Lecturer III

B. Lecturers

Buedel, Barbara
Cornejo-Patterson, Deanna
Espinosa, Hilma
Gonzales Velásquez, María Dolores
Maciel, David
Martínez, Raquel
Peña, Juan José

C. Emeritus Professors

Cobos, Ruben
Duncan, Robert
Fernández, Pelayo
González, Angel
Holzapfel, Tamara
Lopes, Albert
McCurdy, Raymond
Nason, Marshall
Ulibarrí, Sabine

D. Language Learning Center

Vigil, Neddy, Director

E. Teaching Associates

Clark, Susan
Martínez, Elizabeth
Pernía, José

F. Teaching Assistants

Ph.D.

Desachy-Godoy, Elvira
Dykstra, Joel
Fernández, Arturo
Grover, Lisa
Huer, Kyung
Jewell, Eric
Kim, Sangsuk
Ortiz, Luis
Pagel, Michael
Ramsdell, Lea
Ruiz-García, Martha
Sánchez, Josué
Shuru, Xochitl
Silesky, Jean
Ulibarrí, Rodney
Utley, Gregory
Watts, Keith
Weyers, Joseph

M.A.

Bañuelos, José
Díaz, Gabriela
Farren, Kara
Fernández, Angélica
Goldberg, Paul
Guerrero, María
Haven, Shannon
Herron, Paul
Irwin, Angela
Lárraga, Maribel
LeDoux, John
Mato, Shigeko
McCarthy, Stella
Morton, Michelle

Nicasio, David
Ortega, María
Pflug, Martin
Ramírez, Mariana
Sánchez-Flavian, Patricia
Schwartz, Dori
Siegrist, Paul
Tarp, Helen
Tisinger, Stephen
Ugarte, Gueli
Valenzuela, Ricardo
Webb, David

G. Degrees Awarded

Ph.D in Romance Languages/Spanish

Summer 94 — **Kobylas, Joseph**, Dissertation title: "La Poesía de Francisco Brines".

Lettieri, Monica, Disserttion title: "Socialización y Marginabilidad en la Revista Semanal Marcha (Uruguay 1939-1974)".

Tingey Garvin, Susan, Dissertation title: "An Analysis of the Postmodern Elements in the Works of Gustavo Sainz".

Fall 94 — **Hokanson, Sonja Gail**, Dissertion title: "Individual Cognitive Styles of University Students and Acquisition of Spanish as a Foreign Language".

Spring 95 — **Crosby, Margaret**, Dissertation title: "Representations of Women, Self and War in the Poetry and Fiction of Claribel Alegría".

Coonrod Martínez, Elizabeth, Dissertation title: "The Novel of the Latin American Vanguard: Specific Examples of its Innovation and Legacy".

McLoughlin, Betsy, Dissertation title: "The Hero Journey in the Poema del mio Cid".

Weyers, Joseph R., Dissertation title: "Authentic Video: Improving Listening and Speaking in the L2 Classroom".

MAs/Spanish Fall 94

Herron, Paul
Tarp, Cathleen

MAs in Portuguese

Guerrero, María Consuelo
Valenzuela, Ricardo

MAs/Spanish Spring 95

Díaz, Gabriela
Farren, Kara
Haven, Shannon
Lárraga, Maribel
Mato, Shigeko
Pflug, Martin
Sánchez-Clark, Angélica
Sánchez-Flavian, Patricia
Siegrist, Paul
Webb, David

Bachelors of Arts/Spanish Major

Bank, Andrea R.
Brockmann, Marlene L.
Colín, José Juan
Cox, Yamile Pulido
De Abajo, María N.
Hinshaw, Melissa J.
Lowry, Anne M.
Martínez, Bertha M.
Martínez, Sharon C.
Martínez, Yolanda R.
McCarty, Elizabeth Scott
Peña, Thomas
Righettini, Tamara L.
Rodríguez, Roberto
Segura, Paul Marco

Bachelors of Art/Portuguese Major

García, Eric Christopher
Wise, Christopher S.

BA/BS-Spanish as a Second Major

Alonzo-Scott, Laura
Archuleta, María D.
Arruti, Ginger
Barela, Elaine
Beers, Sara
Bell, Michael
Benavídez, Crista F.
Bennett, Kimberly
Berretta, Kristina L.
Campbell, Michelle M.
Charest, Isabelle
Chávez, Nicolasa
Chávez, Stephanie
Contreras, Guillermo
Crume, Kierson
Davis, Jeremy
Fincke, Laura
Gabaldón, Rodney
Garay, Raul
García, Eric Christopher
Gutsch, Rodney
Hedlund, Dawn
Hernández, Vicky
Johnson, Rachel
Jordan, Amber
Kunkel, Fereschteh
Larragoite, Melissa
Lowe, Flor de María
Pacheco, Steven
Palladini, Paulette
Perry, Demian
Polcao, Ana Marie
Ramírez, Leroy J.
Riley, Natalie
Robinson, Eric
Rossi, Giovanna H.
Schula, Steven
Talbot, Jessica
Triolo, Tania
Trujillo, John A.
Valdez, Joseph

H. Office Staff

Johnson, Rosario	Department Administrator
Cerna, Ivana	Staff Assistant
Zazueta, Ana S.	Department Secretary
Hicks, Artemisa	Lower Division Spanish Secretary

I. Work Study Help

Bentley-Gunthorpe, Virginia
Calderón, Arturo
Dykstra, Blanca
Griffin, Julie
Nuñez, Mirtza
Ortiz, Manuel

II. COURSES OFFERED

A. SUMMER 1994

Spanish		Number of Sections	Number of Credit hrs.
	101, Elementary	4	198
	102, Elementary	4	219
	200, Intermediate Morelia, Mexico	6	18
	201, Intermediate	2	99
	202, Intermediate	3	138
	203, Spanish Conversation UNM, Morelia & Xalapa	2	72
	276, Accelerated Beginning UNM, Xalapa, Mexico	1	27
	301, T/Castizo a Mestizo	1	9
	301, T/Pan-Hisp Cultures	1	87
	301, Hispanic Culture	1	84
	301, Cultura de Mexico Morelia, Mexico	1	42
	302/439, T/Span Lang Study	1	45
	439, T/Castizo a Mestizo	1	36
	439, ST/Teatro Mex/Contex	1	21
	497, Undergrad Problems	4	10
	549, S/Span-Based Creoles	1	24
	551, Graduate Problems	7	39
	629, S/Sel Wrks: Medxga	1	21
	699, Dissertation	5	30
Portuguese			
	551, Graduate Problems	2	6

B. FALL 1994

Spanish	101, Elementary	26	1,893
	102, Elementary	17	1,146
	103, Elementary Conv.	1	20
	120, Workshop Conv. Sp.	1	36
	201, Intermediate	15	1,047
	202, Intermediate	10	714
	275, Accel. Beginning	2	141
	277, Sp for Professionals	1	51

	301, T/Span Civilization	1	81
	301, T/Hisp Cult Thr Lit	1	174
	301, T/Lat Am Culture	1	93
	301, Lat Am Lit & Film	2	147
	301, Hispanic Culture	3	237
	301, New Mexico Culture	1	69
	302, T/Devlp Sp Wrtng Skills	3	210
	307, Intro Hispanic Lit	2	153
	331, Span Am Lit Survey I	1	84
	350, Spanish Phonetics	1	81
	352, Advanced Grammar	2	141
	405, Survey of Span Lit I	1	54
	439, T/Latin Am Women Writers	1	69
	439, T/Cine Lat Am	1	84
	497, Undergrad Problems	4	17
	499, Honors Essay	1	3
	502, Pro-Sem Resch Cr Mth	1	33
	517, 19th Cen Span Lit	1	33
	523, Renaissance Poetry	1	18
	531, Mod Movt Sp-Am Poet	1	39
	532, S/Lat Am Fiction	1	33
	536, Colonial Literature	1	33
	537, S/Chicano Literature	1	48
	541, Rsch Methods-Tchers	1	51
	542, History of Span Lang	1	42
	547, Sem Southwest Span	1	33
	549, S/Span Phonology	1	27
	551, Graduate Problems	2	5
	699, Dissertation	9	144
Portuguese	250, Intensive Accel Port	3	162
	301, Advanced Comp/Conv	1	45
	458, Brazilian Lit Survey	1	27
	497, Undergrad Problems	1	6
	551, Graduate Problems	1	3
	570, S/Cont Brazil Lit	1	6
	699, Dissertation	1	6

C. SPRING 1995

Spanish

	101, Elementary	23	1,566
	102, Elementary	16	1,146
	104, Elem Span Conversatn	1	17
	201, Intermediate	12	816
	202, Intermediate	13	849
	275, Accelertd Begin Span	1	66
	276, Accelertd Begin Span	2	126

278,	SP for Professionals	1	69
301,	T/Hisp Culture	1	84
301,	T/Hisp Cult Thr Lit	1	168
301,	T/Cult Y Entre Hisp	1	93
301,	T/Mexican Culture	1	72
301,	T/Lat Am Civ & Culture	1	81
301,	T/Pan Hisp Cultures	1	75
301,	T/Lat Am Cul & Film	1	66
301,	T/Span Cult & Film	1	78
302,	T/Dvlp Sp Wrtng Skil	2	153
302,	T/Princ of Interpret	1	36
302,	T/Wrtng Skls for Tch	1	39
307,	Intro Hispanic Lit	3	243
332,	Span Am Lit Surv II	1	63
350,	Spanish Phonetics	1	93
352,	Advanced Grammar	2	132
370,	Survey Chicano Lit	1	87
375,	SW Hispanic Folklore	1	90
412,	Surv Span Lit II	1	48
423,	Cervantes-Quijote	1	54
429,	T/Peninsular Epic	1	21
450,	Spanish Misticism	1	27
497,	Undergrad Problems	2	17
519,	Medieval Literature	1	39
532,	S/Lat Am Short Story	1	42
540,	Lat Am Dialectology	1	42
548,	Old Spanish	1	33
549,	S/Afro-Hispanic Lang	1	12
551,	Graduate Problems	4	18
599,	Masters Thesis	2	7
601,	Literary Theory	1	21
632,	Lat Am Vanguard Poet	1	42
639,	Sem/19th C Lt Am Lit	1	42
679,	Sem/Chicana Writers	1	33
679,	Sem/Chicano Poetics	1	24
699,	Dissertation	9	120

Portuguese

200,	Intro to Braz Cult Capoe	1	57
251,	Intensive Accel Port	2	132
401,	T/Musica Pop Brasil	1	48
461,	T/Telenovela Brasil	1	42
551,	Graduate Problems	1	3

III. Department Highlights

A. New Professors

The Department of Spanish and Portuguese was joined by two new faculty members in the Fall: Professors Antony Higgins and Kimberle López. Antony Higgins, Assistant Professor of Spanish, arrived from the University of Pittsburg, where he recently defended his dissertation. Kimberle López, Assistant Professor of Spanish, arrived from the University of California at Berkeley.

B. Faculty Searches

The Department also had a Faculty Search this year for candidates for the positions of Golden Age, job number 2644, and 20th Century Peninsular Literature, job number 2645, of which two candidates were selected: Michael Kidd and Susana Rivera. They will start their positions at UNM in the Fall of 1995.

C. Promotion

Associate Professor Tey Diana Rebolledo was promoted to Full Professor, May 1995.

D. Retirement

Professor Rosa Fernández, Lecturer III and Lower Division Spanish Coordinator, retired. Professor Fernández came to the University of New Mexico in 1984 and was an active member of the Hispanic community, promoting Spanish culture and history through

community, promoting Spanish culture and history through collaboration with High School students and teachers.

E. Departures

Professors Hegstrom-Oakey and Cornejo-Parriego left our department to take jobs at other universities. Professor Hegstrom-Oakey went to Brigham Young University and Professor Cornejo-Parriego went to Penn State University.

F. Newsletter

Our second Departmental Newsletter was sent out in October to approximately 300 alumni and friends.

G. Reclasification

The position of Administrative Assistant held by Rosario Johnson was reclassified to Department Administrator II.

H. Award

Rosario Johnson, Department Administrator, received the University of New Mexico Provost's Outstanding Staff Award, Spring 1995.

I. Departmental Lectures and Conferences

Co-sponsored with the Foreign Languages & Literature Department a lecture by Professor Bettina Pohle. September 29, 1994.

Co-sponsored, together with the Latin American Institute, a concert presentation of Brazilian Popular Music by Tico Da Costa, October 18, 1994, 7-9:30 p.m.

Co-sponsored, together with the English Department, a lecture given by E.A. Mares of the University of North Texas. Humanities Room 108. October 20, 1994.

Fiesta de Otoño 1994. This event is done to promote the Spanish and Portuguese studies among high school students of Albuquerque with the participation of Teaching Assistants and High School teachers of Spanish in Albuquerque.

Co-sponsored, together with the General Library, a lecture by Dr. Alessandro Portelli of the University of Rome, entitled "The Text and the Voice: Literature, Orality and Democracy". Zimmerman Library Room 102. October 27, 1994.

Sponsored a lecture on "La Universidad de Nuevo Mexico y el Ecuador" by Ecuadorian Professor Nelson Dávila, Friday, October 28, 1994 at 10 a.m. Ortega Hall Reading Room.

Co-sponsored, along with the Latin American Institute, lectures by Dr. Nelson Dávila "La Coyuntura Política Actual en Ecuador", November 1, 1994, 12 noon at LAI; and Dr. Alexis Levitin "Alixandre O'Neille: Delights and Dangers of Translating Rhyme

and Word Play", November 2, 1994, 4:00 p.m., Ortega Hall Reading Room.

Sponsored a colloquium on Gender and Genre in the Mexican Revolution given by Professor Kimberle López and Graduate Student Greg Utley. Professor López' topic was "Picaresque and Testimony in the Mexican Revolution: Elena Poniatowska's **Hasta no verte Jesús mío**". Greg Utley's subject was "The Vanguard Novel and Nellie Campobello's **Cartucho**". November 11, 1994, 3 p.m. Ortega Hall Reading Room.

Sponsored a lecture by Professor Laia Obregón from the University of Barcelona, Spain, "La improvisación teatral en la clase de lengua". November 17, 1994, 2 p.m., Ortega Hall Reading Room.

Sponsored a colloquium with Professors Garland Bills and Neddy Vigil and Graduate Student Luis Ortiz. Professors Bills' and Vigil's topic was "The Historical Basis for the Dialect Variation of the Spanish of New Mexico and Southern Colorado", and Luis Ortiz' lecture on "Estratificación en el español de San Juan, Puerto Rico: Déficit vs. variación". November 21, 1994, 2 p.m., Ortega Hall Reading Room.

Sponsored a lecture by Professor Bruno Damiani from the Catholic University of America in Washington. The title of the lecture was "El Nuevo Mundo en la novela Picaresca Española". December

8, 1994, 1 p.m., Ortega Hall Reading Room.

Co-sponsored, along with the English, Women Studies, and American Studies Departments, a talk by Pat Mora, on her book of poetry, "Chants, Borders and Communion" and her book of essays' "Nepantla". February 7, 1995. Ortega Hall Reading Room.

The Department also held its Fourth Annual Conference on Ibero-American Culture and Society held at the New Mexico Student Union, February 8-10, 1995. The theme this year was "Mestizo Texts in the Spanish/Mexicano/Chicano Borderlands. Keynote speakers were José Limón, Genaro Padilla and Yolanda López. Papers were presented by 60 participants from the U.S., México and Canada. The "kick off" event was night of creative readings by Sabine Ulibarrí, Rudolfo Anaya, Pat Mora, Denise Chavez, and Estevan Arellano.

Co-sponsored a Medieval Spring Lecture Series, together with the English Department. The theme was "Medieval Islam". February 27-March 2, 1995. Took place at Woodward Hall and Fine Arts.

A lecture by Lissette Rolón, a graduate student at the University of Iowa, and Editor of Torre de Papel magazine. Her lecture was entitled "Tres Cantos y un Cuento: Mitos narrativos en la obra de Carmen Martín Gaite". March 22, 1995, 3-4 p.m., Ortega Hall 153.

Co-sponsored a lecture by Ethel V. Kismisky, entitled "Judaism and Brazil" and "Street Children in Brazil". April 5 & 6, 1995.

Co-sponsored a lecture by Luisa Valenzuela, a renowned Argentine writer. The title of her lecture was "Re-writing Politics and Fairy Tales". April, 13, 1995, 4:30 p.m., Woodward Hall 101.

Co-sponsored Arturo Ripstein's visit to UNM. He presented a free screening and discussion of his masterpiece The Beginning and the End, on April 21, 1995 at 5 p.m., in the SUB Theater.

J. Professional Public Activities

Papers Read at Professional Meetings by Faculty

Bills, Garland 1) Read "The Historical Basis for Dialect Variation in the Spanish of New Mexico and Southern Colorado" at the Annual Meeting of the American Dialect Society, in San Diego, CA., December 27-30, 1994.

Cárdenas, Anthony 1) Read "Alfonso X's Lapidario: A Quagmire of Queries and Quandaries" at the National AATSP Conference, Phildelphia, PA, August 9-11, 1994. 2) Read "Deconstructing the Devil (or Dickering with the Dickens) in Medieval Spanish Literature" at the X Mid-America Medieval Association Conference, at the University of Kansas, February 25-26, 1995. 3) Read "Herstory in the Margins: Anonymous Love Notes" at the La Chispa, Louisiana Conference on Hispanic Language & Literature,

New Orleans, LA, February 28-March 4, 1995. 4) Read "Studies of Alfonsine Science since 1984" at the 30th Annual International Congress on Medieval Studies, Medieval Institute, Western Michigan University, Kalamazoo, Michigan, May 4-7, 1995.

Gerdes, Dick 1) Read "La Feria: Novela Postmoderna," at the Mid-America Conference on Hispanic Literature, at the University of Kansas, Lawrence, KS, September 8-11, 1994.

Gonzales-Berry, Erlinda 1) Read "Narrating the Nuevo Mexico Nation", at the MLA Convention in San Diego, CA, December 27-30, 1994. 2) Read "Spanish Language and Education Policy in New Mexico, 1890-1920". Conference of the National Folklore Association. Albuquerque, NM, October, 1994. 3) Read "La fortuna de una toponimía religiosa: la Relación de Fray Francisco de Escobar," with Prof. Alfred Rodríguez at the Segundo Congreso Internacional sobre Caminería Hispánica, Guadalajara, Spain, July 6, 1994. 4) Read "The Bridge Course at the University of New Mexico: Topics in Hispanic Culture", at the ADFL National Seminar for Department Chairs, Eugene, Oregon, June 22, 1995.

Higgins, Antony 1) Read "La Biblioteca Mexicana: Hacia una poética de la legitimidad criolla". Read "Las poéticas coloniales (y el origen del pensamiento teórico-crítico en

Hispanoamérica)" at the III Encuentro Latinoamericano en Berkeley, University of California, Berkeley, October 8, 1994.

Lipski, John 1) Read "Afro-Portuguese Pidgin: Separating Imitation Innovation" at the annual meeting of the American Association of Teachers of Spanish & Portuguese in Philadelphia, August 6-10, 1994. 2) Read "The Evolution of Null Subjects in Philippine Creole Spanish" at the Mid-America Linguistics Conference, University of Kansas, Lawerence, KS, October 14-15, 1994. 3) Read "Syllabic /m/ in New Mexican Spanish" at the Fifth Annual Conference of El Español en los Estados Unidos/Spanish in the U.S., University of Colorado at Boulder, October 28-29, 1994. 4) Read "So in Bilingual Spanish - From Code-switching to Borrowing" at the XV Symposium on Spanish & Portuguese Bilingualism Conference, Rutgers University, New Brunswick, November 11-12, 1994. 5) "Syllabic Sonorants in Southwest Spanish: Patterns of Feature Reassignment," at the Georgetown University Round Table, March 6-7, 1995. Georgetown University, Washington D.C.

López, Kimberle 1) "Hasta no Verte Jesús Mío", at the Comparative Lit. Symposium, Texas Tech University in Lubbock, TX, January 26-28, 1995. 2) "The Representation of Columbus as Jewish in the New Chronicles of the Conquest" at Strangers in Paradise: Voices in Exile Conference, CSU San Bernardino, CA, April 6-8, 1995.

Rodríguez, Alfred 1) Read "La fortuna de una toponimia religiosa: la Relación de Fray Francisco de Escobar," at the Segunda Congreso Internacional sobre Caminería Hispánica, Guadalajara, Spain, July 6, 1994.

Tolman, Jon 1) Chaired two sessions "New Perspectives on Brazilian Literature" and "Brazil's Modernist Discourses", and read "Machado de Assis' Narrative Strategy", at the Rocky Mountain Modern Languages Association Conference at the University of Nevada in Las Vegas, March 5-8, 1995.

Papers Read by Graduate Students

Coonrod Martínez, Elisa: 1) Read "La voz feminista del bildüngsroman chicano: Trini de Estela Portillo Trambley," at the Latin American Women Writers: Canons, Traditions, Revisions, Conference at Texas Tech University, Lubbock, January 1995.

Desachy-Godoy, Elvira: 1) "Dos poetas, un camino: Oralitura en los cuentos-poema de Sabine Ulibarrí y los cuentos musicalizados de Franciso Gabilondo Soler". Escuela Normal Veracruzana, Xalapa, Veracruz, México, Octubre 19, 1994. 2) Read "Herencia cultural del Siglo XX a la juventud del XXI: Eco-literatura". Facultad de Humanidades, Universidad Veracruzana, Xalapa, Veracruz, México, October 17, 1995.

Lárraga, Maribel & Pagel, Michael: 1) Read "Mexican-American Humor: Resistance and Cultural Maintenance", at the 28th Annual Meeting of the Oral History Association in Albuquerque, NM, October 1994.

Ortiz, Luis: 1) Read "Social context and maintenance of Spanish: Quad Cities (Davenport, Iowa, y Moline, Illinois'" at the XV Spanish in the U.S. Conference, University of Colorado at Boulder, Boulder, CO, October 28-20, 1994. 2) Read "Distanciamiento geográfico de la frontera mexicana y uso del español en mexicanos y méxico-americanos de los Quad Cities", at the First Annual Hispano/Chicano Student Conference, University of New Mexico, September 1994.

Pearson, Carol: 1) Read "Gender, Genre, and Revolution: A Comparison of Mobilization of Women in the Mexican and the Nicaraguan Revolutions as seen in the works of Daisy Zamora and Elena Poniatowska", at the Rocky Mountain Conference of Latin American Studies, Las Vegas, NV, March 1995. 2) Read "La resitencia desde adentro: Lo feminista y lo político en la obra de Angeles Mastretta", at the Latin American Women Writers, Texas Tech University, Lubbock, TX, January 1995.

Pinedo, Rosa O.: 1) Read "La función de lo carnavalesco en The Last of the Menu Girls" at the Fourth Annual University of New Mexico Conference on Ibero-American Culture and Society: Mestizo

Texts in the Spanish/Mexicano/Chicano Borderlands. February 1995. 2) Read "The Trail of Power in Fanny Buitrago's Cola de Zorro" at the Twenty-eight Annual Texas Tech University Comparative Literature Symposium, Latin American Women Writers: Canons, Traditions, Revisions, Lubbock, Texas. January 1995.

Weyers, Joseph: 1) Read "Spanish as a Social Marker in El Paso, Texas" at the National Lasso Conference, Houston, TX, October 1994. 2) Read "Latin American Cultural History: A Proposed Syllabus for Addressing Culture and Identity", at the National Meeting of AATSP, Philadelphia, PA, August 1994.

K. Invited Lectures and Other

Gerdes, Dick: 1) Invited to give a series of lectures and to do research in Quito, Ecuador, June 28-August 7, 1994. 2)Invited to the University of Los Andes to give five talks on Latin American Literature, Culture, Postmodernism and Translation, Mérida, Venezuela, October 8-17, 1994.

Gonzales-Berry, Erlinda: Invited to head the External Review Committee for the Graduate Programs of the Humanities at University of California-Irvine on March 19-21, 1995. Read from her creative work at La Feria Internacional del Libro, Guadalajara, México, November 1994.

Lipski, John: Invited to give a series of lectures on Latin American dialectology and Afro-Hispanic language contacts at the Universidad de los Andes in Mérida, Venezuela, May 20-26, 1995.

Rebolledo, Tey Diana: Invited to give a talk entitled "Art and Spiritual Politics of Sor Juana Beatriz de la Fuente: A Feminist Literary Analisis" to the College Art Association, San Antonio, TX., January 25, 1995.

L. Attendance/Contributions to Other Meetings, Workshops, Seminars, Readings, etc...

Gerdes, Dick Invited Presentations: 1) "Julio Ramón Ribeyro," Premio Juan Rulfo/Homenaje a Julio Ramón Ribeyro, and "Humor y oralidad en la obra de Alfredo Bryce Echenique," Homenaje a Alfredo Echenique, La Feria Internacional del Libro/Universidad de Guadalajara, México (November); 2) "La pos-modernidad literaria en la América Latina" (Una serie de cinco charlas), Instituto de Investigaciones literarias "Gonzalo Picón Febres," at the Universidad de Los Andes, Mérida, Venezuela (October).

Gonzales-Berry, Erlinda 1) Participated in a sponsored workshop on preparing for job interviews and interviewed candidates for the two open positions, Golden Age and Twentieth Century, in our Department, at the MLA Convention, San Diego, CA, December 27-30, 1994.

López, Kimberle 1) Panel on Interviewing Techniques for Job Search in Foreign Languages, at the MLA Convention, San Diego, CA, December 27-29, 1994.

Rebolledo, Tey Diana 1) Interviewed candidates for the two open positions in our Department, Golden Age and Twentieth Century at the MLA Convention, San Diego, CA, December 27-30, 1994.

Tolman, Jon M. 1) BRASA Conference organizer, May 12, 1995.

M. University and Community Service

Bills, Garland 1) **Department of Linguistics:** Undergraduate Advisor; Associate Director, 1995 Linguistic Institute; Chair, search committee for Native American linguistics position. Member, coordinating committee for the doctoral concentration in Educational Linguistics. **College of Arts and Sciences:** Chair, Junior Faculty Promotion and Tenure Committee (1994-95). **University:** Member, UNM Press Committee; Member, Council on the Americas.

Cárdenas, Anthony J. 1) **Department:** Undergraduate Advisor. **College:** Senior Promotion Committee, Chair; **University:** Faculty Senate.

Gerdes, Dick 1) Program Co-coordinator, Annual Conference, American Literary Translators Conference, Albuquerque, October,

1994. 2) Associate Editor, Hispania. 3) Associate Editor, Chasqui. 4) Member of Spanish & Portuguese Graduate Committee.

Gonzales-Berry, Erlinda 1) **Department:** Chair of Spanish and Portuguese Dept. 2) **University:** Co-Editor "Pasó por Aquí" Series, UNM Press; Member, Board of the Maxwell Museum Association; Member, Policy Board, Latin American Studies; Member, Council of the Americas; Member, Hispanic Arts Council. **University:** New Mexico Endowment for the Humanities. Translation: "Cuando Hablan los Santos," Maxwell Museum. Member: Executive Committee: Association of Departments of Foreign Languages.

Higgins, Antony 1) **Department:** Member of the BRAC Committee.

Lamadrid, Enrique **University:** 1) UNM Press Committee. **College: Fine Arts:** Regional & Folk Arts Steering Committee; **Department: SHRI:** Faculty Associate Chair; **Spanish & Portuguese:** Budget and Resource Allocation Committee. **Public Service:** 1) NM Endowment for the Humanities Speakers Bureau Lecture Series "Música del Corazón: New Mexican Folk Music", 2) Scoutmaster, Troop 9, Boy Scouts of America.

Lipski, John 1) **Department:** Graduate Advisor, and Member of the Graduate Committee, Member of the Search Committee. 2) **College:** Member of Graduate Curriculum Committee. 3) **University:** Member

of the Faculty Senate Library Committee, Member of Committee on Governance, Member of Committee on Graduate Achievement Awards (Office of Graduate Studies).

López, Kimberle 1) **Department:** Undergraduate Committe, MA Exam Committee. 2) **University:** New Faculty Committee.

Rebolledo, Tey Diana 1) The University of New Mexico Press Committee. 2) Long-Range Planning Committee for Women Studies. 3) Faculty Research Associate, Southwest Hispanic Research Institute. 4) Undergraduate Commitee, BRAC Committee, Search Committee for the Dept. of Spanish & Portuguese. 5) American Studies Affiliated Faculty. 6) Manuscript Evaluations for the University of New Mexico Press. 7) Manuscript Evaluations for the University of Arizona Press.

Rodríguez, Alfred 1) **Department:** Salary Selection Committee and Graduate Election Committee. 2) **University:** RAC.

Tolman, Jon 1) Graduate Committee, Salary Committee, Search Committee for the Dept. of Spanish & Portuguese; 2) Coordinator for the Luso-Brazilian Studies; 3) Associate Director for Luso-Brasilian Programs, Latin American Institute; 4) Executive Committee, Budget Committee, Research and Grants Committee; **University:** Academic Freedom and Tenure Committee;

Interdisciplinary Committee on Latin American Studies (ICLAS); Council of the Americas.

N. Honors

To Faculty

Professor John Tolman was honored with the Outstanding Professor Award for the 1994-95 academic year.

To students

Rosita Pinedo received a Graduate Fellowship from the Center for Regional Studies for the academic year 1994-95.

O. Grants and contracts, extramural and otherwise

Bills, Garland & Neddy A. Vigil

Title: "Linguistic Atlas and Archive of the Spanish of New Mexico and Southern Colorado"

Agency: National Endowment for the Humanities

Dates: June 1, 1991 through November 30, 1993

Funding: $225,000

Extended: December 1, 1993 through November 30, 1994

Funding: $91,000

Higgins, Antony

Title: "An Investigation into the Emergence of Literature as Discourse and Institution in Colonial México"

Agency: RAC

Dates: June 12, 1995-July 15, 1995

Funding: $1,317.00

P. Affirmative Action

This past fiscal year, the Department tried to set goals to comply with the rules and regulations of Affirmative Action, providing employment to qualified personnel, making the effort to attract women and minority groups. During this year the Department issued contracts to 37 Teaching Assistants, 17 of which were Hispanic, 19 women, 11 of them were of Hispanic origin; 3 Asian. A total of 5 Lecturers taught on a part-time basis, 4 of them were women of Hispanic origin. The work study team was composed of 4 students, 3 being Hispanic.

ANNUAL REPORT OF THE WOMEN STUDIES PROGRAM

COLLEGE OF ARTS AND SCIENCES

July 1, 1994-June 30, 1995

Louise Lamphere
Academic Coordinator

I. Staff

Beginning July 1, 1994, Women Studies became part of the College of Arts and Sciences on a two-year trial basis. Early in the summer, Louise Lamphere, who had been Acting Director during 1993-94 declined to be half-time Acting Director for another year. Arts and Sciences Dean William Gordon called a meeting of Women Studies Faculty Associates and Part-Time Instructors on July 14, during which the future direction of the program was discussed. He also asked for written input by August 15 on the structure of the program for 1994-95, the directorship, and longer range directions for the program. In August, Louise Lamphere, agreed to become Academic Coordinator for the program during the 1994-95 academic year. She agreed to be responsible for setting up the Spring and Fall 1995 schedules, hire appropriate part-time faculty, oversee student advisement and the Women Studies office (including the Administrative Assistant, Graduate Assistants and Work Study Students).

During the Fall 1994, Dean Gordon appointed a Women Studies Planning Committee, which initially met with the Dean on November 14, to discuss the committee's charge to propose a structure for Women Studies and to articulate goals for the next few years. Karen Foss, Associate Professor of Communication and Journalism, was appointed Chair of the Committee. The committee met once in December and several times during the Spring 1995, culminating in a one-day retreat on May 6, 1995. A final report was submitted to the Dean of Arts and Sciences in May outlining a future structure of the program and recommendations for the Directorship (see details in the section concerning Plans and Recommendations). The Committee submitting the report consisted of Karen Foss, Chair; Louise Lamphere, Academic Coordinator; Jane Caputi, Diana Rebolledo, Jane Slaughter, and Susan Tiano, Arts and Sciences faculty members; Stephanie Bacheller, Student Member; and Leslie Donovan, part-time instructor.

Gordene MacKenzie began her first year of a two year Visiting Assistant Professor appointment in the program. She was responsible for teaching five courses during the year and was the Student Advisor. In addition, she shouldered a great deal of the

responsibility for organizing the fall Women Studies Open House for Undergraduate Students and the Women Studies Graduation in May.

Teresa Cordova continued as a Core Faculty member in Women Studies and as an Assistant Professor in the School of Architecture and Planning. She had a two-course buyout during the fall semester (to give her time for writing and research in consideration of her tenure and promotion revue in Fall 1995). During the Spring she taught three courses (two for Women Studies and one for Planning).

Bessie Torrez continued as our Administrative Assistant, and Maura Daly and Maria Torres again served as Graduate Assistants. Teresa Cordova was the Acting Director during the summer 1994 and Gordene MacKenzie was Acting Director during summer 1995.

Many of our courses continued to be taught by part-time faculty, even with the addition of a Visiting Assistant Professor. During summer 1994, courses were taught by Leigh Anne Chavez, George Anne Gregory, Virginia Hampton, Gordene MacKenzie, and Pat Murphy. Part-time Instructors for Fall 1994 included Maisha Baton, Leigh Anne Chavez, Winifred Devlin, and Leslie Donovan. Maura Daly and Maria Torres, our graduate assistants, also taught one course. Baton, Chavez, Devlin, Donovan, and Gregory continued to teach in the Spring 1995, as well as Doris Fields. Finally, during the first summer session 1995 (June), Carole Epple, Gordene MacKenzie, and Flavia Rando taught courses. Women Studies also contributed to the salary of Alison Freed who taught a course on Language and Gender as part of the Linguistics Institute organized through the Department of Linguistics.

II. Significant Developments during 1994-95

A. Overall Organization and Administration

With only an Academic Coordinator, rather than a Director, the Women Studies Program operated in a scaled down fashion. The Operations Committee as constituted in 1993-94 continued to be the decision-making body for the program, although not all committee slots were filled. Representatives among the Associates from the College of Arts and Sciences were Karen Foss (Communications and Journalism) who chaired the committee and Jane Caputi (American Studies). Cheryl Learn (College of Nursing) and Jackie Hood (Anderson School of Management) were Associates from colleges other than Arts and Sciences; Monica Cyrino represented Frontiers. Winnie Devlin (Fall Semester) and George Anne Gregory (Fall and Spring) represented the Part-time Faculty. Maura Daly and Maria Torres were graduate student members, while Donna Hoff was the undergraduate student during the Fall Semester and Consuelo Garvey-Sierra during the Spring. Sandi Gonzales represented the Women's Center. Core Faculty Teresa Cordova and

Visiting Assistant Professor Gordene MacKenzie were also members of the Operations Committee. Bessie Torrez, Administrative Assistant, also attended.

Following the 1993-94 Annual Report which noted that the committee structure was too cumbersome the Curriculum Committee, Outreach Committee, and Research Committee were not instituted. Instead the Planning Committee undertook the task of recommending a more streamlined structure. The Associates were not called together for formal meetings, although they continued to be appraised of program activities and many participated in Brown Bags, Open Houses, and the International Women's Day Lunch.

B. Instructional Activities

It has helped the program to have the addition of a Visiting Assistant Professor so that there are now two Faculty members in the Program, a core faculty who teaches three courses a year and the Visiting Faculty who teaches 5 courses per year. During Fall 1994 we taught eight courses in Women Studies (and several additional classes were cross-listed with various departments). During Spring 1995, the Program offered 10 class, for a total of 18 classes, the same number as offered during 1993-94. Our enrollments increased to 500, due to a high enrollment of 272 in the Spring semester. Enrollments for 1993-94 were 426 and for 1992-93 were 442. Our summer enrollments have dropped, however, to 88 for the summer of 1994 and 55 for the 1995 summer session. Enrollments in 1993 were 118 for the summer. It is difficult to know what accounts for this drop; however, we will look into new avenues for advertising and making additional contacts with summer programs and cross-listing for 1996.

There are now 82 minors in Women Studies. Three students graduated in December, 1994 and eight students graduated from the program in May, 1995. Gordene MacKenzie continued to serve as advisor. She was particularly important in providing a liaison with the Arts and Sciences counselors as we integrated our courses into the Arts and Sciences distribution requirements.

C. Program Activities

The Program continued many of the activities begun in 1993-94 that have helped to raise the visibility of Women Studies on campus and to encourage the participation of women faculty. During the Spring semester we held a series of "Brown Bag" talks which included:

February 22, 1995- "Is There a Chicana in This T.V. Movie?" Diana Rios, Assistant Professor of Journalism.

March 24, 1995- "How to Compost Your Ph.D.: Taking Feminism out of the Classroom and into the Fields." Winnie Devlin, Women Studies Part Time Instructor.

April 12, 1995- "Witchcraft, Cooperatives, and Gendered Competition in a P'urepecha Community." Claudia Issac, Assistant Professor of Planning.

On March 8, we once again co-sponsored an "International Women's Day Luncheon" with the Women's Center. Four women were honored for their work that supports the needs of New Mexico Women. They were Debbie Jaramillo, the first woman mayor of Santa Fe; Havens Levitt, a lesbian political activist and teacher who was one of the founders of Women in Movement in New Mexico; Helene Vann, a community activist who makes her feminist voice known through her work at Full Circle Books, and Katherine Greyson, the Executive Director and Co-founder of thee La Pinon Sexual Trauma Recover and Crisis Center in Las Cruces, New Mexico. Pat Mora, poet and writer was the featured speaker, who combined her own thoughts on the day's theme "Promises to Keep" with a poetry reading. Over 100 faculty, staff, students and guests attended.

We continued to publish the Women Studies Newsletter with one issue during the Fall 1994 and one during Spring 1994. The newsletter is circulated to all UNM faculty and to students in Women Studies courses. Women Studies also contributed funds to help bring several women speakers to campus. These included Sherna Gluck who discussed her new book on Palestinian Women (November 2, 1994), Nicaraguan poet Daisy Zamora, Pat Mora who gave a poetry reading (February 8, 1995), and Pamila Swain, a grass roots indigenous leader who talked on her work on social justice for the rural poor in Orissa, India (April 20, 1995). The Program also provided funds for the debate on abortion featuring Phyllis Schafley and Sarah Weddington (January 26, 1995) and for feminist Robin Morgan who gave the keynote address and public lecture on "The Anatomy of Freedom" for the Conference on Gender and Communication (April 7, 1995).

As part of the Planning Committee's effort to rethink our vision for the Women Studies Program, we invited Paula Gunn Allen, Native American writer and Professor of English at UCLA to speak on "Developing Women Studies for the 21st Century." The talk and the reception following it were attended by over 80 students.

During Fall semester, we held an undergraduate open house on to publicize our course offerings for Spring 1996 and to encourage students to minor in Women Studies. We held a graduation ceremony and open house on Friday, May 12, at 3:00 to honor our the eight minors who were graduating. Gordene MacKenzie, our undergraduate advisor, was instrumental in

organizing these activities.

III. Publications, outside professional activities, and outside-sponsored research

During the year the Academic Coordinator, the Core Faculty, and the Visiting Assistant Professor participated in various scholarly and professional activities. Louise Lamphere, Academic Coordinator, received the 1994 Conrad Arensberg Award given by the Society for the Anthropology of Work for outstanding contributions to the field. The award was given at the annual meeting of the Society which was held during the American Anthropological Association Meetings in Atlanta in early December 1994. She was also awarded the Snead-Wertheim Lectureship given each year to either an anthropologist or historian. She used the stipend to begin a book length life history of a Navajo woman. She delivered the annual Snead-Wertheim Lecture on April 6, 1995, entitled, "Bringing Navajo Women into History: Personal Narratives of Eva Price, Navajo Healer."

She continued to serve as and President-elect of the Association for Feminist Anthropology and was a discussant for two sessions at the American Anthropological Association (Atlanta November 30-December 4, 1994) and for one session at the American Ethnological Association (Austin, Texas, April 1995).

Louise continues to serve as a member of the Editorial Boards of the Annual Review of Anthropology, Signs: Journal of Women in Culture and Society, The Journal of Anthropological Research, and The American Anthropologist. She also serves as an Associate Editor of Frontiers: A Journal of Women Studies which is published through the Women Studies Program at UNM.

Teresa Cordova, Core Faculty in Women studies has continued to be active in attending professional meetings and has been invited to participate in several sessions at a national level. In November, 1994 she participated in a conference on national transportation policy sponsored by the Department of Transportation. She facilitated several sessions at another conference on transportation in May in Atlanta, also sponsored by the Department of Transportation. She attended the ACSP (Association of Collegiate Schools of Planning) meeting in October 1994 and the NACS (National Association of Chicano Studies) Meetings in Spokane, Washington in April 1995. For the latter, she participated in a panel on "Gender, Power, and Institutional Backlash." She also testified before the EOA subcommittee on "Waste and Facility Siting" in Atlanta, Georgia in January 1995. Finally, she participated in a Planners Network meeting in East St. Louis, Illinois in a session community-based planning in May 1995.

Teresa's article, "Roots and Resistance: The Emergent Writings of Twenty Years of Chicana Feminist Struggle" has now appeared in the Handbook of Hispanic Cultures in the United States: Sociology (pp. 175-201) edited by Felix Padilla. It contains a substantial review of the writings of Chicana feminists. Her commentary, "Refusing to Appropriate: The Emerging Discourse on Planning and Race," was published in the Journal of the American Planning Association (Vol 60, no. 2:242-43).

Gordene MacKenzie, Visiting Assistant Professor, published Transgender Nation (Bowling Green State University Popular Press) in 1994. This past year it was number two among non-fiction sales at Feminist Bookstores. She has been professionally active, giving a talk on "Freedom and Justice for All: Transphobia and Civil Rights," at the Third Annual International Transgender Law and Employment Conference in Houston. She was also the keynote speaker at the International Transgender Conference in San Antonio in February 1995 where she spoke on "Discourse Interruptus: The Emerging Transgender Voice." In June 1995, she served on a panel at the Fourth International Transgender Law and Employment Conference in Houston and also gave a lecture sponsored by Santa Fe Stages in Santa Fe (funded by the New Mexico Endowments for the Humanities).

She is currently working on three academic articles derived from her book to be submitted to the Journal of the History of Sexuality, The Harvard Educational Review, and The Journal of Popular Film and Television.

IV. Plans and Recommendations

The Planning Committee submitted its report to Dean Gordon in May 1995, making several important recommendations.

(1) The committee felt the most important priority was a search for a full-time permanent director. The program will request a permanent position in 1995-96, with a search to commence in the fall of 1996 and a new full-time director to take over in fall 1997. The committee envisions that this will be a tenured position with a joint appointment in an appropriate department with the line permanently in Women Studies.

(2) Once the director is hire, the program will request a tenure-track line (either full-time in Women Studies or half-time in Women Studies and half-time in another department). This search would take place in 1997-98. In the meantime, the committee urged that a director be appointed for a two-year term from existing faculty.

(3) The committee proposed a new structure which is being put into place during the fall 1995. This includes an Executive committee, composed of the director and three other faculty

appointed by her, at least one of whom must be a full-time Women Studies faculty member (either a Core faculty or visiting faculty). This group will work with the director to handle the day-to-day operation of the program, including advising the director on budget issues, reading application files, and generating workshops and programs.

(4) A second tier will include a Women Studies Council. This group will meet two or three times a semester and will consist of the Director, all full-time faculty in the Program, one representative from the Women's Center, two faculty from Arts and Sciences, two faculty from outside Arts and Sciences, the Research Director, one undergraduate, one graduate student, and one part-time faculty member. The Women Studies Council is consulted by the Executive Committee and votes on major decisions including the hiring of part-time and full-time faculty, policy decisions, and curriculum changes.

(5) The Planning Committee also recommended that a faculty member serve as Research Director, with one course released time each semester, beginning January 1996. The Research Director would begin building a research component to the Women Studies Program and would seek research grants for the program as well as supporting research activities among the faculty. The Program is requesting $5,000 from the College of Arts and Sciences as seed money to start the research program.

The Planning Committee is optimistic about the new structure, the potential for involving more women faculty in the program, and possibility of a research program. The Program still needs to permanently secure the funds attached to the line formerly held by Tania Ramalho for the program. These could be utilized for the funding of a position for a permanent director, which is still the first priority of the Program.