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ANNUAL REPORTS
1985-86

VOLUME I

page

THE PRESIDENT
- REPORT FROM THE PRESIDENT 1
- DEVELOPMENT OFFICE. 17
- ALUMNI OFFICE 48
- ATHLETICS
  - MEN'S ATHLETICS 58
  - WOMEN'S ATHLETICS 75

VICE PRESIDENT FOR ADMINISTRATION & PLANNING
- POLICE AND PARKING SERVICES 103
- PLANNING AND POLICY STUDIES 122

VICE PRESIDENT FOR ACADEMIC AFFAIRS
- GRADUATE STUDIES (INCLUDES LOS ALAMOS, SANTA FE, AND GRADUATE STUDENT ASSOCIATION) (NOT SUBMITTED)
- ANDERSON SCHOOLS OF MANAGEMENT. 133
- SCHOOL OF ARCHITECTURE AND PLANNING (INCLUDES 1984-85) 189
- COLLEGE OF ARTS AND SCIENCES. 261
  - AMERICAN STUDIES 304
  - ANTHROPOLOGY (INCLUDES CONTRACT ARCHEOLOGY & MAXWELL MUSEUM) 312
  - BIOLOGY. 362
  - CHEMISTRY. 463
  - COMMUNICATIVE DISORDERS. 484
  - ECONOMICS. 494
  - ENGLISH. 518
  - GEOGRAPHY. 531
  - GEOLOGY. 549
    - INSTITUTE OF METEORITICS. 734
  - HISTORY. 778
  - JOURNALISM 782
  - LINGUISTICS. 784
  - MATHEMATICS AND STATISTICS 793
  - MODERN AND CLASSICAL LANGUAGES 799
  - PHILOSOPHY 804
  - PHYSICS AND ASTRONOMY. 809
  - POLITICAL SCIENCE. 836
  - PSYCHOLOGY 856
  - SOCIOLOGY. 920
  - SPEECH COMMUNICATION 937

(CONTINUED IN 1985-86 VOLUME II)

The State of the University:

a Report from the President

September 1985

The University of New Mexico

PRESIDENT'S OFFICE
Albuquerque, NM 87131
Telephone 505: 277-2626

Dear Colleague:

Two months ago, on the eve of the supposedly tranquil days of summer, with one semester and three legislative sessions behind me and the 1985-86 budget virtually complete, the time seemed appropriate to share with you my diagnosis of the state of the University and the actions I had taken in light of that diagnosis. So I began to write this letter imagining that, by writing a section each evening, I would complete it in a matter of days. Then I discovered that for presidents of major universities, there is no summer.

Problems and opportunities—as diverse as parking and the honors program—constantly leap off the wall demanding immediate attention. Over the past few years, too many issues have been left to languish without resolution. The consequent sense of decay, of the University as a ponderous, almost immobile creature, is too widespread to permit accumulated issues to be addressed gradually and sequentially. Rather, many must be confronted simultaneously across a broad front. That is why days collapse into weeks. Weeks become months. And there never seems to be enough time to do all that I want to do.

The experience of the past eight months has taught me many things. Among them is a realization that presidents of large institutions (including countries, no doubt), like coaches and politicians, quickly develop a tendency to feel unjustly abused. Abused we regularly are; whether in most cases unjustly, however, is a subject of legitimate dispute. The sensation of unfairness stems, I think, from three features of the presidential office. One is the extent to which its occupants, other than the original one, immediately find themselves enmeshed in inherited structures and struggles, personalities and perceptions, one great host of problems that come storming through the door on day one. Before you even have time to find out where the toilet is hidden, each member of the host is tugging on some piece of your anatomy demanding attention. You quickly feel rather like the besieged character in A. E. Housman's *More Poems*.

Instead of starting fresh, you find yourself in dubious battle with the past. Few can and even fewer wish to recall the authors of present discontents. A kind of collective amnesia settles over the institution. The past vanishes. All that remains is the accumulated sense of grievance and a compulsion to find the source of every grievance in the person of the present president.

A second, no doubt universal, source of every president's sense of being unjustly abused is the sheer volume of work. The concurrent imperatives of management (which consists very largely of dispute resolution), planning, and representation of the University before the larger community are not easily accommodated within a seven-day week. Great under any circumstance, during a period of transition and change the work assumes monstrous dimensions, which in turn encourages the worker to feel virtuous and perhaps sometimes to forget that after kindergarten, one is graded on achievement, not simply effort.

Finally, the sensation of unjust abuse arises from the partial, one might argue inevitably partial, view which most abusers employ. It is not a question of relative intelligence or objectivity but rather of position. The president by virtue of his office stands in the middle and at least has the chance as well as the obligation to see and feel concern for all parts of the institution. By virtue of their location in particular departments, members of the faculty and staff tend to see the whole from the special perspective of their part of the institution. And when they hold administrative positions, they not unreasonably feel an obligation to serve as advocates for their unit on the assumption that the decision-making process is basically adversarial. They believe, in other words, that if they themselves take too balanced a view, the system will be skewed by the more intense partisanship of other unit heads. As for those outside the institution, with many honorable exceptions either they pursue personal agendas irrelevant to the institution's proper goals or they lack the time, the incentive, or the opportunity to grasp its daunting complexities.

The controversy over our Athletic Department nicely illustrates my point. I am the heir to a twenty-four-sport intercollegiate athletic program. Like every other unit in the University, it is about to be scrutinized by the Strategic Planning Committee, about which I will have more to say

below. As far as I can tell, neither the Legislature nor successive Boards of Regents nor my predecessors as President have laid down principles governing the size and cost of the program. Should it be funded entirely out of revenues, private donations, and a legislative line-item, if any? Should a fixed or variable percentage of student fees to be used to support the program? Should it receive any measure of support from University revenues other than those generated by the athletic program itself?

In order to address those alternatives rationally, one needs, of course, to reach some principled judgment about the proper role of intercollegiate athletics. Is the sports program primarily a form of entertainment which the University provides to the community as a kind of public service? Or is it a means of bonding the University and the community so that the latter will more generously support the former? Or is it first and foremost an integral part of the University's teaching program no different in its essence than performance-oriented units of the College of Fine Arts? Have we any greater or lesser obligation to provide skilled instructors for students who wish to excel in classical guitar as distinguished from those who wish to excel in gymnastics? Whatever we might have concluded originally about the proper role of intercollegiate sports, have they now become so tied up with the very ideas of a major state university that no single university can jettison its program without a perilous loss of prestige, without acquiring the image of a peculiar and impoverished sort of place?

I am confident that reasonable people addressing these questions with equal care will reach very different conclusions, in part because they raise questions of fact that are virtually impossible to resolve definitively, in part because they raise questions of value or taste outside the realm of rational agrument.

The issue of how to finance intercollegiate sports is rendered even more complex and problematical by the absence of a simple connection between conclusions about the role of sports and guidelines for determining their proper share of the University's budget.

For example, even the most enthusiastic advocate of a comprehensive intercollegiate program would, I am sure, call for reductions if the program began gobbling up University revenues that would otherwise be available to support teaching and research. Conversely, persons instinctively opposed to the use of any funds for the program other than sports-generated revenues, private donations, and line-item appropriations might nevertheless support a temporary enhancement of the football budget, for instance, if such an investment seemed likely to transform a money-losing into a revenue-generating activity.

With these complexities in mind and without benefit of established guidelines, last spring I began to review the Athletic Department's proposed expense budget for 1985-86. It provided for a net increase of roughly three percent over the 1984-85 budget. In part because of the increase, in part because of a fall in projected revenues, the proposed budget was not in balance.

I had just launched what is to my knowledge the most intensive and extensive study of the University that has been commissioned at least since World War II. The work of the Strategic Planning Committee will, among other things, help me determine whether further budget reductions are consistent with our remaining competitive in various sports. Athletic Director Bridgers believed that, in terms of being competitive, the proposed budget was lean. I had no informed basis for doubting that judgment.

I was therefore confronted with four alternatives. I could accept the unbalanced budget and hope that revenue projections were unduly pessimistic. That alternative seemed to me irresponsible. An unbalanced budget implies that it is provisional and need not be taken too seriously. It thereby encourages excess and complicates enforcement. The subsequently revealed cost overrun in this year's budget (which led to my placing the athletic director on probation and the department in a state of fiscal receivership by transferring all authority over its financial affairs to Associate Vice President for Business/Comptroller Carroll Lee) underscores the need for rigorous financial discipline.

A second alternative was simply to eliminate one or two or several sports. Doing so except in the face of extreme financial duress would have been inconsistent arguably with certain legal, indisputably with the moral, obligations of the University. A sudden refusal to renew the contracts of coaches would have thrown them onto the job market under highly adverse conditions and consequently have placed them and their families in jeopardy. Terminating sports would also have violated the University's commitment to the young men and women attracted here by the opportunity simultaneously to pursue an education and to realize their full athletic potential.

A third alternative, cutting the budget radically across the board, might not have required us to drop any single sport but could have threatened the competitive viability of several. And not just for 1985-86. For it would deposit a residue of doubt among high school coaches and athletes that would endure even if cuts were restored in the following year. The possibility of reduced recruiting capability

for the football team was particularly worrisome since it is the only program other than basketball with the potential for revenue generation.

The fourth alternative, and the one I chose in consultation with the President of the Board of Regents (who is also a member of the Regents' Athletics Committee), was to close the gap through a combination of moderate real cuts in authorized expenditures and a moderate reduction of the items for which the Athletic Department is required to reimburse the University's central administration. Enter tuition waivers.

Everything I have seen about them thus far tends rather to illuminate the ignorance of the author rather than the substance of the waiver. In order to understand the waiver it is first necessary to appreciate that, under our accounting practices, the Athletic Department is required to reimburse the University for the cost of scholarships granted to athletes. That reimbursement constituted approximately one and one-quarter million dollars in 1984-85, roughly one-fifth of the department's entire budget. While in general restricting the number of scholarships (i.e., waivers of fees or tuition or both) the boards of regents of the various state colleges and universities may establish, the state legislature created a special and limited exception for athletic scholarships. The applicable statute authorizes the various boards to grant, by waiving one-half of tuition, a number of athletic scholarships that would not count for purposes of the 3 percent limit.

New Mexico State University has granted such waivers since the law's inception. UNM granted them until 1980 when, for reasons that remain obscure, the practice was terminated. Such tuition waiver laws appear widespread. Texas, Utah, Colorado, and Arizona have them. I am informed that Arizona State University grants close to one million dollars in waivers. I chose the waivers as a means for closing the budget gap in part because applicable legislation can be said to encourage their use, in part because they are employed by other institutions in New Mexico, and in part because doing so seemed to underline the fact that many student-athletes would not be attending UNM if we did not have an athletic program that gave each of them a chance to develop his or her full athletic potential.

Given the fact that we do not place any limit on the number of students who can attend UNM in a given year, athletes add to our numbers; they do not displace other students. Their presence directly generates revenue under the funding formula. The presence of basketball players in particular generates a net income which, even under the most conservative accounting principles, amounts to well over a half million dollars a year (and one could reasonably argue for a figure closer to a million dollars). And all sports raise some funds from private sources.

If I had not already lived in Albuquerque for almost five months, I might have been astonished to find the waiver announced in a screaming headline on the front page of our afternoon paper. While, like most human beings, I like to think that my decisions have some consequence, I would not myself have placed this one on a level of concern or newsworthiness comparable to such minor items as the balance of payments, Africa's famine, South Africa's slaughter, Lebanon's civil war, the President's tax and strategic defense initiatives, or many others that come readily to mind. Indeed, one might argue that there was no story there at all, only the illusion of one. By its headline and its placement alone, the story implied that the waiver represented a very significant enlargement of the Athletic Department's budget. As you can see from the figures enumerated above, that implication is at best misleading.

It is, of course, true that if the waiver were not granted and if no compensating transfer were made to the athletic program, we would have an additional $150,000 available for other purposes (unless revenues turn out to be greater than anticipated, in which case we can reallocate the funds which as of this date seem necessary to balance the Athletic Department budget). But given the real alternatives, the attribution to the Regents and to me of a priority favoring athletics over academics was as unfair as it is inaccurate. Given the fact that I have devoted most of my own professional life to academic pursuits, the attribution was also bizarre.

The furor over my decision to give Coach Colson a salary increase well above the average even more aptly illustrates the taste some members of our community have for condemning decisions without first bothering to understand them.

As I suggested above, the basketball program can be seen respectively as a peripheral revenue-raising activity comparable to our leasing land for a shopping center, as an entertainment maintained to strengthen the relationship between the University and the community, as an integral part of the University's instructional program, or as a mixture of all three elements. Under any of these views, Coach Colson's raise is easily justified.

No one, not even those most viscerally hostile to a competitive intercollegiate athletic program, would prefer to see the activity lose money. I believe that in order to sustain public interest over time and thus to generate net income, we need a team which is at least able to challenge the other schools in our conference. Most people seem to accept the

existence of a relationship between fielding winning teams and generating revenue. And virtually everyone both within and outside the University joins me in insisting that we live within the rules of the NCAA—in other words, that we must win without cheating.

My impression, an impression shared by many more knowledgeable observers, is that only a quite limited number of coaches in big-time college basketball are willing and able to win within the rules. Coach Colson has been one of that number. His achievement is made all the more notable by the fact that New Mexico is too sparsely populated to have an abundance of homegrown talent; hence he must attract players—players of good character and with decent academic credentials—from other and often distant states. Because of his achievements, when an opening occurs at another university, as it did this year at the University of Washington, his name comes to the fore.

The effort to find a satisfactory replacement for Coach Colson would be problematical. It would also be expensive: Finding and signing a new coaching staff is estimated to cost in the vicinity of $50,000. And having expended that amount, we would have an unproven commodity.

Coach Colson was by no means the only member of our University community to receive an exceptional raise. Among others receiving relatively substantial increments is one of our most distinguished physicists and the Director of our Latin American Institute. Like Coach Colson they are still earning a good deal less than they could obtain if they put themselves on the market. Like Coach Colson, because they are very good at what they do, they have brought very substantial additional revenues to the University. Paradoxically, it is precisely those who hate competitive intercollegiate athletics, precisely those who are unwilling to think of coaches as colleagues, who have the least logically persuasive case against Coach Colson's salary. For if basketball is simply a peripheral revenue-generating activity rather than an integral element of University instruction, then there is no basis for comparing coaching and faculty or staff salaries. Then they are totally separate tracks. And the only question to be asked in the case of coaches is: Are they successful and what must we pay to retain them?

Coach Colson has been successful both as a coach and as the model of a man who competes with dignity and honor. We are fortunate to have him among us.

A satisfactory and sustainable athletic program must, in my view, satisfy three tests. First, it must possess unimpeachable integrity; success must be sought within the rules of the University and the NCAA. Second, it must not draw on revenues which would otherwise be available to support the University's teaching and research functions. Finally, it must have the potential to compete effectively against "peer" institutions. (One's peers may, of course, vary from one sport to another.)

Can a twenty-four-sport program satisfy those tests? The jury is still out.

In this first letter to all members of the faculty and staff, I want to share with you my ideas on a variety of subjects that I am sure concern you and give you an update on various measures I have initiated. Much of what I have to say is undoubtedly familiar, since the local media have in most cases carried fragmentary reports or abbreviated versions of my speeches and statements. Nevertheless, I thought you would probably prefer a fuller presentation than the media can normally provide, a presentation which would cover the main issues I have tried to address and the more important actions I have taken. What follows is not by any means exhaustive; but it does, I hope, touch on most points of major interest and concern.

If I were writing eight months ago, I would naturally begin with a statement of my conception of the purposes of a university. That, however, was the subject of my Commencement Address. Rather than incorporating it directly into this letter, I have included it as an attachment. You may wish to glance at it before reading on.

DIAGNOSIS

A natural progression is from one's sense of the purposes of any university to the distinct circumstances of our own. Before January 2nd, when I arrived and assumed the Presidency, I was the beneficiary of detailed analyses of UNM's condition prepared independently by various members of the faculty and administration. Though writing from a wide variety of perspectives, their diagnoses had much in common. Most expressed in one form or another the following propositions:

1. Given its resources, the University was trying to do too much; to avoid generalized mediocrity, either the University needed to secure substantially more resources or it had to concentrate on a more limited number of tasks.

2. The intramural process of resource allocation was neither open nor systematic. The University operated without benefit of a strategic plan. Chairs, deans, and other unit directors were neither encouraged nor compelled to defend budget requests in light of well-defined and justified goals. In short, the University lacked a well-developed and participatory planning and budgeting process.

3. Channels of communication among the major units of the University were clogged. As a consequence, the left hand was often unaware of the right hand's activities. The legs were also inclined to push off in opposite directions.

4. The Albuquerque community saw the University as detached if not indifferent to the community's concerns, lethargic, and in many respects mediocre. The rest of the state tended to see UNM as an institution serving Albuquerque's interests rather than as The State University.

5. The potential for cooperation with the other research-oriented institutions of higher education in New Mexico and the federally- funded laboratories had hardly been tapped. Nor had much effort been made to explore cooperative ventures with T-VI or APS.

6. Ties to and support from alumni, particularly those outside the Albuquerque area, were very weak, at least when UNM was compared to major public universities in other states.

THE NEW MANAGEMENT TEAM

In order to address these and related concerns voiced both by campus and community leaders, I moved as quickly as possible to establish a new management team and a new style of management. First a word about the team.

When I arrived in January, I established July 1 as a target date for completing my evaluation and revision of senior-management structures and personnel. In large measure, the goal has been reached.

After careful consideration, I concluded that the provostial system did not optimally serve the interests of the University. In its place we now have three vice presidencies: one for Research, one for Academic Affairs, and one for Community and International Programs. As I assume most or all of you know, the latter two positions have been filled respectively by Robert Desiderio (former Dean of the Law School) and Alex Sanchez (former Associate Provost for Community Education). We are in the process of filling the research vice presidency. A number of outstanding applicants have already emerged. It appears that we will have a very rich pool of candidates. I think you would agree that the quality of these candidates is an expression of confidence in the future of the University.

On the Student Affairs side, there have been changes in structure and in personnel. Following the resignation of Marvin "Swede" Johnson, I appointed Mari-Luci Jaramillo (former Associate Dean of the College of Education) to replace him.

At the same time I appointed Leon Griffin (former Chair of HPER in the College of Education) to fill the position of Associate Vice President for Student Affairs, a position that has remained open since the departure of Ted Martinez to become Executive Secretary of the BEF. Concomitant with these changes in personnel, I placed the offices of Development, Alumni Relations, and Police and Parking directly under me and assigned responsibility for KUNM and KNME to Alex Sanchez whose duties encompass all aspects of telecommunications. A major purpose of this reorganization was to allow Mari-Luci and Leon to concentrate exclusively on "student affairs" issues.

Elevating the office of Associate Provost for Research to the level of a full vice presidency should re-enforce our constantly growing achievements in the research area. A main mission of the new vice president will be to strengthen the ties between the University on the one hand, and, on the other, the national and federal laboratories and the private sector. The Vice President for Research will also assist in organizing closer cooperation with research activities at New Mexico State University and New Mexico Institute of Mining and Technology.

The most important additional change in structure on the academic side of the University has been the creation of a vice presidency for Administration and Planning, a position that former Associate Provost Joel Jones has filled since I established it shortly after my arrival. Joel is charged with continuing review of University administration and with the development of a more adequate planning mechanism. In addition he serves somewhat like a chief of staff, working closely with me on a wide range of issues cutting across traditional intramural boundaries.

Yet another important change, this one purely in the realm of personnel, has been the appointment of Joe Goldberg as the new University Counsel. Among his other duties, Joe is charged with reviewing, in consultation with deans, chairs, and unit directors, a vast range of personnel procedures and policies. The purpose of this exercise is to provide us with assurance that such procedures and policies are efficient, fair, sensible in light of each unit's mission, and generally understood.

Leonard Napolitano remains as our universally-admired Dean of the Medical School and Director of the Medical Center. In effect, though for some obscure historical reason not in name, he serves as a Vice President.

With respect to the business, finance, and general support side of the University community, it is the desire of the Regents, with which I concur, that we maintain for at least another year existing

structures. I am delighted that Carroll Lee and Jim Wiegmann have agreed to continue to serve respectively as Associate Vice President for Business/Comptroller and Budget Director.

I am also delighted that Bill Weeks agreed to postpone for a year his planned retirement and will remain Executive Assistant to the President with particular responsibility for legislative liaison. In addition, Bill is coordinating the naturally-linked activities of Public Affairs, Alumni Relations, and Development.

The Office of Institutional Research, so ably directed by Richard Cady, previously located in the Office of the Provost, has in fact been providing a University-wide service. In light of the breadth of its activities, I have placed it directly under me.

As you review these changes, you will note that, with the exception of the new office of Vice President for Administration and Planning, there has been no increase in the number of senior-management positions. Rather there have been changes in personnel and, in some instances, mission. I believe that these changes will greatly strengthen our capacity to facilitate the teaching, research, and community service activities of the University. Let me add that before making any of these changes, I have consulted as broadly as possible with members of the faculty, administration and staff, and, of course, with the Regents. One of my highest priorities in the next six months is to further institutionalize the process of consultation, particularly with deans and chairs. I already meet regularly with the Faculty Senate Operations Committee. It is also my intention to meet periodically with the chairs and the Council of Deans. Inadequate communication is an old problem at UNM, one that I am determined to solve. In order to solve it, I need your advice.

ENHANCING COMMUNICATION AND RESPONSIVENESS

The men and women who have agreed to serve with me share my preference for collegial leadership and for an open, highly participatory decision-making process. They form the "Cabinet" with which I normally meet twice a week. The participants are remarkably free of the sort of turf-guarding obsessions endemic to most bureaucracies. Cabinet government has, I believe, already contributed to a much-enhanced flow of information to all corners of the campus. But a good deal more needs to be done. Last semester I appeared before the Faculty Senate on several occasions, met monthly with the Senate Operations Committee, and weekly with the Senate President. I would like to continue this close contact with the faculty's principal political organ.

Within the past four weeks I have met three times with the Council of Deans. I will continue to consult them frequently. In addition, I hope to arrange periodic meetings with the chairs of all departments and with directors of support units. In addition, I would like more systematic contact with the faculty. To that end, I propose to visit with individual departments as frequently as possible.

In order to strengthen the sense of community at UNM, there must be an easy flow of ideas and information between the President and the diverse groups that form our student body. I have initiated regular meetings with the presidents of ASUNM and GSA. Moreover, with the assistance of Vice President Jaramillo, I am forming a Student Advisory Council which will include not only officers of ASUNM but also representatives of the Presidential Scholars, the honor societies, the "Greeks," the Honors Program, and the intercollegiate athletic teams.

Literally since the day I arrived in New Mexico, I have worked to enhance the external community's perception of UNM. Recognizing that the image it received was often distorted, I have visited with many and diverse groups both within Bernalillo County and in other parts of the state in an effort to communicate an accurate vision of the University. But I quickly realized that the problem was not purely one of poor public relations. Some criticism was merited and required, as a condition of its reduction, substantive change.

A case in point was the Anderson Schools of Management. While possessing certain strengths, the School's curriculum was plainly unresponsive to important features of our business and financial community, unresponsive to the needs it possesses and the opportunities it offers. The Schools did not, for example, offer any program in tourism or real estate development and management. Offerings in the banking area were skeletal. For years, unstable leadership and the lack of firm encouragement from the very center of the University allowed this misfit between the School's program and the surrounding community to persist.

Choosing new leaders for the Schools was one of my first tasks. Fortunately, both in-house candidates, Ray Radosevich and Rod Lievano, enjoyed broad faculty support and shared my view that the Schools had to become far more responsive to community needs. They also concurred in my optimistic assessment of the Schools' and the University's potential. Both agreed to stay, taking on respectively the positions of Dean and Associate Dean. In the ensuing months, the business and financial communities have displayed a vastly-enhanced level of satisfaction with the Schools' performance. Enthusiasm and material aid have replaced criticism and indifference.

Another source of criticism was the University's inability to deliver either a well-developed set of evening degree programs on campus or to project courses off campus through instructional media. The technology for two-way audio-visual hookups was available. The demand was incontestable. The requisite investment was relatively small. But we had been characteristically slow to act. In the spring semester we finally reached the point where we were able to offer a single course, and it was available only at Sandia Laboratories. I authorized the investment required to expand the number and incidence of our courses. This fall we are projecting ten courses to Sandia and Los Alamos. Workplaces throughout Bernalillo County can receive courses whenever they choose to make the small investment required for reception equipment.

The audio-visual connection to Sandia and Los Alamos is only one manifestation of our rapidly growing ties to these vast reservoirs of scientific and engineering talent. The process has been faster in the case of Sandia. Among other developments, we have reached formal agreement on a program of joint appointments. The potential for synergistic collaboration between UNM on the one hand and the national laboratories on the other is now being tapped. Ties with the large federal laboratory at Kirtland, the Air Force Weapons Lab, are also being fostered. In all these cases, however, both sides recognize that collaboration must proceed without compromising the University's traditional commitment to unclassified research subject to peer review.

THE STRATEGIC PLANNING COMMITTEE

Coming on the scene after an unusually long transition aggravated by the trauma of Lobogate, I felt the need to move forward on many fronts even as I reorganized senior management and inaugurated the sort of strategic planning effort every well-run institution must have. I realized that planning exercises of one kind or another have been carried out at various times here at UNM. It nevertheless seemed to me that these efforts have never been adequately integrated into the decision-making process and that in fact the University did not have an authentic medium- or long-term plan to guide year-to-year decisions about legislative packages, budgetary allocations, or other critical activities.

I trust you will agree that no institution can hope to progress without a well-developed planning process which actually guides the process of governance.

Recognizing, as I inevitably did, the inadequacies of past planning efforts, I asked Bob Desiderio to assume the quite frankly enormous responsibility of organizing and directing a strategic planning effort which would encompass the operations of the entire University. Once I convinced him that the results of this effort would serve as the basic guide for my administration, he agreed to accept the chairmanship of the Strategic Planning Committee. Marc Price (the new Associate Vice President for Academic Affairs and the former Chair of Physics and Astronomy) and Mari-Luci Jaramillo agreed to serve as vice-chairs.

The Strategic Planning Committee includes outstanding people from every part of the University community, as well as a number of distinguished persons from outside the University. Its mandate is to assess the strengths and weaknesses of every unit, academic and nonacademic, in light of our mission to serve the people of New Mexico by means of our teaching and research and related activities. In areas of strength, we must know what is required to maintain that strength. In areas of relative weaknesses, we must decide what is required to enhance the quality of the unit and then must decide whether, given the needs of the larger community and the comparative advantage, if any, we may enjoy with respect to the activity in question and considering its importance in relation to other units or to the very idea of a university, we can afford to make the necessary quality-enhancing investment.

The task is enormous. It is also essential. The Committee, consisting of over seventy people, has been broken down into a series of subcommittees. As each subcommittee completes its study of a particular area, it will issue a report. These reports will be widely circulated so that all affected parties will have an ample opportunity to comment on them and to propose amendments and alternatives to the recommendations contained in these reports. We will then move to decision, not impetuously but nevertheless expeditiously.

I am absolutely confident that as a result of this strategic planning process, we will be far better equipped to carry out the missions of the University. There will no doubt be hard choices arising from the recommendations of the committees. I promise to make those choices openly, after full consultation and with respect for the diverse interests and constituencies which comprise the University and the larger community which supports it. At the end of this process we will all know far more about the University, and we will have in place a more precise definition of our purposes and of the measures required to realize them.

I will be disappointed, as well as profoundly surprised, if the planning effort does not expose ways in which we can conduct our affairs more efficiently and thereby liberate funds for reinvestment consistent with the long-term strategy the planning effort will help us to clarify. But there

is a limit to the prodigies we can perform internally. For instance, we could hardly claim to be the comprehensive university every state needs if we eviscerated all those programs that cost more than they generate in formula revenues and research grants. Philosophy, literature, history: these and other disciplines are implicated in the very idea of a university. Without them we are lost in a high-tech world shorn of meaning. Without them we are in a very real sense less human. Our task is to put our house in better order, not to gut it.

In this post-industrial economy where knowledge is king, no state can hope to compete effectively if it fails to invest adequately in the principal knowledge-producing institutions, the universities. In going through a process of self-examination, in responding to community needs, in establishing new links to the federally-funded laboratories and to the other centers of higher education in the state, we are doing all the things legislators have demanded at one time or another as conditions for greater financial support. Having done all that is demanded, we have a right to expect more support.

Perhaps, in order to generate the necessary funds, the state must in some measure restructure the missions of its many institutions of post-secondary education. Proposals have been made from different points on the political spectrum. I and other university presidents have evaluated and analyzed various proposals. Certain provisional reactions are contained in the testimony I presented on August 13th on behalf of UNM, New Mexico State, and New Mexico Tech to the Legislative Higher Education Reevaluation Committee which is attached hereto. But as I mentioned in a letter to Governor Anaya about the same time, major structural reforms require careful preparation and gradual implementation lest in the process of trying to enhance what we have we injure investments made over many decades. In the meantime, all institutions of higher learning, but particularly the three that compete for faculty and graduate students and research contracts in national markets—UNM, State, and Tech—are suffering. The gap between us and our peer institutions in neighboring states is becoming insupportable. If the legislature does not act soon, we will all incur damage that will take years to repair and at a cost far in excess of the cost of prevention.

I think that the University is better organized now than ever before to communicate its needs and justify its requests. Meetings with legislative leaders have left me modestly optimistic. I will continue to meet with legislative leaders in all parts of the state to make the case for UNM and for our colleagues at other institutions who are themselves engaged in a similar, cooperative effort.

By now you are probably beginning to feel like the farmer who went to church one Sunday to hear a new preacher. On arriving he found he was the preacher's entire audience, not a single other person being present. Perhaps on the supposition that so dedicated a man deserved something out of the ordinary, the minister launched into a sermon that continued for an hour and a half. At its conclusion, the preacher walked over to the farmer and asked him what he thought about the sermon. "Well," said the latter, "I was thinkin; that when I have only one cow in the barn, I don't generally dump an entire load of hay into its stall."

While I would like to share ideas with you on many other topics, I suspect that what I have already written, together with the appendices, may be approaching the point of indigestability. So I think I ought to stop here, leaving other topics to future letters or to occasions when we visit together and exchange ideas face to face. In the meantime, I hope you will feel free to send me in writing any comments or ideas or suggestions you care to share.

I believe we have made some progress. I know we have a long way to go before we arrive at the goal I think we all share, namely making UNM an institution admired throughout the country for the quality of its intellectual achievements and its human relations. We have a core of outstanding intellectual figures and first-class programs on which to build. No doubt there are some among us who are satisfied that the rest should remain mediocre. I am convinced that they are a small minority, a minority that will not find this a comfortable place in which to vegetate. Among the majority of faculty and staff I sense hope, but a hope heavily weighted with skepticism, the residue of promises unfulfilled.

I shall do all in my power to overcome that skepticism. I appreciate that words will not suffice. You have heard them all before. And so, quite properly, by my deeds you will judge me. But if you will only stand and watch, I am doomed to fail. For moving the University forward is a collective enterprise. I need your active support and your help. If you will lend them to me, in spite of the skepticism you have learned from experience, I will not disappoint you.

With best wishes.

Yours, sincerely,

Tom J. Farer
President

TJF:mb
Attachments

THE PURPOSES OF THE UNIVERSITY

An Address Presented by Tom J. Farer,
President of The University of New Mexico,
at the Ninety-third Commencement of
The University of New Mexico
May 12, 1985

Six months ago, when I was still living the relatively carefree, rather hermetic life of an academic, I had few incentives to ask myself: What are the purposes of a university and how should the president of one define success, its and his own? But once it became apparent that I, myself, might become a president, these questions shoved their way into the forefront of my thoughts, where they continue to thrash about.

The best definition of a president in this era of financial stringency may be one suggested by a wit who remarked that the president of a university is a man who lives in a big house . . . and begs. Certainly presidents do pass a good bit of time going about and asking legislatures, foundations, corporations, and putatively generous citizens for money. Their attitude and mood in carrying out this task is a function both of personality and confidence about the university's role in society. Sellers of IBM information systems do not wander around with their hat in one hand while the other tugs deferentially on their forelock, assuming they have one. Rather they stride ahead with the unaffected certitude of true believers in the value of their product.

Do presidents and professors have an equal or greater right to such certitude? Well, that's simply another way of framing my original questions to which I now turn. Before sketching my own answers, I want to describe in brief compass answers I have detected in the minds of others. I use the word "detection" with care, since I am referring to ideas that often exist at the far border of consciousness beyond the reach of the individual's own critical intellect.

One view I have detected is that the university is a form of legitimate political prey, a large cluster of jobs available for allocation to people who have paid their political dues or have the right sorts of friends or preferably both. Probably such a perception is inevitable in any state where the university is one of the largest single employers and where the public sector has historically provided an important source of political patronage. Since this notion of the university collides harshly with other ideas about the university's role, ideas often held by the very same people who are affected by what we might call the "cluster-of-jobs" syndrome, the latter perception rarely surfaces openly except, perhaps, in the form of claims about the distinctive virtues or superior rights of New Mexico citizens competing with outsiders who would like to become citizens. Fortunately, most New Mexicans recognize that the future of our state depends on its ability to attract not only industry but also the skilled people who will help service those industries. Because of the state's stunning physical beauty and a unique culture characterized by unselfconscious warmth, courtesy, and generosity of spirit, we continue to attract the kinds of people who, working together with those already here, will help us to transform our economy while preserving the state's cultural inheritance. As long as I am President of UNM, it will remain open to men and women from every part of the country and the world who possess the skills and the character and the commitment one finds on the campuses of all great universities.

The university is also conceived by many as an important part of that ongoing process, terminated only by death or retirement, whereby it is determined who shall succeed and who shall fail in the struggle for place and power. Picture a conveyer belt carrying high-tech widgets whose quality cannot be determined by a simple visual inspection. Experts with sensitive instruments called exams and term papers probe the widgets and then, on the basis of what they discover, grade them. These grades powerfully influence consumer choice. Widgets with high grades are bought for relatively high prices or are selected for new assembly lines called graduate schools where more, albeit highly differentiated, amounts of market value will be added. In this way, it is said, the university contributes to the gross national product and therefore to the sum total of human happiness.

Although the process may indeed have a net positive effect on human happiness—rumors that rich people are less happy than poor ones have yet to convince many of the former to distribute their wealth and

take vows of poverty—it certainly generates a good deal of pain along the way. The mathematically incontrovertible fact is that in any group of men and women, however skilled, about half will be below average. Be that as it may, all modern societies use universities in part as places for testing and credentialing. One consequence is widespread tension, pressure, and often suppressed anger among those being tested. Another, which I will return to shortly, is a tendency to obscure other, more ancient and arguably nobler purposes.

From their inception, the public universities, unlike their older private counterparts in the East, were at least theoretically committed to a stern ideal of meritocracy, that is to say, they would be open to all people of apparently rich intellect rather than indisputably rich fathers. As standards and scholarships rose in the Ivy League, this distinction faded. The stunning inflation of costs at the private universities may resurrect it. Whatever happens in the private sector of academia, I hope and I believe that poverty will not be allowed to bar any man or woman from the opportunity to confirm or enhance their place in the steep socio-economic pecking order of American society.

We Americans live more easily with vast differences in wealth and income than any other people in the West. We do so for two reasons. First, because our culture continues to nurture belief in political and social equality, the rich are not allowed to indulge the belief that they are in some sense morally superior or that they have a right to demand signs of deference. In fact, it is one of the characteristics of the American rich to pretend, even as they descend from large, shiny, and conspicuously expensive cars under the canopies of conspicuously expensive hotels, that they are just good ol' boys who like Lite beer no less than Dick Butkus and Bubba Smith, who by now, one imagines, must be pretty well off themselves.

The second reason we live fairly comfortably with large and manifest inequalities of wealth and economic power is a twinned belief in the possibility of social mobility and, consequently, in a connection between economic success and merit or, if not merit, at least luck, other than the luck of having been born rich, although even in that case it is presumed that this generation's wealth is justified by the skill and hard work of its predecessors.

There are those who argue that social mobility is largely a myth sustained by cheap novels, expensive movies, a handful of anecdotes, and a desperate desire to believe. The vast majority of people who start at the bottom, they argue, end up there no matter how hard they work, while conversely, rare is the wealthy family that does not find some way to keep its children, however indolent and unintelligent, from sinking into poverty. Moreover, they argue, if you start off life by attending the best-funded schools and if you are virtually guaranteed access to some sort of college and if your father always has a friend with a pocketful of comfortable, white-collar jobs and if from birth you are assured by everything around you of your right to live in comfort, it is awfully hard to fail.

I suppose there is some truth to that charge. The achievements of our families do give us handicaps or advantages in the race of life. Nevertheless, it is hard not to be impressed by the evidence of social mobility over generations. Until the last census, I think most people believed that the wealthiest single group in the population remained the old-family white Anglo-Saxon Protestants. But according to the last census, Orientals, Jews, and Italians all ranked ahead of Episcopalians—who are normally white Anglos—in per capita income. Beyond the cold statistics, anyone who moves in the world of law and business sees massive evidence of change in the ethnic composition of senior partners of major law firms and senior management of our most powerful corporations. Popular culture is an equally sensitive indicator of changes in perceptions and power relationships. Forty years ago Al Pacino would have had to change his name to Alan Parsons and would still have had to play the sheikh of Araby or a waiter at the Twenty-one Club. And Barbra Streisand would no doubt have been forced to choose between a career in vaudeville or a change of nose and name. And can you imagine even twenty years ago Eddie Murphy making fools of white cops or Bill Cosby playing an upper-middle-class doctor?

We have come a long way, but we have certainly not achieved paradise. Universities, above all state universities with their relatively low tuition and more flexible entrance standards, have played a large and honorable role in helping people of talent to kick open the doors of opportunity. They have done so by recognizing and rewarding merit, by evaluating and honoring people on the basis of objective standards of achievement rather than the name, color, or class of their ancestors. Universities must continue to hold open the doors of opportunity so that we can move progressively closer to the ideal of a society in which every man and woman is judged by their unique, intrinsic qualities. In that way we honor the American ideal.

Lately, it has become stylish to justify the university's existence on the grounds of its potential contribution to industrial development. Like so many other propositions that govern our lives, the alleged connection between a good university and economic growth cannot be proved like a mathematical theorem. Rather, it rests on an amalgam of evidence and examples which I, too, find fairly convincing. But to assert that there is some connection is one thing; another is to determine its exact nature.

Among the most convincing pieces of evidence is the extraordinary growth of high-technology industry around two epicenters: Cambridge and Boston in the Northeast and Palo Alto and Berkeley in California. For the names of the cities we can substitute those of two clusters of universities: In the East the preeminent ones are Harvard and MIT, but they are, of course, supplemented by many others, including Boston University, Boston College, Northeastern, University of Massachusetts, etc. In California, we have Stanford and Berkeley and a little farther away, Cal Tech, and they too have many supplements.

The sheer fact of these two eruptions of economic development is not all we have to rely on. In addition, many business leaders explicitly relate locational decisions to the educational quality of competing sites.

When one thinks of what modern businesses want and need, the connection is very plausible. One salient aspect of the modern industrial world is the rapidity of change. In order to keep up, workers and managers must continually re-educate themselves. Companies could, of course, band together to create educational centers; clearly, that would be more efficient than each trying to do the job itself. But it is more efficient still to contract out the educational function to institutions already well-established in the field, i.e., the universities.

Similarly, companies could, in theory, do all their own research, including basic research. But here again it is more efficient to interact with universities, the traditional home of basic research. Moreover, universities tend to provide a more congenial environment for many of the sort of men and women drawn to basic research, people who demand freedom from heirarchy; and freedom to pursue the dictates of their imagination rather than the commands of the market. But for them and also for an increasing number of the scientists and engineers and managers of high-tech companies, a congenial environment means more than a good place to do research and continue one's vocational education. It means as well a place where high culture thrives, where there is art, music, theatre, a love of literature, a fascination with the play of mind for its own sake.

If I am right in my perception, two things follow. One is that a university which invests exclusively in science and engineering, while beggaring the humanities, will not complement other incentives to new industry nearly as well as one which moves forward on a broad cultural front. A second is that the city matters too. And it is not enough to offer cheap land and subsidies. Every city seems willing to offer that. But not every city is prepared to invest in theatres and museums and to create in their centers that critical mass of people and shops and restaurants which market forces alone will not create. In every great city—Paris, London, New York, Washington, Boston, San Francisco to name some—government has had to play an important, sometimes a central role, in the creation of those centers of beauty, culture, and pleasure which draw people and draw in their wake the capital and the institutions such people command.

But suppose, just suppose, everything I have said to this point were wrong. Suppose universities did not help people climb higher on the greasy pole of wealth and power or contribute to the wealth of the city and state by attracting or catalyzing industrial development. Would there still be a case for supporting the university? Would men and women of talent still choose academic careers?

When, during the late middle ages and the early renaissance, scholars banded together to form the precursors of our contemporary universities, clearly they were not animated by concern for social mobility or economic development. They came together out of a commonality of spirit and purpose. They believed that they were the conservators of something unspeakably valuable, the entire historical accumulation of ideas and knowledge about God and the human race. That knowledge and that knowledge alone infused life with meaning. Being men and therefore certain to die, to conserve it was necessary to teach, so that knowledge, embedded in the minds of the next generation, would endure.

The men who formed these universities were not, of course, mere passive receptacles of knowledge. They had to sort out truth from falsehood and refine received wisdom in the light of their own unique circumstances and experience. Inevitably they began to inquire into the very process of knowing; and being men of wisdom and intellect and imagination, inevitably they created new possibilities of belief, new ideas about the world, and added these to those they had received.

In the end they were animated by nothing less than the primal human passion to understand more about this world through which each of us makes a brief, one-way passage. When everything else has been lost, when after the great nuclear conflict that will probably engulf us some day men and women crawl out of the ruins, a few will doubtless band together in pursuit of that same passion, for as much as any other it defines what we are.

So there you have the highest purpose of the university. In our time it is easily and often forgotten. But even in our time, here in this state, in different classrooms and laboratories I have visited on the campus of the university I am honored to serve, I have seen the flame of that passion to press against the frontiers of human knowledge. And at such moments I reconsecrate myself to the difficult, frustrating, yet utterly marvelous task of helping preserve a place where inspired men and women work joyfully to understand the past and illuminate the future.

PRESIDENT'S TESTIMONY ON BEHALF OF THE NEW MEXICO RESEARCH-ORIENTED UNIVERSITIES BEFORE THE LEGISLATIVE HIGHER EDUCATION RE-EVALUATION COMMITTEE

HEARING OF THE COMMITTEE HELD AT
THE UNIVERSITY OF NEW MEXICO
August 13, 1985

INTRODUCTION

Good morning ladies and gentlemen of the Legislative Higher Education Re-evaluation Committee. I am Tom Farer, President of the University of New Mexico, and I welcome you to UNM. As requested by cochairman Simms, New Mexico State University, New Mexico Institute of Mining and Technology, and UNM have collaborated on their testimony to minimize duplicative and overlapping presentations. Except where I may so indicate, you may take my testimony as representing the views of the administrations of all three institutions and reflecting their emphasis on research, as well as instruction. For purposes of brevity, I will refer to them as the research-oriented universities although I, of course, recognizè that the regional universities also encourage faculty research, it being, in their case, ancillary to their principal mission: instruction.

With me today is Larry Lattman, President of Tech. President James Halligan of New Mexico State is abroad, and State's Executive Vice President, Dr. William Conroy, is here for Dr. Halligan.

Our testimony will be in three parts: *first*, some general points on funding formulas; *second*, specific recommendations on changes in the New Mexico funding formula that will better enable State, Tech, and UNM to carry out their distinctive missions within the structure of higher education in New Mexico; and *third*, some views on several of the broader issues concerning the financing of higher education in this state.

FORMULA FUNDING

"Formula funding" of higher education has its origins in the 1920's. The idea is to identify measurable quantities of common workload, to estimate the required funding levels for this workload on the basis of measured costs, usually averages, of those units of workload, and to arrive at an appropriation level for each institution based on "workload." In principle, formula funding is based on reliable data, kept up-to-date by cost reporting and analysis, with judicious attention paid to changes in mission and in demand, as well as to the prices which institutions must pay. The process can be characterized as factual, rational, open, and reasonable. Whether it us understandable depends upon the complexity of a particular formula and upon the candor of the parties involved.

I have often heard it said that the purpose of the formula for higher education institutions in New Mexico is "to generate the budget." That is true, but then there are many ways to generate a budget, and some are better than others. It is generally accepted by people who study such things that the main purposes of a funding formula should be:

(1) to assure *adequacy* of funding
(2) to assure *equity* of funding
(3) to *minimize political conflict* between institutions at the executive and legislative levels.

Any evaluation of the existing funding formula must be measured against how well it advances these purposes. One point, at least, is beyond reasonable doubt, namely that the broad variety of activities at the research-oriented universities is inadequately funded by the current formula. Our most important resource—people—consume 70–75 percent of our state Instruction and General appropriations for wages and fringe benefits. As we have repeatedly demonstrated, our faculty salaries are 10–15 percent below averages for comparable institutions. At UNM our staff wages are estimated at 16 percent below the local competition in the public and private sectors in 1984. Faculty at our institutions have lost 20 percent in purchasing power in the last fifteen years. We are continuing our emphasis on pay increases tied to meritorious performance, though I must say that was difficult this year in the light of an average two percent increase. I do not support "across-the-board" adjustments to salaries and wages except when required to do so by collective bargaining agreements. With comparative federal data we can show that appropriations at UNM per FTE student for instruction, research, and overhead categories are well below the regional averages for comparable institutions.

The causes for this inadequate funding are embedded in the assumptions, technical detail, and practical application of the formula. First, there are the invalid assumptions that the only direct activity which has any value as "workload" is instruction, and that research activity by faculty is equally distributed across ranks, disciplines, and institutions. These assumptions are simply untrue, and this lack of differentiation in the formula is particularly disadvantageous for the research-oriented universities where there is concentration of graduate programs and a high priority on research and scholarship. Second, there is the practice of setting funding of faculty according to average costs incurred *within* the state. The three research-oriented institutions normally do not compete for faculty with Highlands, Eastern, and Western. The effect of average costing is to insure substandard wages at the research-oriented institutions.

I should add at this point that the establishment of the centers of technical excellence and endowed chairs were steps tending to counteract somewhat the effects of funding average costs intra-state. I think we all know, however, that these measures, salutary and appreciated as they are, do not provide a long-term, stable solution.

Finally, any funding formula must be kept up-to-date; ours has not been. From 1975, the base year for costs used in the New Mexico formula, to 1984, costs in the Higher Education Price Index increased as follows: fringe benefits, up 163 percent; library materials, up 122 percent; utilities, up 217 percent. The base costs in the formula have not been recalculated. Instead, somewhat arbitrary increments have been added annually to the base. The arbitrary incremental funding provided over these years has simply not kept up with inflation in certain categories of expenditures. Even though we have economized in energy consumption, library materials, fringe benefits, and through some reduction of programs, these inflationary forces have simply devalued appropriations. Similarly, the pervasive impact upon our institutions of computing, and the acquisition and maintenance of sophisticated equipment, is not recognized in the obsolescent parameters in the current formula. As far as the research-oriented universities are concerned, the funding formula has failed the test of *adequacy* of funding.

Equity is a more difficult concept to put into practice by means of a funding formula. First, there is the question of what is meant by equity. There has been a tendency to interpret *equity* as *equality*. If, however, the objective of equity means the *fair treatment* of all institutions, then it appears somewhat difficult to justify the size of the funding differential per unit of instructional workload between the research-oriented and the regional institutions. Similarly it is not equitable to the institutions or to student consumers to fund the summer session or off-campus programs differently from the regular academic-year activities. Yet, the formula as currently applied results in these inequities.

There is another issue of fairness which we believe the legislature should address: the economic incentives which are built into the present formula. These are: (1) *bigger is better*, because additional instructional activity is funded at average costs, not marginal costs; and (2) faculty teaching assignments should be kept at a maximum and class sizes large to obtain more funds for personnel. These incentives toward size may cause decisions to be made more on the basis of economic rather than upon sound educational grounds. It seems clear, I think, that the current formula fails to satisfy the goal of equity from the perspective of the institutions, the state, or the taxpayer.

It is also notable that New Mexico's funding mechanism contains no economic incentive to improve the *quality* of instruction.

Now I come to the third function of funding formulas, that is, to *minimize political conflict among institutions at the executive and legislative levels.* Though the time in office of the three presidents in the New Mexico research-oriented institutions is relatively short, it is our impression that the funding formula has been quite effective on this score. Up to now, the conflict has been largely contained in the formula funding committees made up of institutional representatives, the BEF staff, and the LFC staff. Continuation of this salutary effect depends, however, upon the formula's producing fair and adequate funding for the institutions. The long-term efficacy of the formula in reducing political conflict will depend on the adoption of reforms which will reverse the inequity and inadequacy characterizing contemporary formula funding.

SPECIFIC RECOMMENDATIONS ON THE FORMULA

I turn now to our specific recommendations on the current funding formula:

1. The New Mexico funding formula is based upon a single cost study done ten years ago. All of the parameters in the instructional formula should be re-evaluated and modernized to reflect more accurately current conditions and costs. And there should be annual review of the formula rather than annual postponement of review.

2. The research-oriented universities should not be asked to deliver more instruction per faculty member in lower division mathematics, English, and foreign languages than do the smaller universities unless it is demonstrated that the current funding discrepancy is justified by the availability of graduate teaching assistants in the former set of institutions. Some differential probably is justified, at least in the case of State and UNM, but we very much doubt that it approaches the present 15–20 percent extra funding to the smaller institutions for the *same* courses delivered in the *same* way.

3. Compensation parameters for faculty at research-oriented universities should be set against valid groupings of similar institutions to reflect the marketplace. We endorse the efforts of the LFC to find appropriate external norms.

4. New Mexico should experiment with economic incentives to improve the quality of instruction.

5. For the smaller specialized institutions, such as

Tech, where the programs are limited, and enrollment is thus more affected by prevailing economic conditions, some kind of fixed, programmatic funding is becoming necessary to offset enrollment fluctuations. On the downside of the enrollment curve, New Mexico's average cost method will take away too much funding to permit viability of the programs, or perhaps, of the institutions. In a related matter, institutions which eliminate programs that are adequately offered elsewhere might be allowed to retain a suitable fraction of resources thus freed up to improve the quality of the programs which are retained, provided the retained programs are consistent with defined missions and long-range plans.

6. Specific revisions should be made in the I & G formulas to fund the gross deficiencies that have accumulated for:

—the adequate maintenance and replacement of scientific equipment;

—the replacement of computers which are now so pervasive and whose time to obsolescence is so short, and the funding of maintenance of computers;

—the adequate funding of the summer session.

7. The libraries at our universities are not in good shape. Largely, this is due to the price escalation of over 10 percent/year for the last ten years which the formula simply fails to recognize. Periodic bond issues are helpful but are not the best answer. New Mexico's research-oriented institutions need library funding based upon national standards for their various programs. This should be combined with a statewide, rational plan for collection and sharing which will minimize unnecessary duplication. This plan must include support for the *means* of effective sharing; i.e., a state-wide electronic network to provide access to electronic catalogues of holdings. We endorse the work of the LFC staff and the institutions on adequate funding of libraries.

8. The funding formula should be adjusted to reflect the broader scope and mission of the research-oriented universities. This means that the instructional workload factors need to be lowered or redefined to permit research-oriented universities to increase the amount of externally sponsored R&D which they now capture. In FY 85, State, Tech, and UNM won in excess of $115 million in R&D awards, an amount $30 million greater than the sum of the state-funded instructional budgets at these institutions. This large infusion of resources coming almost entirely from outside the state supports education, creates jobs, leads to greater cooperation with the private sector, stimulates economic development, and is good for the institutions and the whole state.

I might add that we do not accept the notion that research competes with instruction. On the contrary, best teaching is often done by those faculty who are current in their fields and inspired by research and creative activity. This research, moreover, often involves the students and thereby reinforces classroom instruction. This holds true even in the teaching of beginning courses, for the excitement of the search for new knowledge reflects in the excitement of the presentation to students at all levels. If we are going to multiply external resources, it must be recognized that faculty time as well as hard work and creativity are required to obtain high levels of sponsored research. *The formula's imposition on the research-oriented institutions of instructional workloads equal to or greater than that of the other four-year institutions must be changed if we are to claim a growing proportion of R&D funding. Our collective research effort produces an economic impact equivalent to that of an enterprise with an annual payroll in excess of $100 million.*

FINANCING HIGHER EDUCATION IN NEW MEXICO

Let me turn now to the broader question of adequate financing of higher education in New Mexico, of which the funding formula is only a part. What follows are my views, not necessarily those of NMSU and Tech. We need to examine more than the state's standing on appropriations per student or New Mexico's rank order in tuition charges to get a sound understanding of why apparently generous appropriations fail to meet the needs of the research-oriented universities.

In my opinion, one of the major reasons why New Mexico's costs for public higher education are comparatively high is because 95 percent of its higher education enrollment is in *public* institutions. The fifty-state average of 78 percent in public institutions is far lower.

New Mexico also has a comparatively high cost system on a per student basis. The main cause for this high unit cost is the unusual distribution of enrollment in the four-year and two-year sectors. Over 80 percent of New Mexico's FTE enrollment is in the more expensive four-year sector. This, of course, is considerably higher than the fifty-state average of 60 percent in the four-year sector. Nationally, over the last ten years, the per FTE student cost in the four-year sector was two and one-half times the per FTE student cost in the two-year sector. This means that, in order to equal national norms, New Mexico must spend approximately fifteen to twenty percent more per student than the national average merely because of the distribution of its enrollment.

The other main explanation of why relatively high state appropriation produces a level of funding below the norm for comparable research-oriented institutions is low tuition. In 1984-85, New Mexico's tuition was only 44 percent of the national average, and the state ranked forty-seventh in tuition levels. Moreover, the legislature needs to know that tuition and fees as a percent of instructional costs have been steadily declining in New Mexico. With respect to the question of equity, students are charged widely varying fractions of cost of education at the various institutions in our state.

There are many variables which enter into assessment of the state's financing of higher education. When all of the relevant factors are taken into account, i.e., enrollment, appropriations, tuition, the enrollment distribution in the system, legislative allocations to higher education, tax capacity, and tax effort, *New*

Mexico's support for higher education ranks thirty-fourth in the nation, 12 percent below the national average. And New Mexico has been slipping lower over the past three years.

These numbers, of course, reflect a public policy choice. New Mexico has set out to *maximize access* to higher education for its citizens. We do so by assuring access in terms of distance by establishing many small, dispersed two-year institutions. Moreover, we attempt to keep access higher in an economic sense by levying low tuition. The result is a system with a very high cost per student and consequent need for high appropriations per student. We do not make judgment on whether the policy of ready geographic access is appropriate. We ask only that the legislature recognize its consequences and not underfund the research-oriented universities as a result. The truth is that higher education in New Mexico has been losing ground when compared to other states. If this trend continues, the impact on employment and equality of opportunity for low- and middle-income citizens of New Mexico will be disastrous. For we will steadily deteriorate in our capacity to attract industry, incubate new companies, win research contracts, and to provide citizens with a quality education.

ACTIONS WHICH WILL IMPROVE FINANCING

What actions need be taken to permit more adequate financing of higher education without exceeding reasonable fiscal limits? Some say that we should be tested against national norms. We would be content to be tested against national norms and believe that the following actions will bring financing more into line.

a. Redistribute enrollment toward a more developed two-year sector by assuring high quality of instruction in academic transfer programs; secure more inter-institutional cooperation to accomplish effective articulation arrangements for students moving from two-year to four-year institutions; and keep cost of attendance low in the two-year sector.
b. With the exception of graduate programs in education, restrict graduate and professional programs to the research-oriented universities.
c. Establish tuition rates that are tied to a fixed proportion of the cost of instruction at each institution, that proportion to be determined by the legislature. Create an adequate safety net, state-grant program for low-income students to assure that higher tuition will not serve as a bar to any qualified students.
d. Achieve salaries, fringe benefits, and teaching loads in the research-oriented universities which encourage the capture of even more externally funded research and public service programs. Growth is likely if we can get and stay competitive, and that growth creates knowledge, jobs in both public and private sectors, and higher income for New Mexicans.

That concludes our prepared presentation, Mr. Chairman. We are grateful to the committee for asking our advice on these serious matters. We will be happy to respond now or to provide written answers to questions which the committee may have.

THE REPORT OF

THE DEVELOPMENT OFFICE/UNM FOUNDATION, INC.

July 1, 1985 - June 30, 1986

Robert G. Lalicker
Acting Director/Executive Director

TABLE OF CONTENTS

		PAGE
I.	ACTIVITIES	
	A. The Development Office	3
	B. The University of New Mexico Foundation, Inc.	3
	C. General Support Summary	5
	D. Finance and Administration	6
	E. The Annual Fund	9
	F. The Presidential Scholarship Fund	10
	G. Planned Giving	13
	H. Allocation of Unrestricted Funds	14
II.	PLANS FOR THE COMING YEAR	
	A. Finance and Administration	16
	B. The Annual Fund	16
	C. The Presidential Scholarship Program	17
	D. Planned Giving	18
III.	PERSONNEL AND STAFF CHANGES	19
IV.	PROFESSIONAL AND RELATED ACTIVITIES	21

APPENDIX A - UNM Foundation, Inc., Board of Directors
APPENDIX B - General Financial Support Summary
APPENDIX C - UNM Foundation, Inc., Balance Sheet
APPENDIX D - UNM Foundation, Inc., Revenues and Expenses

I. ACTIVITIES

A. The Development Office

The Development Office has general responsibility for organizing, implementing and supervising programs for the development of private financial support to benefit the University of New Mexico. To accomplish this, the Development Office maintains communication with alumni and friends of the institution, as well as with the statewide business and professional communities in order to apprise them of the needs of UNM which are beyond the capabilities of normal sources of funding and to solicit their support in providing the necessary funding to meet these needs.

B. The University of New Mexico Foundation, Inc

In order to provide a mechanism for the receipt acknowledgement, accounting, and expenditure of private support for the University, The University of New Mexico Foundation was incorporated in the State of New Mexico in 1979 and began operations in 1980. It is a 501(C)(3) charitable organization, recognized by the IRS as such and also determined by them to be a public foundation by their

regulation 509(1)(a). These determinations assure donors that all contributions are deductible for tax purposes. The sole purpose of the Foundation is to solicit, receive, hold, invest, and disburse gift funds on behalf of the University of New Mexico.

Foundation operations are managed through the Development Office, with Foundation funds used to fund portions of the Executive Director's and the Research Assistant's salaries and a significiant amount of the operating expenses of Development and Foundation activities. This funding comes from investment income from Foundation controlled gift funds. Management of the Foundation is overseen by a Board of Directors consisting of 36 individuals(See Appendix A).

Officers of the Foundation during the reporting period were Jerry Geist, President; Maxine Friedman, Vice-President; C.E. Woodcock, Treasurer; and the Executive Director, Secretary, Peter Hunter (7/85-9/85), S.Y Jackson, Jr. (10/85-3/86), R.G. Lalicker (4/86-6/86).

C. General Support Summary

A detailed Report of Gifts, listing names of all individual, corporate, foundation and organization donors, is compiled in the fall of each year and will be distributed throughout the University and to all donors when it is completed. However, a summary of all gift support received by the Foundation, the Development Office and/or other offices or departments of the University, whether cash or gifts-in-kind, is attached as Appendix B. This summary shows a total of $8.3 million was received as cash gifts from all sources during 1985-86, as compared to $7 million for the 1984-85 reporting year, an increase of 18.6% When non-cash gifts are added, the total of $8.9 million represents an increase in total private financial support for the University of New Mexico of 8.7% over the previous reporting period.

More detailed financial statements relating to the UNM Foundation's assets and liabilities (Appendix C) and revenues, expenditures and changes in fund balances (Appendix D) are also attached.

D. Finance and Administration

The 1985-86 year was extremely successful for the UNM Foundation, Inc., in terms of fund-raising on behalf of the University of New Mexico. On June 30, 1986, records indicate gift revenue for the 1985-86 year at over $3.6 million received as cash and non-cash gifts. This represents a 43% increase over the previous year's record of $2.5 million. In addition, assets of the Foundation grew from $4.2 million (audited) to $6.2 million (unaudited) at June 30, 1986, an increase of nearly 48% over the previous year.

Much of the growth, both gift revenue and asset accumulation, is attributable to the completion of UNM's most ambitious fund-raising project ever, the $5 Million Development Program, completed in December 1985, under the leadership of Chairman Robert Stamm, a member of the Foundation's Board of Directors. A report on this capital campaign had been made earlier.

The UNM Foundation, Inc. has become the principal repository for private funds generated for specific projects, programs, colleges, departments and offices on

the UNM campus. Gift funds, both generated by the Foundation and/or on behalf of those specific purposes, are on deposit with the Foundation acting as the administrative fund manager. These "agency" funds held by the Foundation increased from 115 separate funds with a value of $909,000 at June 30, 1985, to 217 funds with a value of $2.2 million at June 30, 1986. As much as anything, this indicates an acceptance of the UNM Foundation as the proper and effective private support coordinator for the University. In addition, the Foundation held 41 endowment funds at nearly $1.6 million on June 30, 1986, compared to 35 funds at $1.4 million at the end of the previous fiscal year.

Prior to 1985-86, the UNM Foundation was investing short and long-term funds in-house. Due to changing economic conditions during the year and increasing investable assets, the Investment Committee began consideration of contracting with an investment manager. During the course of the year, a group of over 20 fund managers was pared to seven firms that were invited to make presentations to the Investment Committee. After careful deliberation, Fiduciary Trust Company of New York was selected by the Board of Directors on a probationary basis as the UNM Foundation investment manager. In June 1986, $2.6 million

was placed with Fiduciary Trust for management purposes.

In 1985-86, the Development Office/UNM Foundation, Inc., in conjunction with the UNM Alumni Office, realized a goal that had been initiated in 1984--the installation and utilization of an on-line data base information system--to replace a "batch" records storage system in use since 1970. Purchased in 1984 from Arizona State University, the Alumni/Development Information System became operational in February 1986. For Alumni Office purposes, the system maintains nearly complete biographic and demographic information available on-line for review or overnight for hard copy reports.

The Development portion of the system provides historical gift information, receipt generation, campaign and fund accounting information and a pledge generating system. Since being put into operation, the system maintains information on nearly 90,000 alumni, non-alumni individuals, corporations, foundations and organizations. In 1985-86 the main components of the system were put into operation. It is hoped that refinements and enhancements for both Alumni and Development needs will be functional in 1986-87.

E. The Annual Fund

Great strides were made in the Annual Fund during the year, as demonstrated by the fact that more alumni were solicited, the alumni Annual Fund giving rate increased from 5% to 11% and the Annual Fund revenue increased from $211,000 last year to $250,000, an increase of 18%.

A number of factors contributed to this improvement, such as the appointment in October of an Annual Fund Manager, carefully planned direct mailings, well organized phonathons, more specific appeals, i.e., department and college volunteers calling on their peers/classmates for their particular department or college, and careful and timely followups on pledges made. Certainly, a great deal of the success can be attributed to the fact that faculty, staff, students and alumni were involved in the planning and execution of the specific mailings and phonathons relating to their department/college Annual Fund effort.

Specifically, a mass direct mailing was made to 49,000 alumni in November, excluding several colleges that were planning to conduct their own Annual Fund drives (through our office) later in the year, $43,000 was received. A

phonathon for the College of Engineering was conducted by a professional telemarketing firm in December. A 24% response rate of pledges was achieved and some $18,000 was generated. March saw phonathons conducted by the College of Arts and Sciences and Allied Health Sciences. Alumni and student volunteers generated nearly $25,000 in pledges from 807 alumni in a phonathon conducted during the month. Additional direct mailings of 18,000 were made during the year.

Two professional telemarketing firms conducted simultaneous phonathons for the College of Education in April and $19,000 in pledges was generated by them. Also in April, a direct mail solicitation was made to 8,000 previous all-University donors, which resulted in $14,618 in revenues. Finally, a series of phonathons was conducted for the School of Law in May using alumni and students. Calling only previous donors who had not pledged during the year and "never givers", $15,330 was pledged.

F. Presidential Scholarship Program

Since its establishment eleven years ago, the Presidential Scholarship Program remains as the finest academic

recognition and financial assistance program at the University of New Mexico. Funded primarily by private support generated through the UNM Foundation, the program has attracted hundreds of top scholars from state high schools to UNM. Each year, a campaign carried out by the Development Office staff members and volunteers raises funds to support these outstanding scholarships.

For 1985-86, a total of 522 new and returning scholars were enrolled at UNM; 476 were fully-funded, and 46 were provided from pooled contributions. To respond to continuing program growth, the goal for the 1986 campaign was established at $416,000, or 520 fully-funded scholarships. Full sponsorship was maintained at $800 per scholarship, with the UNM Foundation adding $100 per scholarship and the UNM trust adding $600 per scholarship. As of June 30, 1986, 404 scholarships were logged, with total dollars raised at $357,000, or 86% of the goal. Unfortunately, at that time, 60 scholarships had been lost--22 from just two donors.

Several reasons accounted for these losses, including the battered State economy (particularly in the oil and gas industry), a divestment policy relating to South Africa

established by the UNM Board of Regents, the elimination of Sandia National Laboratories' corporate contribution program, and a turbulent relationship between the UNM President and the Board of Regents aired by the local media. Former Presidential Scholars were solicited by direct mail for their support for the first time this year.

Special acknowledgement and appreciation should go to Susie Cheney, who served as Chairperson of the 1986 Campaign, and to her Vice-Chairperson, Charlie Batsel, who will be Chair of the 1987 Campaign. Another acknowledgement should go to Larry Ahrens of KOB-AM for his sponsorship of the Third Annual Larry Ahrens Golf Tournament, directed by Paul Sjodal and Forrest Putman. The tournament raised $18,000 to support the 1985-86 Presidential Scholarship Program during July 1985. The Fourth Annual Larry Ahrens Golf Tournament was on its way to success on June 30, 1986, directed by Ron Curry.

Other significant activities in this program during the year included the development of an IBM Displaywriter information base to provide increased data on sponsors, solitations made and results, all of which was more easily retrieved for reporting purposes than in previous years.

Also, former Campaign Chairpersons were invited to provide suggestions and recommendations, based upon their own experiences, for the improvement of future campaigns. Finally, the Development Office assumed the administrative responsibility for the Annual Presidential Scholarship Program Dinner, held in April, at which both sponsors and scholars are honored. Special recognition and deep appreciation go to the Maloof Companies for their generous sponsorship of this important event.

G. Planned Giving

While no professional staff member was assigned this responsibility during most of the year, efforts were still successful in encouraging interested persons to provide deferred support for the University through bequests, insurance, trusts, and similar arrangements. The Foundation is presently administering a sizeable Charitable Remainder Annuity Trust, a Charitable Remainder Unitrust, a Pooled Income Plan and several holdings of real estate.

Numerous bequests were arranged in wills of individuals during the year through the assistance of the professional staff.

H. Allocation of Unrestricted Funds

The vast majority of gifts coming to the Development Office/Foundation are earmarked for specific programs, projects, or purposes. However, some gifts are made with no restrictions and certain investment income is also available for use throughout the University where there are identified needs. A screening, or prioritizing, process has been developed over the years to consider requests that come to the Foundation from the various academic and student affairs offices for allocations from these unrestricted funds.

Briefly, proposals received are screened first by the President's Needs Review Committee, then they are sent to the University President with recommendations. Following his review, they are sent to the Foundation's Allocations Committee, composed of only Board members. This Committee's recommendations are then considered by the full Board at their Annual Meeting and approvals/disapprovals are made.

At their annual meeting this May, the Board of Directors approved the following allocations for the 1986-87 academic year:

Department	Project	Total
College of Arts & Science	UNM Advisement/ Information Manual	$ 2,750
Mathematics & Statistics	NM Math Contest	$ 5,000
Political Science	SW Public Policy Symposia Series	$ 4,630
Anthropology/Maxwell Mus.	Organic Archaeological Materials Conservation	$ 3,100
Popejoy Hall	Concert Grand Piano	$32,000
General Library	John Gaw Meem Archive Brochure	$ 1,000
Intensive English Inst./ Resource Center	Training Program for International Teaching Assistants	$ 1,500
Communicative Disorders	Speech Analysis by VISIPITCH	$ 4,160
Modern & Classical Lang./ Zimmerman Library	Hispanic Experience in the US	$ 4,850
General Honors Program	Freshman Curriculum Enhancement Program	$ 1,000
Theatre Arts Dept.	Student filmmaker fund	$ 1,400
Cancer Center	"Dialogues in Basic & Clinical Research"	$ 3,500
VP for Adm. & Planning	Distinguished Teachers Awards	$10,000
Development	Discretionary Fund	$ 3,000
	TOTAL:	$77,890

II. SIGNIFICANT PLANS FOR THE COMING YEAR

A. Finance and Administration

It is necessary for a full-time programmer to be hired to work on the Development/Alumni Office Data Base Information System in order to refine and enhance the system. Every effort will be made to accomplish this.

B. The Annual Fund

The Annual Fund effort in 1986-87 will involve an increased number of phonathons and related direct mail solitations associated with specific colleges and/or departments. Plans are underway to initiate Class Giving Projects for those classes having reunions during Homecoming each year (10th, 25th, 50th). Efforts will be made to increase publicity relating to the Annual Fund through the Mirage and various college and departmental newsletters. Finally, we will request assistance from the Alumni Office to allow information on the Annual Fund to be presented at Alumni meetings, at Alumni Board meetings, and other gatherings of former students.

C. The Presidential Scholarship Program

A timetable, with related staff/volunteer activities, has been developed and presented to the incoming Director of Development for his consideration regarding the organization and conduct of the 1987 PSP Campaign. Early planning, recruitment of volunteers, expansion of the prospective donor list and timely preparation of campaign materials and mailings, coupled with an intensive two-month campaign and immediate clean-up by staff should result in the successful, on-time completion of the 1987 Campaign.

More specifically, the amount of each scholarship to be awarded during the 1987-88 academic year (including the amount of Foundation and University Administration shares) should be determined as soon as possible so that the 1987 Campaign goal can be established. It is hoped to implement some, if not all, of the recommendations of past campaign chairpersons, to wit: (1) naming annually a Leadership Committee to provide counsel and advice to each year's chairperson/vice-chairperson; (2) perhaps recognizing volunteers at the Annual Spring Presidential Scholarship Dinner, rather than at a separate function; (3) assigning

volunteer teams specific goals; (4) recognizing, in some manner, the less-than-full-sponsorship supporters of the program; (5) expanding the list of viable prospective donors and prospect pools; and, finally, (6) increasing the number and quality of volunteers and carefully monitoring their production.

Improved record-keeping, billing, campaign reporting and increased personal contact with current scholarship sponsors during the year are also goals for the coming year.

D. Planned Giving

The employment of a professional person in the position of Associate Director for Planned Giving/Major Gifts will take place early in the 1986-87 year and the hiring of a Research Associate in this area will follow soon thereafter. Such staff assignments should bring about a dramatic increase in private support, through the Foundation, for the University.

III. PERSONNEL AND STAFF CHANGES

DIRECTOR

7/ 1/85 - 9/30/85	Peter F. Hunter(terminated)
10/ 1/85 - 3/14/86	S.Y."Tony" Jackson, Jr. (resigned)
3/17/86 - 6/30/86	Robert G. Lalicker(Acting)

ASSOCIATE DIRECTOR - MAJOR/PLANNED GIVING

7/ 01/85 - 10/ 1/85	S.Y."Tony" Jackson, Jr. (promotion)
10/ 1/85 - 6/30/86	Vacant

ASSOCIATE DIRECTOR - ANNUAL GIVING
(Presidential Scholarship Program)

7/ 1/85 - 6/30/86	Nancy Magnuson

ASSOCIATE DIRECTOR - FINANCE/ADMINISTRATION

7/ 1/85 - 6/30/86	C.W. Vickers

ANNUAL FUND MANAGER

10/ 1/85 - 6/30/86	Randall Williams

DATA MANAGER

7/ 1/85 - 6/30/86	Ann Leonard Mattimore

RESEARCH COORDINATOR

7/ 1/85 - 8/12/85	Susan Stevens(resigned)
8/15/85 -12/31/85	Kathy Liden(temporary)
1/ 1/86 - 6/30/86	Vacant

ACCOUNTING TECHNICIAN

7/ 1/85 - 6/30/86	Lorena Herrera

ADMINISTRATIVE SECRETARY

7/ 1/85 - 9/ 2/85	Vacant
9/ 3/85 - 9/11/85	Christina Macias(resigned)
9/12/85 - 11/14/85	Vacant
11/15/85 - 6/30/86	Paula Woods

DEPARTMENT SECRETARY #1

7/ 1/85 - 11/14/85	Paula Woods(promotion)
12/ 1/85 - 3/28/86	Phyllis Castillo(terminated)
4/ 9/86 - 6/30/86	Linda Spaulding

DEPARTMENT SECRETARY #2

7/ 1/85 - 3/28/86	Deborah Walton(resigned)
4/ 4/86 - 6/30/86	Marti Ford

CLERICAL SPECIALIST V

7/ 1/85 - 6/30/86	Diana Valdez Rodriquez

WORD PROCESSING SPECIALIST #1

7/ 1/85 - 6/30/86	Faustina Castillo

WORD PROCESSING SPECIALIST #2

7/ 1/85 - 6/30/86	Marge Herrmann

CLERICAL SPECIALIST II(Occasional)

7/ 1/85 - 6/30/86	Sandra Erickson

Note: This position was made permanent 7/1/86

WORK-STUDY POSITIONS - 2 allocated

IV. PROFESSIONAL AND RELATED ACTIVITIES

Associate Director - Finance and Administration

CASE, District IV, Nominating Committee
NACUBO
UNM Lobo Club
Focus UNM Group
University Golf Association

Associate Director - Annual Giving
(Presidential Scholarship Program)

Member-at-Large, CASE District IV Board of Directors
Presentor, Round Table at National CASE meeting, July, 1985, Washington, DC
Presentor, Workshop at CASE District IV Conference, April, 1986, Puebla, Mexico
Researcher, New Mexico Futures Committee, December, 1985.
Member, New Mexico AUTOCAP
Member, Junior League of Albuquerque
Who's Who of American Women

Annual Fund Manager

Attended two CASE conferences on annual fund programs and measuring annual giving programs.
Attended Robert F. Sharpe National Institute for Planned Giving.
Active Member of Kiwanis, Navy League, and Association of Naval Aviation.
Taught graduate level courses in Computer Resource Management, and conducted numerous seminars in Management, Development, and Training.
Coached soccer team in American Youth Soccer Assoc.

R O S T E R
UNM FOUNDATION, INC. - BOARD OF DIRECTORS
August 6, 1986

ANN ANDERSON (Phelps) (1988) (Second Term)
612 N. Kentucky
Roswell, NM 88201
Phone: 623-1563 H
Public Relations Committee (Co-Chair)
Centennial Committee

MARGE BECK (Robert) (1990) (First Term)
2617 North Montana Avenue
Roswell, NM 88201
Phone: 624-0619 H
Gifts Committee

ROLFE BLACK (Dorothy) (1990) (First Term)
Seven Bar Flying Service
10001 Coors Road NW
Albuquerque, NM 87114
Phone: 898-1313 O 344-1380 H
Executive Committee

LEE BROWN (Donna) (1992) (Second Term)
P. O. Box 4816
Santa Fe, NM 87501
Phone: 473-2200 O 983-7990 H
Executive Committee and Nominating Committee (Chair)

Replacing:
Randy Seligman
whose term expired.

MARALYN BUDKE (1992) (First Term)
401 Vera Drive
Santa Fe, NM 87501
Phone: 982-3173 H
Allocations Committee and Investment Committee

BETH CRAIN (1988) (Second Term)
9328 Layton Loop
Albuquerque, NM 87111
Phone: 822-7964 H
Allocations Committee

Replacing:
Alan Antweil
who resigned.

GEORGE C. DACEY (Anne) (1988) (First Term)
1201 Cuatro Cerros SE
Albuquerque, NM 87123
Phone: 299-8622 H
Gifts Committee and Nominating Committee

AUBREY DUNN (Betty Jo) (1990) (Second Term)
P. O. Box 386
Alamogordo, NM 88310
Phone: 437-7623 O
Investment Committee

UNM FOUNDATION BOARD ROSTER
8-6-86

GERALD W. MAY (Mary Joyce) (Open)
UNM President
Scholes Hall 160
Albuquerque, NM 87131
Phone: 277-2626 O
Executive Committee

MAXINE FRIEDMAN (Jerry) (1992) (Second Term)
2300 Vista Larga Dr. NE
Albuquerque, NM 87106
Phone: 255-6338 H
Executive Committee and Centennial Committee

GENE GALLEGOS (Felice) (1990) (Second Term)
Jones, Gallegos, Snead & Wertheim
P. O. Box 2228
Santa Fe, NM 87504-2228
Phone: 982-2691 O
Executive Committee and Centennial Committee

JERRY GEIST (Sharon) (1990) (Second Term)
Public Service Co. of New Mexico President
Alvarado Square
Albuquerque, NM 87158
Phone: 848-2835 O 299-1151 H
Executive Committee (Chair)

JACK GRAHAM (Joan) (1992) (Second Term)
9905 Tanoan Drive NE
Albuquerque, NM 87111
Phone: 884-8494 H
Gifts Committee and Real Estate Committee

BEN HERNANDEZ (Vangie) (1988) (First Term)
600 Raynolds SW
Albuquerque, NM 87104
Phone: 242-7993 H
Allocations Committee and Centennial Committee

CHARLES HIGH (Arlene) (1988) (Second Term)
300 W. Hill Avenue
Gallup, NM 87301
Phone: 863-6671 O 863-6637 H
Allocations Committee

H. B. HORN (Lucille) (1992) (Second Term)
P. O. Box 8765
Albuquerque, NM 87198
Phone: 265-3553 O 266-7019 H
Investment Committee and Centennial Committee

JOHN LAFLIN (Marge) (1990) (First Term)
2400 Louisiana NE - Suite 330
Albuquerque, NM 87110
Phone: 883-0679 O 298-9980 H
Gifts Committee

CHARLES LANIER (Rita) (1992) (Second Term)
New Mexico Title & Abstract President
301 Gold SW
Albuquerque, NM 87102
Phone: 247-1011 O 255-7393 H
Gifts Committee and Real Estate Committee

CARROLL J. LEE (Open)
Associate Vice President
for Business and Comptroller
Scholes Hall 227
Albuquerque, NM 87131
Phone: 277-5111 O 883-7682 H
Investment Committee

JACK LITTLE (Patty) (1992) (Second Term)
c/o Daniels Insurance Inc.
4157 Montgomery Blvd. NE
Albuquerque, NM 87109
Phone: 884-8111 O
Gifts Committee and Nominating Committee

Replacing:
Jack Daniels
whose term expired.

EDWARD L. LUJAN (Virginia) (1992) (First Term)
President
The Manual Lujan Agencies
2001 San Mateo Blvd. NE
Albuquerque, NM 87110
Phone: 266-7771 O 881-6489 H
Investment Committee

JEAN MACEY (Bill) (1988) (First Term)
7010 Javelina Drive
Tucson, AZ 85718
Phone: (602)299-3131 H
P. O. Box 360
Alto, NM 87312
Phone: 336-4448 H
Public Relations Committee

CYRENE MAPEL (Frank) (1988) (Second Term)
1616 Park Avenue SW
Albuquerque, NM 87104
Phone: 247-2008 H
Allocations Committee (Chair) and Nominating Committee

UNM FOUNDATION BOARD ROSTER
8-6-86

RICHARD MORRIS (Mary) (1990) (First Term)
El Paso Natural Gas Co.
P. O. Box 1492
El Paso, TX 79978
Phone: (915)541-2600 O
Gifts Committee

LEONARD NAPOLITANO (Jane) (1992) (Second Term)
Dean - School of Medicine
Basic Medical Science Bldg. #177
Albuquerque, NM 87131
Phone: 277-2321 O 298-9087 H
Gifts Committee

JOHN PEROVICH (June) (1990) (First Term)
1314 Calle del Ranchero NE
Albuquerque, NM 87106
Phone: 277-1314 O 266-6856 H
Investment Committee

RICHARD ROWLEY, II (Judy) (1988) (Second Term)
P. O. Box 790
Clovis, NM 88101
Phone: 763-4457 O 763-5437 H
Investment Committee

JACK RUST (Donna) (1992) (Second Term)
Rust Tractor
P. O. Box 25007
Albuquerque, NM 87125
Phone: 345-8411 O 831-3607 H
Executive Committee and Centennial Committee

JOHN SALAZAR (Terrie) (1990) (First Term)
Rodey Law Firm
P. O. Box 1888
Albuquerque, NM 87103
Phone: 765-5900 O 345-5288 H
Public Relations Committee (Chair)
Nominating Committee and Centennial Committee

Replaced:
Robert G. Lalicker
August 4, 1986

JOSEPH W. SKEHEN (Debbie)
Director of Development
and UNM Foundation
Hodgin Hall
University of New Mexico
Albuquerque, NM 87131
Phone: 277-4503 O 823-9676 H

JEAN SETH (Judge Oliver) (1988) (First Term)
P. O. Drawer I
Santa Fe, NM 87501
Phone: 983-3207
Litchfield, Arizona phone: (602)935-4874 H
Public Relations Committee

ROBERT STAMM (Florence) (1988) (First Term)
P. O. Box 25027
Albuquerque, NM 87125
Phone: 765-1200 O 242-9320 H
Gifts Committee (Chair) and Centennial Committee

BILL TAYLOR (Pat) (1992) (Second Term)
3600 Lincoln Plaza
500 N Akard Street
Dallas, TX 75201
Phone: (214)748-7261 O (214)351-2121 H
Investment Committee

FRANCISCO URREA, JR. (Alberta) (1990) (Second Term)
Summa Medical Corporation
4272 Balloon Park Road NE
Albuquerque, NM 87109
Phone: 345-3551 O 884-5014 H
Gifts Committee

BOB WERTHEIM (Liz) (1990) (First Term)
Southwest Mortgage Company
P. O. Box 11519
Albuquerque, NM 87192
Phone: 291-3007 O 293-6100 H
Investment Committee (Chair)

C. E. WOODCOCK (Mary) (1988) (Second Term)
P. O. Box 25365
Albuquerque, NM 87125
Phone: 243-7867 O 266-1369 H
Treasurer, Executive Committee

EX-OFFICIO MEMBER

Steve Merrick
UNM Alumni Relations
Hodgin Hall
Albuquerque, NM 87131
Phone: 277-5808 O

UNM FOUNDATION BOARD ROSTER
8-6-86

STAFF PERSONNEL

Joseph W. Skehen - Director	277-9076
Chuck Vickers - Associate Director	277-9079
Nancy Magnuson - Associate Director	277-9077
Randall Williams - Annual Fund	277-9075
Ann Leonard - Data Manager	277-9074
Open - Research Assistant/Staff Writer	277-9074
Open - Administrative Secretary	277-5640
Lorena Herrera - Accounting Technician	277-0689
Marge Herrmann - Word Processing Specialist	277-5649
Faustina Castillo - Word Processing Specialist	277-0691
Marti Ford - Department Secretary	277-9094
Linda Spaulding - Department Secretary	277-0093
Diana Rodriguez - Clerical Specialist VI	277-9078
Sandra Erickson - Clerical Specialist II	277-5649

1985-86
PRIVATE VOLUNTARY SUPPORT
SUMMARY

	1985-86 UNM Foundation	1985-86 Other UNM Agencies	1985-86 TOTAL (Combined)	1984-85 TOTAL (Combined)
SOURCE				
ALUMNI	705,410.87	163,307.43	868,718.30	464,040.53
Non-Alumni Individuals	421,944.06	203,403.80	625,347.86	1,654,720.90
Business/Corporate	1,317,116.12	1,964,784.01	3,281,900.13	1,310,824.75
Organizations	42,758.79	812,884.02	855,642.81	767,191.63
Foundations, Estates, Miscellaneous	667,832.74	624,550.75	1,292,383.49	1,666,558.17
Fund Raising Projects	62,609.07	1,304,361.00	1,366,970.07	1,152,095.22
TOTAL (Cash Gifts)	3,217,671.65	5,073,291.01	8,290,962.66	7,015,431.20
PURPOSE				
Financial Aid	557,889.18	210,343.38	768,232.56	1,027,112.91
Instruction/Departmental	253,306.71	400.00	253,706.71	354,351.21
Research	41,779.75	2,237,493.78	2,279,273.53	1,436,846.15
Unrestricted	287,936.55	3,869.44	291,805.99	170,220.26
Library Materials	158,576.00	492.00	159,068.00	19,935.40
Special Projects	1,398,425.73	651,322.09	2,049,747.82	673,577.08
KNME-TV	0.00	1,304,361.00	1,304,361.00	1,064,683.52
Athletics	40,042.69	626,459.32	666,502.01	541,484.46
Bldg.Construction/Equipment	164,238.87	38,550.00	202,788.87	120,327.05
Life Income Funds	5,000.00	0.00	5,000.00	208,112.93
Endowment: Scholarship	147,437.23	0.00	147,437.23	272,883.80
Other	163,038.94	0.00	163,038.94	1,125,896.43
TOTAL (Cash Gifts)	3,217,671.65	5,073,291.01	8,290,962.66	7,015,431.20
Non-Cash Gifts*	342,235.00	310,246.89	652,481.89	1,211,752.81
TOTAL VOLUNTARY SUPPORT	3,559,906.65	5,383,537.90	8,943,444.55	8,227,184.01

SOURCE	1985-86	1984-85	1983-84	1982-83	1981-82	1980-81
ALUMNI	868,718.30	464,040.53	524,849.19	553,441.23	372,659.25	429,150.42
Non-Alumni Individuals	625,347.86	1,654,720.90	506,321.45	640,217.56	594,280.17	453,843.87
Business/Corporate	3,281,900.13	1,310,824.75	1,268,289.22	1,147,980.18	836,316.66	802,584.29
Organizations	855,642.81	767,191.63	616,743.45	368,762.58	368,586.55	355,793.95
Foundations, Estates, Miscellaneous	1,292,383.49	1,666,358.17	1,909,173.28	1,718,053.21	1,288,817.47	1,408,173.25
Fund Raising Projects	1,366,970.07	1,152,095.22	977,358.95	765,262.49	580,626.26	374,791.72
TOTAL Cash Gifts (all SOURCES)	8,290,962.66	7,015,431.20	5,302,735.54	5,193,717.25	4,021,286.36	3,824,337.50
PURPOSE						
Financial Aid	768,232.56	1,027,112.91	771,709.31	923,038.56	548,692.88	559,798.36
Instructional/Departmental	253,706.71	354,351.21	187,400.27	449,283.29	203,761.03	300,818.00
Research	2,279,273.53	1,436,846.15	1,288,787.25	857,429.59	705,982.03	542,689.32
Unrestricted	291,805.99	170,220.26	184,041.26	113,379.93	80,148.96	71,695.70
Library Materials	159,068.00	19,935.40	19,646.08	13,998.49	16,233.37	30,572.13
Special Projects	2,049,747.82	673,577.08	798,536.42	1,225,438.76	888,116.32	855,076.87
KNME-TV	1,304,361.00	1,064,683.52	946,969.42	712,013.00	537,990.97	374,798.72
Athletics	666,502.01	541,484.46	514,618.08	611,222.52	430,585.74	391,282.05
Bldg.Construction/Equipment	202,788.87	120,327.05	146,212.08	87,127.33	117,487.22	101,733.81
Life Income Funds	5,000.00	208,112.93	0.00	5,000.00	77,621.62	0.00
Endowment: Scholarship	147,437.23	272,883.80	423,703.30	195,785.78	414,666.22	595,872.54
Other	163,038.94	1,125,896.43	21,112.07	n/a	n/a	n/a
TOTAL Cash Gifts (all PURPOSES)	8,290,962.66	7,015,431.20	5,302,735.54	5,193,717.25	4,021,286.36	3,824,337.50
Non-Cash Gifts*	652,481.89	1,211,752.81	1,764,924.77	857,618.37	915,167.15	434,654.46
TOTAL VOLUNTARY SUPPORT	8,943,444.55	8,227,184.01	7,067,660.31	6,051,335.62	4,936,453.51	4,258,991.96

*Estimated Value

UNH FOUNDATION, INC.

Balance Sheet

June 30, 1986

(Subject to Audit Adjustments)

ASSETS	Operating	General	Endowment	Life Income Funds	Capital Campaign	TOTAL Combined Funds
Cash	14,429.84	1,074,240.81	26,534.04	17,177.70	(207,326.04)	925,056.35
Invested Cash*	0.00	2,209,229.34	512,040.81	0.00	0.00	2,721,270.15
Imprest	552.81	(6,901.06)	0.00	8,598.54	0.00	2,250.29
CD's**	0.00	0.00	200,000.00	93,308.94	0.00	293,308.94
Interest Receivable	0.00	10,003.69	59.72	941.22	0.00	11,004.63
Securities/Bonds	0.00	25,400.00	750,000.00	207,430.17	0.00	982,830.17
Other Receivalbe	35.05	10,000.00	100,000.00	0.00	0.00	110,035.05
Prop/Equipment***	1,458.03	614,178.71	0.00	340,000.00	0.00	955,636.74
Def.Costs	0.00	0.00	0.00	0.00	207,326.04	207,326.04
TOTAL ASSETS	16,475.73	3,936,151.49	1,588,634.57	667,456.57	0.00	6,208,718.36
LIAB\FUND BALANCES						
Cap.Lease	2,045.82	0.00	0.00	0.00	0.00	2,045.82
Schol.Payable	0.00	44,432.35	0.00	0.00	0.00	44,432.35
Alloc.Payable	0.00	100,444.75	0.00	0.00	0.00	100,444.75
Other Payable	2,327.24	11,584.99	0.00	380,739.05	0.00	394,651.28
Restricted Gifts						
Pass Thru	0.00	197,108.77	0.00	0.00	0.00	197,108.77
PSP Full	0.00	213,333.41	0.00	0.00	0.00	213,333.41
PSP Pool	0.00	277,771.11	0.00	0.00	0.00	277,771.11
Other Design.****	0.00	2,219,659.02	0.00	0.00	0.00	2,219,659.02
UR-Allocable	0.00	110,771.10	0.00	0.00	0.00	110,771.10
UR-Dev.Program	0.00	52,668.72	0.00	0.00	0.00	52,668.72
UR-Property	0.00	614,178.71	0.00	0.00	0.00	614,178.71
Due to Participants	0.00	0.00	0.00	695.24	0.00	695.24
Total Liab.	4,373.06	3,841,952.93	0.00	381,434.29	0.00	4,227,760.28
Fund Balances						
Restricted*****	0.00	0.00	1,551,634.57	286,022.28	0.00	1,837,656.85
Unrestricted	12,102.67	94,198.56	37,000.00	0.00	0.00	143,301.23
TOTAL LIABILITIES/ FUND BALANCES	16,475.73	3,936,151.49	1,588,634.57	667,456.57	0.00	6,208,718.36

APPENDIX C

UNM FOUNDATION, INC.

Revenues, Expenses, Changes in Fund Balances

July 1, 1985 - June 30, 1986

(Subject to Audit Adjustments)

REVENUE	Operating	General	Endowment	Life Income	Capital Campaign	TOTAL Combined Funds
Gifts:						
PSP	0.00	392,460.34	0.00	0.00	0.00	392,460.34
Unrestricted	0.00	284,176.55	0.00	0.00	0.00	284,176.55
Other	0.00	1,940,067.13	0.00	0.00	0.00	1,940,067.13
Pass Thru	0.00	286,683.88	0.00	0.00	0.00	286,683.88
Endowment	0.00	0.00	156,013.78	0.00	0.00	156,013.78
Life Income	0.00	0.00	0.00	5,000.00	0.00	5,000.00
Non-Cash	0.00	342,235.00	0.00	0.00	0.00	342,235.00
Contributed Services	250,094.45	0.00	0.00	0.00	0.00	250,094.45
TOTAL Gift Revenue	250,094.45	3,245,622.90	156,013.78	5,000.00	0.00	3,656,731.13
Interest/Dividends	4,559.45	272,105.68	3,191.10	33,106.89	0.00	312,963.12
Other	5,675.94	104,253.53	58,723.77	30,000.00	0.00	198,653.24
TOTAL REVENUE	260,329.84	3,621,982.11	217,928.65	68,106.89	0.00	4,168,347.49
EXPENSES						
Operating Costs	319,910.16	0.00	0.00	11,200.84	0.00	331,111.00
Gift Expense	0.00	3,245,622.90	0.00	0.00	0.00	3,245,622.90
Pay.to Participants	0.00	190,416.51	0.00	50,409.73	0.00	240,826.24
Other	0.00	104,253.53	0.00	0.00	0.00	104,253.53
TOTAL EXPENSES	319,910.16	3,540,292.94	0.00	61,610.57	0.00	3,921,813.67
REVENUE OVER EXPENSE	(59,580.32)	81,689.17	217,928.65	6,496.32	0.00	246,533.82
Net Transfers	62,894.56	(62,894.56)	0.00	0.00	0.00	0.00
Change in Fund Balance	3,314.24	18,794.61	217,928.65	6,496.32	0.00	246,533.82
Beg. Fund Balance	8,788.43	75,403.95	1,370,705.92	279,525.99	0.00	1,734,424.29
ENDING FUND BALANCE	12,102.67	94,198.56	1,588,634.57	286,022.31	0.00	1,980,958.11

APPENDIX D

ALUMNI ASSOCIATION
THE UNIVERSITY OF NEW MEXICO
July 1, 1985 - June 30, 1986
Steven R. Merrick, Acting Executive Director

The UNM Alumni Association is a non-profit membership organization whose main purpose is to promote and support the University of New Mexico. All former students of UNM who have been enrolled for credit shall be considered regular members of the Association.

The Alumni Relations Office, with a staff of thirteen, is a budgeted department of the University of New Mexico and administers all functions of the Alumni Association.

I. Alumni Chapter Program

We currently have 35 chapters in place nationwide. The purpose of a chapter is to provide a link between the university and the alumni in a given community. The chapters are the backbone of the Association and serve as an effective source of news and information concerning the university and alumni activities. This year new chapters were inaugurated in the following cities: New York City, San Antonio, and Tucson.

Lobo Day celebrations were held in 28 chapter cities across the country with 1500 alumni participating in a salute to UNM's founding. UNM faculty and staff served as speakers at many of these Lobo Day events. The Lobo Day season kick-off was sponsored by the Albuquerque alumni chapter celebration at the Hilton Hotel on February 28 with Ann Bingaman as speaker.

Thirty chapter representatives participated in an Alumni Council meeting and workshop on June 6/7 in Hodgin Hall.

Sixteen Alumni Community Scholarships were awarded by the in-state alumni chapters.

The second corporate alumni chapter was launched at a reception held at Mountain Bell headquarters in February. About thirty-five alumni were on hand to hear President Tom Farer. Following the reception, a six-member steering committee was formed to carry on the functions of the chapter.

III. Alumni Awards Program

The Alumni Association sponsors awards which recognize alumni for their various contributions to professional, community, and university endeavors.

This year the Zimmerman Award, which is the highest honor that can be bestowed upon an alumnus, was presented to Ed Lewis, publisher of Essence Magazine at the Fall Homecoming activities. The other two awards, the Bernard S. Rodey and the Award of Distinction were not issued during the year.

IV. Homecoming

One of the traditional programs conducted by the Alumni Association is the annual Homecoming celebration. This year Homecoming was held during the week of October 21-26, and the theme was "The Year of the Lobo." Over 800 alumni and families participated in the annual Southwest Fiesta prior to the Homecoming game. The King and Queen were presented at halftime, and the Classes of 1935, 1960, and 1975 held reunions with 1000 alumni in attendance.

V. Trailblazers

The Trailblazers is an alumni-sponsored student organization created to foster spirit, volunteerism, and service to alumni and the university. Forty students comprised this year's club.

VI. Alumni Lettermen's Association

The Lettermen's Association is sanctioned by the Alumni Association and has a fifteen-member board of directors which includes the Directors of Men's and Women's Athletics and the Alumni Director. Lettermen's membership saw an increase from 200 dues-payers in 1984 to 325 in 1985. Highlights of this year's activities included 1) five post-eligibility scholarships awarded to senior athletes, 2) Lettermen's Room campaign drive kick-off, 3) the formation of an Athletic Hall of Honor which will annually induct a selected group of outstanding former UNM athletes and/or coaches at Homecoming, 4) the annual Homecoming cocktail party and membership breakfast, 5) participation in the opening of the new track stadium, and 6) a pledge to support the weight room expansion and football stadium expansion project.

VII. Annual Fund

The Annual Fund campaign was restructured this year. A direct mail appeal was instituted and went out to 48,000 alumni. The Fund raised $200,000 in pledges from alumni and friends.

The alumni Phonothon was organized by the Association and 80 alumni volunteers helped raise $24,000 in pledges. The Alumni Association received a total of $50,590 from the unrestricted UNM Foundation fund.

VIII. Alumni Publications

The Alumni Association published the Mirage magazine four times, and each issue was distributed to over 55,000 alumni, faculty, and staff. The magazine is edited by the Public Affairs and Alumni Relations staffs, and a publications/publicity committee comprised of alumni volunteers helped plan the content and format.

A quarterly chapter newsletter was sent to the officers/directors of the 35 chapters nationwide.

IX. Staff

The following personnel actions occurred:

June 10, 1985	Patricia Walter hired as CS V, Bookkeeper
June 14, 1985	Cheryl Cormican resigned as Administrative Secretary

June 28, 1985	Mary Nelson retired as CS VI, Bookkeeper
July 1, 1985	Kathy Edwards was upgraded from CS V to Administrative Assistant
July 8, 1985	Patsy Maes was hired as CS V for Records
July 11, 1985	Margaret Weinrod was hired as Administrative Secretary
December 1, 1985	Steve Merrick was hired as Associate Director
May 5, 1986	Ed Waller resigned as Executive Director
May 7, 1986	Steve Merrick was named as Acting Executive Director
May 1986	Mary Lynn changed from occasional part-time to permanent part-time Administrative Secretary

X. Athletic Liaison

Over 1000 alumni and boosters participated in the 1985 pre-game parties held before the Lobo football games in Albuquerque. A greater emphasis to work closely with the Athletic Department and with the Lobo Club was instituted this year by the Alumni Relations Office.

XI. Student Recruitment

The Alumni Association works in cooperation with the Office of School Relations and the College Enrichment Program in an effort to recruit top students to UNM. This year alumni-hosted student receptions were held in Roswell, Alamogordo, Carlsbad, Clovis, Los Alamos, Hobbs, Las Cruces, and Amarillo. Eighty-five alumni visited top Albuquerque area high school seniors in their homes as part of the home visit recruitment program. Over 150 top senior high school students and their parents were hosted by Albuquerque alumni at two receptions held in Hodgin Hall on the UNM campus. Alumni, faculty, and staff presented "Pride of New Mexico" pins to all of the top high school students that were visited by alumni or participated in the receptions.

XII. Legislative Relations

The Legislative Liaison Committee hosted a cocktail reception in Santa Fe for alumni legislators in January. Each legislator was presented with a colorful alumni T-shirt with their name printed on it. Over one hundred alumni, faculty, staff, and legislators participated in a reception at Hodgin Hall prior to a Lobo home basketball game. The Committee sponsored the UNM Marimba Band playing in the rotunda of the State Capitol Building during the legislative session. Bernalillo County alumni teamed with key faculty and staff and set up cocktail parties and lunches for Bernalillo County legislators. Alumni legislative liaison representatives met with their local legislators in designated cities around the state in an effort to help promote UNM and higher education.

XII. Tours Program

During the year the Association had over 114 alumni participate in seven separate tours that were offered. The tours program offers alumni and their families an opportunity to see magnificent parts of our country and the world at affordable prices. Tours included the following:

July - New England - 7 participants

October - Rhine Journey - 14 participants

November - Hong Kong - 24 participants

February - Panama Canal - 10 participants

March - South America - 32 participants

June - Scotland - 1 participant

- Alaska - 26 participants

The Association suffered many cancellations due to world-wide tension and terrorist activity. The entire tour industry was affected by this phenomenon.

XIII. Alumni Memorial Chapel

The Alumni Association oversees the scheduling of the Alumni Memorial Chapel. This year over 200 weddings and recitals took place at the Chapel. In addition, the Chapel provided a serve to alumni, faculty, and students for such activities as memorial services and related events.

XIX. Visa Program

A new income-producing program was instituted in January of this year. The UNM Alumni Association and First National Bank of Albuquerque cooperatively initiated a Visa card program for UNM alumni. An initial start-up fee and a portion of the finance charge for each active account will be paid to the Alumni Association.

XX. Insurance Program

A major medical insurance program was instituted during this year. The Alumni Association and Association Consultants, Inc., of Chicago cooperatively initiated a medical package underwritten by American Motorists and the Kemper Group for UNM alumni. A percentage of the total insurance coverage package issued will be paid to the Alumni Association.

XXI. UNM Internal Audit

In May, the UNM Auditing Department began a full Alumni Relations/Alumni Association audit. The report was not completed before June 30, 1986.

XXII. UNM Alumni Association

The Association Board of Directors met at its required three meetings during the year. The bylaws are being reviewed to increase the total amount of board members. The Strategic Planning Committee is planning a full-scale review of the Alumni Association to provide direction

SPORTS INFORMATION

THE UNIVERSITY OF NEW MEXICO

John Keith, Director
Greg Remington, Assistant

Athletic Bldg., South Campus
Albuquerque, NM 87131
Telephone: (505) 277-2026

1985-86 UNIVERSITY OF NEW MEXICO

MEN'S ATHLETICS

ANNUAL REPORT

Prepared by the UNM Men's
Sports Information Office
John Keith, Director
Greg Remington, Assistant
Ross Haefer, Grad. Assistant
Jeff Wells, Student Assistant

Sept. 20, 1986

SPORTS INFORMATION

THE UNIVERSITY OF NEW MEXICO

John Keith, Director
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ALL SPORTS RECAP -- 1985-86 SEASON

Sport	Head Coach (Years)	Record
Soccer	Klaus Weber (1st)	Overall: 9-5-2; RMISL: 6-2
Cross Country	Del Hessel (6)	WAC: 4th
Football	Joe Lee Dunn (3)	Overall: 3-8; WAC: 2-6, T7th
Indoor Track	Del Hessel (6)	WAC: 6th
Swimming	Bill Spahn (5)	WAC: 1st; Duals: 4-2
Wrestling	Bill Dotson (8)	WAC: 3rd; Duals: 9-5
Basketball	Gary Colson (6)	Overall: 17-14; WAC: 8-8, 5th
Gymnastics	Rusty Mitchell (20)	WAC: 1st; NCAA: 8th; Duals: 7-1
Outdoor Track	Del Hessel (6)	WAC: 4th; Duals: 1-3
Tennis	David Geatz (4)	WAC: 3rd; Duals: 20-13
Baseball	Vince Cappelli (10)	Overall: 26-21-1; WAC: 16-8, 2nd East
Golf	Dwaine Knight (9)	WAC: 2nd; NCAA: 26th

1985-86 INDIVIDUAL HONORS

Sport	Athlete	Honor
Soccer	David Robertson	RMISL 1st team midfielder/sweeper
	Bruce Boeke	RMISL 1st team midfielder/defender
	Tommy Smith	RMISL 2nd team forward
	Jon Toman	RMISL 2nd team midfielder
Football	Willie Turral	All-WAC 2nd team running back
	Ron Keller	All-WAC 2nd team punter
Swimming	Duncan Cruickshank	All-America (1,650-freestyle)
Basketball	Johnny Brown	All-WAC first team Honorable Mention All-America (AP)
Gymnastics	Chad Fox	All-America (vault)
	Tom Novak	All-America (pommel horse)
	Scott Burr	All-America (rings)
Tennis	Tim Cass/Steve Bickham	All-America doubles
	Jack Griffin	All-WAC first team
	Jesus Rojo	WAC Newcomer of the Year
Baseball	Glen Russell	All-WAC first team/All-Dist. 9, 2nd
	Steve Sparks	All-WAC first team/All-Dist. 9, 2nd
Golf	John Kienle	All-America/All-WAC first team
	Sean Murphy	All-WAC second team

1985 LOBO FOOTBALL

The Lobos finished a disappointing 3-8 overall and 2-6 in the Western Athletic Conference, tying Wyoming for seventh place. Although the record was less than satisfying for head coach Joe Lee Dunn and his troops, the UNM offense finished third in the nation in 1985 averaging 469.5 yards a game. There were also many team and individual records set by the Lobos' new run-and-shoot offense.

UNM eclipsed single game marks for yards passing (458 vs. Wyoming), total plays (99 vs. Utah), and kickoff returns (10 at San Diego State). Season records included passes completed (194), passing yards (3,245), passing yards per game (295.0), total yards (5,165), total offense per game (469.5), first downs passing (134) and total first downs (260). Individual kudos went to junior quarterback Billy Rucker who set UNM single game standards for yards passing (468 vs. Wyoming), total offense (487 vs. Wyoming), total plays (68 vs. San Diego State) and season records for total plays (432) and total offense (2,857). Senior running back Willie Turral finished his career at UNM with 2,520 yards, third best and 465 attempts, fifth best. Turral scored 26 points at Utah (4TDs, one 2-pt.) and set a WAC record in the process. Willie set a UNM season record by scoring 14 touchdowns and tied Mike Williams' career mark with 31 TDs. Freshman sensation Terance Mathis finished 18th in the nation averaging 133.6 all-purpose yards a game. Rucker finished 10th in the nation in total offense and 18th in passing effeciency. Punter Ron Keller placed 16th nationally with a 42.2 average. Head coach Joe Lee Dunn completed his third season at New Mexico with a 13-22 overall record. The Lobos hope for a better season in 1986 as nine of 11 starters return on offense. Defensively, UNM hopes to shore up some holes with junior college transfers.

1985-86 LOBO BASKETBALL

The University of New Mexico men's basketball team finished 17-14 overall and 8-8 in the Western Athletic Conference, good for fifth place. The Lobos have recorded 60 wins the past three years, the second highest total over any three-year span in the school's history. UNM notched 62 wins between 1977-79.

The Lobos advanced to the semifinals of the WAC Tournament for the third consecutive year, a feat accomplished only by UNM and Texas-El Paso. UNM dumped BYU, 79-68, the quarterfinals, only to lose to Wyoming, 56-54 on a last second shot in Laramie.

UNM played in the National Invitation Tournament (NIT) for the third straight year. No other Lobo teams have gone to three straight post season tournaments. UNM lost to Texas, 69-66, in the first round.

UNM finished the 1985-86 season with an 829-727 record through 83 years but 414-255 since the 1962 season. The Lobos are 259-67 in the Pit, and 158-29 against non-conference teams. UNM was 14-4 in '85-86 in University Arena.

Attendance at University Arena was 306,908 for 18 games, the third best total in the Pit's 20 years. An average of 17,050 passed through the turnstiles each game, good for fourth in the nation behind Syracuse, Kentucky, and Louisville. The Lobos have been in the top 10 in national attendance average every year since the Pit opened in 1966, a claim no other school in the country can make. UNM increased its attendance by 802 a game from 1984-85.

The Lobos set one NCAA record and a team record last year. Against Oregon State, UNM canned 35-of-43 shots or 81.4% eclipsing the national mark set by Fresno State (34-42, 81.0%) against Portland State in 1978. The Lobos also scored 132 points (132-95 win) versus U.S. International breaking the old mark of 129 points set against Arizona in 1979.

The Lobos played against five teams that advanced to the NCAA Tournament losing to Georgetown, Arizona, Michigan State, UTEP twice and splitting a pair of games with Utah. The Lobos had an 8-5 mark against non-conference opponents.

Head coach Gary Colson completed his sixth season at New Mexico with a 99-82 overall record, the fourth winningest coach at UNM. Gary is 440-288 through 27 years, making him the 12th winningest active coach in the nation.

The 1985-86 season marked the end of a great two-year career for captain Johnny Brown. The 6-6 foward from Los Angeles finished his stint at UNM as the seventh all-time leading scorer with 1,157 in just two seasons. Johnny's 649 points in 1985-86 was the third best single season in Lobo history. Johnny was All-WAC in 1985-86 and second team two years ago. Brown was one of 30 finalists for the John Wooden Award, awarded annually to the top collegiate basketball player in the nation. Johnny was the lone senior on the team.

Other individual accolades went to Kelvin Scarborough, who finished first in the WAC in assists for the second straight year. Scar also placed third in the conference in steals. Mike Winters was fifth in the league in assists and Rob Loeffel was tied for third in blocks.

Gary Colson returns 10 lettermen for the 1986-87 season plus redshirt Hunter Greene, who missed last year with an ankle injury. Greene was UNM's third leading scorer in 1984-85.

1985 LOBO SOCCER

In Craig Robertson's third and final season as UNM soccer coach the Lobos tallied a 9-5-2 season record, 6-2 in Rocky Mountain Intercollegiate Soccer League play, with a ninth-place ranking in the Midwest Region, ISAA poll. UNM's three-year record stands at 31-12-3 under the tutelage of coach Craig Robertson.

Four Lobos received all-league honors in 1985. Junior fullback Bruce Boeke and junior midfielder David Robertson received first-team honors, while junior defenseman Tom Smith and senior midfielder Jon Toman were voted to the second team. Robertson received further postseason honors when he was selected to the Western Regional U.S. select team and played in the prestigious Olympic Festival in Houston ,Texas. Robertson led the Lobos in the scoring department for the second year in a row with 12 goals and seven assists for a total of 31 points.

In season highlights, UNM defeated North Texas State, 4-3, a team ranked 20th in the nation at the time of the match. UNM staged strong performances against other soccer powers such as San Diego State, losing 3-2 in overtime, and Air Force Academy, with UNM again losing 3-2 in overtime.

1985-86 LOBO WRESTLING

The UNM wrestling team finished 1985 with a 9-5 dual record and a third-place finish in the 1985-86 WAC Championships.

Individually, the Lobos posted WAC champions in three weight classes when junior Greg Gascon, 118, junior Chris Luttrell, 134, and senior Ralph Harrison, 150, captured championships in their respective weight divisions.

(cont.)

Senior Luis Loya, 126, joined Gascon, Luttrell and Harrison as the foursome selected to represent the WAC in the 1985-86 NCAA Division I Championships, held at University of Iowa's Carver Hawkeye Arena, March 13-15. This year's NCAA tournament marked the third time Luttrell and Harrison received NCAA nods during their UNM wrestling careers. Unfortunately, Greg Gascon was not able to compete in the NCAA's due to a leg injury sustained in the WAC tournament. Loya, selected as first alternate by WAC coaches, replaced Gascon as the WAC representative.

Gascon, a junior college transfer from Cypress JC, led the Lobo team in dual meet victories posting a 29-8-1 season record.

UNM junior Bruce Garner, 118, redshirted in the '85 season after capturing a WAC title in '84 while leading the Lobos with a 26-9 season mark. Garner will return to the lineup in '86.

UNM freshman TeDon Fleischman, 142, was a bright spot in the Lobo attack in '85. Fleischman compiled an 18-14 season record and tallied a third-place finish in the WAC tournament.

Head coach Bill Dotson finished his sixth season as UNM mentor. The former two-time NCAA champion wrestler from Northern Iowa University continues his quest for a WAC team title while molding top quality wrestlers and upgrading the UNM program each season.

1985-86 LOBO TENNIS

The Lobos logged a 21-13 team record in the '85-86 season while finishing third in the WAC Championships held at Brigham Young University. UNM entered the WAC tournament with the best record among WAC opponents, as the Lobos topped San Diego State, UTEP and BYU while managing a split with Utah during season play. As the WAC touranment unfolded, the Lobos defeated Colorado State, 9-0, in the first round of action, followed by a loss to host BYU, 3-5. UNM battled back in the second round, besting San Diego State, 5-3, ending up with a third-place finish behind 1986 WAC champion Utah and runnerup BYU.

1985-86 LOBO TENNIS cont.

In WAC tournament play, UNM's #1 singles player Jack Griffin tallied a 27-15 record in season play, but was then eliminated by San Diego State's Russell Meyers, 5-7, 7-5, 6-4, in the second round of the tournament. The junior from La Jolla, California, was voted to the All-WAC team and will return to UNM for his senior season. Griffin finished the '85-86 season ranked sixth in the WAC Region VII singles poll.

Lobo senior Tim Cass finished a quality tennis career at UNM with a 18-17 record in singles, ranked eighth in the Region VII poll. Cass capped his UNM career teaming with doubles partner Steve Bickham to capture the WAC title in doubles play while logging a 31-9 record in season play. The talented duo advanced to the NCAA Championships in Athens, Georgia where they battled their way to the quarterfinals to capture All-America honors. Cass and Bickham defeated the team of Sponaugle-Hultquist in the opening round, followed by an upset victory over Stanford's top-ranked doubles team of Goldie-Grabb. Next up was the University of Alabama's team of Hahn-Ferreira who put the brakes on the Cass-Bickham surge, but not before the top-notch duo had established themselves as one of the best doubles teams in UNM history.

An added bright spot in 1985-86 Lobo tennis was the addition of freshman Jesus Rojo, who was voted the WAC's Newcomer of the Year by WAC coaches. The powerful freshman from Mazatlan, Mexico, advanced to the third round in WAC singles play before being eliminated by WAC champion Christian Schultes from Utah, 6-3, 5-7, 6-4.

1985-86 LOBO SWIMMING

In head coach Bill Spahn's fifth season as UNM swim mentor, he watched a talented and persistent squad capture UNM's first WAC swim title since 1973.

LOBO SWIMMING (cont.)

The '85-86 Lobo team, led by All-American and defending WAC champion Duncan Cruickshank, and three-time defending WAC champion Gordy Westerberg, sent five tankmen to the NCAA Men's Swimming Championships in Indianapolis, Indiana.

In only his sophomore season Cruickshank established high marks in the early weeks of the season when he posted a 9:17.36 clocking in the 1,000 meters. Team captain Westerberg provided team leadership in and out of the pool the entire season.

UNM hosted the WAC Championships as spectators watched the Lobos, defending WAC champ Hawaii, and Utah lock up in a heated battle for the top spot. The Lobos prevailed as Cruickshank led the Lobos to 392 points through the 18 events, topping second-place Hawaii, 370.5, followed by Utah with 336 points.

Cruickshank and Westerberg were joined by sophomore Mark Granovsky, freshman Mikael Holmertz, and senior freestyler Hakan Jonsson as UNM representatives in the 1986 NCAAs. Cruickshank won the WAC in the 500 and 1,650 freestyle events and went on to set two UNM records while at Indianapolis. At the NCAAs Cruickshank finished eighteenth in the 500-yard freestyle with a 4:23.96 clocking, followed by a ninth-place finish in the 1,650 freestyle with a time of 15:09.14. Westerberg capped his UNM swimming career finishing first in the WAC 400-yard IM (4:01.18.) While at Indianapolis Westerberg set another UNM record, tallying a twenty-ninth place finish in the 400 with a 3:57.07 clocking. In the 100-yard butterfly event Mikael Holmertz swam a 48.97 clocking for a first-place finish in the WAC, followed by a twentieth-place finish at the NCAAs with a time of 48.93 in the 100 fly, and yet another UNM record. In the 800 freestyle relay UNM tankmen Cruickshank, Holmertz, Granovsky and Jonsson teamed to give UNM the top spot in the WAC championships. Subsequently, the Lobos were eliminated in the NCAA prelims with a 6:29.39 clocking in the 800 relay.

LOBO TRACK AND FIELD

LOBO CROSS COUNTRY

"Unpredictable and interchangeable," are the words UNM track coach Del Hessel used to describe the 1985 cross country team prior to the opening meet. After losing graduated seniors and cross-country mainstays Phil Armijo, Adam Kedge and Richie Martinez Hessel had to look for a talented field of underclassmen to pull the load.

UNM ran well in the first outing while tallying a second-place finish in the George Kyte Invitational in Flagstaff, Arizona. Unfortunately, following the opener sophomore Bill Mangan decided to redshirt in '85 while team leader senior Greg Keith continued to battle a sore achilles tendon which plagued him throughout the prior season. Keith battled the injury and finished third in the Lobo Fast 4 Mile pacing UNM to a first-place finish as a team. Junior Tom Glass became an instant bright spot in the Lobo attack when he finished third in the Kyte eight-kilometer race, and followed-up with a fourth-place finish in the Lobo Fast 4.

Coach Hessel in his sixth season at UNM continued to use the cross country season primarily to prepare his athletes for the following indoor and outdoor campaigns. Hessel's philosophy has continued to produce quality middle-distance runners under his tutelage.

The Lobos finished the cross country season with a fourth-place team finish at the Air Force Invitational in Colorado Springs, followed by a fourth-place mark at the Arizona Invitational.

LOBO INDOOR TRACK

UNM opened with the Zia Classic in Albuquerque's Tingley Coliseum where the Lobos finished third behind UTEP and Texas Tech. While Hessel was somewhat

LOBO INDOOR TRACK cont.

disappointed in the outcome of the opener, nonetheless, UNM fared well in spite of numerous injuries and a host of underclassmen. A knee injury kept high jumper Mike Foster out of the lineup, while sprinter Shawn Taylor was sidelined by a sore hamstring. The Lobos were also without the services of sprinter Gabriel Okon who waited for the transfer release to arrive from Lincoln University where Okon has previously competed. To make matters worse, coach Hessel watched his former runners win the distance medley relay, as graduated Lobos Richie Martinez, Jeff Turcotte, Ibrahim Hussein and Phil Armijo pounded the Tingley boards.

The tempo remained the same throughout the indoor season as the Lobos battled injuries and academic inadequacies resulting in a patchwork lineup for Del Hessel. UNM finished sixth in the WAC championships with senior Greg Keith as the lone Lobo winner with a victory in the mile with a 4:09.4 clocking.

LOBO OUTDOOR TRACK

UNM experienced a highlight in Lobo track and field history prior to the opening meet of the '86 outdoor season. The new Great Friends of UNM Track and Field Stadium was completed and ready to go for the Lobo opener. The long-awaited million-dollar stadium ranks among the top track and field facilities in the nation. Since coach Del Hassel's arrival at UNM the Lobos had not been able to hold home meets due to the inadequate track within University Stadium. The new stadium will become a valued recruiting tool and welcome addition to the entire track and field community. The new stadium enables UNM to bid for national track events in addition to accommodating New Mexico high school meets and invitationals.

LOBO OUTDOOR TRACK cont.

The new stadium also features the John Baker warmup lounge, dedicated to the courageous effort and leadership demonstrated by the former UNM track star until cancer took his life in 1970 at the age of 26. Baker is a credit to UNM track and field tradition, while the warmup lounge dedicated in his honor will provide his fellow athletes with a warm and comfortable place to stretch and concentrate before races.

Coach Hessel took full advantage of the sunny weather and a new facility, hosting five home meets. UNM featured an attack led by a strong corp of middle distance runners and a talented sprinter form Lagos, Nigeria, by the name of Gabriel Okon. Okon, in his freshman season set school records in the 100 meters (10.10) and the 200 meters (20.27) qualifying for the NCAAs in the 200. Senior Greg Keith led the middle-distance parade with a 3:46.4 clocking in the 1,500 meters.

The field events experienced marked improvement under the leadership of assistant coach Richard Shanahan. Sophomore Darren Crawford set a school record in the shot put with a toss of 59'2" bettering the old mark of 58'10" held by Larry Kennedy which was established in 1965.

Basketball player-turned-triple jumper Larry Markland added points to UNM's attack as the front-line Lobo hoopster tallied a 42-3½ mark in the triple jump. Markland was a welcome surprise for the UNM team this season, and hopefully will continue to persue his long-jumping and triple-jumping career.

UNM finished fourth in the WAC championships with 75 points behind WAC champion Brigham Young, 187, San Diego State, 149, and Texas-El Paso, 118. Greg Keith led UNM in the 1,500 with a first-place finish (3:45.87). Senior Richie Martinez tallied a good time in the 800 meters with a 1:51.42 clocking, good enough for a fourth-place mark.

1986 LOBO GYMNASTICS

1986 was a year of questions answered for Lobo Coach Rusty Mitchell. Will the freshmen perform up to expectations? Would the veterans, also young, come through again? Could this team make the NCAA Championships without a senior? The answer to all of the questions was a solid yes.

Mitchell started the '85-86 campaign with a squad made up of a junior, four sophomores and four freshmen who had never competed in intercollegiate gymnastics. There was a very good reason to think that this might be a rebuilding season, especially in view of the loss of four time All-American Matt Arnot last season. Events quickly proved the fears groundless.

The Lobos' first competition at the Rocky Mountain Invitational saw them easily outpointing the rest of the field, junior Neil Merrion won All-Around honors with an impressive 55.05. In addition, freshman Chad Fox won both the floor exercise and vaulting events, a feat which was to be repeated several times.

As the season progressed, it became apparent that the overall talent level was making the experience factor less of a disadvantage than first thought. With a good showing (3rd, 262.90) at the tough Oklahoma Invitational, the Lobos were ready for their first home meet.

With Houston Baptist making a visit to University Arena to start off the home schedule, New Mexico produced one of the nation's best efforts of the early season. The Lobos' 268.95 placed UNM in the Top Ten, a position they were to hold for the rest of the season. Later wins over Oklahoma and at the Titan Invitational solidified the lofty rankings.

The Lobos' only real disappointment of the season came with their fifth-place showing at the LA Times Invitational. The 275.70 was the team's second-best mark of the season, but relatively low scores on both parallel and high bars kept UNM from placing higher.

After defeating both Houston Baptist at Houston and Illinois and CSU Fullerton at home, UNM made ready for the WAC Championships with a meet at tough Arizona State. Unfortunately for the Wolfpack, Tempe was less than friendly, with the hometown Sun Devils winning the meet by almost 10 points.

The Western Athletic Conference Championships put the Lobos back on their winning ways as UNM easily defeated BYU and Air Force for the conference crown. After finishing a strong fourth at the prestigious PAC-10 Invitational, the tenth-ranked Lobos made ready for the NCAA Championships in Lincoln, Nebraska.

A decided underdog going into Lincoln, UNM nevertheless fought to and eithth-place finish in the team standings. Of the six individuals qualifying for the individual titles, Chad Fox and Tom Novak were given the best shot at capturing a national championship.

Novak finished sixth in his specialty, pommel horse, but freshman Chad Fox, whose regular season performances were the surprise of the year, beat out stiff competition for the championship in vaulting. In that event, Fox was beaten only once in 12 outings.

Perhaps the best news out of the Championships is the fact that all of the Lobos return for next season, with only Neil Merrion graduating in 1987.

1985-86 LOBO BASEBALL

The University of New Mexico baseball team continued to carry the tag "record-setters" after the 1986 season. UNM finished second in the Western Athletic Conference Eastern division and earned its second straight trip to the WAC playoffs, a first for Lobo baseball. UNM finished with a 26-21-1 overall mark and 16-8 in the WAC, tying a school standard for conference victories.

Back to the records. The Lobos set WAC hitting records for batting (.361), runs (280), hits (342), RBIs (257) and total bases set a WAC mark scoring 44 runs in 24 conference games.

Although the Lobos lost two straight in the WAC playoffs, the season was a very satisfying one for the players and head coach Vince Cappelli. Cappelli, completing his 10th season, had lost 11 players from the 1985 squad that was 42-17 and ranked nationally. Included in the group were six players drafted into professional baseball. So, there were a lot of questions when the 1986 season started. On a personal note, Cappelli surpassed Bob Leigh, Lobo head coach from 1966-76, as UNM's all-time winningest baseball coach. Vince has a 322-253-5 record entering the 1987 campaign. The biggest yardstick of collegiate baseball, though, is how many players advance into the pro ranks. UNM ranks near the top of the list sending 10 players in the past three years, with eight still active.

1985-86 LOBO GOLF

The University of New Mexico men's golf team pocketed four first place wins, two seconds, one third and failed to place in the top

10 in just one of 12 tournaments in 1985-86. The Lobos traveled to the NCAA Championships hosted by Wake Forest and finished 26th out of 31 teams. It was UNM's 29th appearance at the collegiate finals in the past 31 years.

UNM won the Falcon Invitational in the fall of '85 and the Bronco Invitational, Ventura Cup and Western New Mexico Invitational in the Spring of 1986. The Lobos took second in the Western Athletic Conference championships in Kona, Hawaii, for the second consecutive year.

Individually, junior John Kienle earned All-American status. The Albuquerque Manzano grad took the top spot in three tournaments and finished second in two others, including the WAC. Sophomore Sean Murphy was a second team All-WAC selection by finishing sixth in Hawaii.

Head coach Dwaine Knight completed his ninth year as men's golf coach. Knight has coached the Lobos to one WAC title and three seconds. He has produced 13 All-WAC performers and eight All-Americans. Knight annually conducts all facets of William H. Tucker Invitational golf tournament, held at UNM's south course the last weekend in September. The Tucker, now in its 32nd year, is the second oldest collegiate tournament in the nation, and brings in the best college golfers in the country.

The 1986-86 season promises to be even better since UNM returns all its lettermen from 1985-86.

YEAR END REPORT

Women's Athletics

July 1, 1985 - June 30, 1986

Submitted By:
Dr. Pat Trainor
Women's Sports
Information Director

TABLE OF CONTENT

PAGE

Summary of Program 1

Listing of Coaches & Records 5

High Country Athletic Conference Standings 6

Athlete Awards 7

Summary By Sport

Basketball

Results 9

Roster 10

Golf

Results 11

Roster 12

Gymnastics

Results 13

Roster 14

Skiing

Results 15

Roster 16

Softball

Results 17

Roster 18

Swimming

Results 19

Roster 19

Tennis

Results 20

Roster 21

Track & Field

Cross Country 22

Results 22

Roster 23

Volleyball

Results 24

Roster 25

Summary of the Program

Women's Athletics continued to be an intricle part of the University and the collegiate sports world. The ten women's sports sponsored by the University maintained their level of competition despite unsettling occurrences within the University. The 1985-86 school year saw a newer [illegible] president assume office amidst controversy from the govenor, and later from the Board of Regents. The University also experienced budgetary constraints. All of these factors had an effect on UNM's academic and athletic programs. Perhaps the best indicator of UNM's athletic performance was the HCAC Conference Cup, which is awarded to an institution on a point basis according to team finishes throughout the year. Since its inception four years ago, New Mexico has always placed second, just points away from BYU. This year UNM lipped to third behind New Mexico State and BYU. UNM teams found themselves in an unusual position, that of being in the middle rather than in first or second place for many of the team finishes. But again this was perhaps a reflection on the economic times facing higher education.

Several of the individual sports did well during their season. In the fall, cross country was again nationally ranked for a fourth year in a row. They placed third at HCAC, but more importantly, they placed [illegible] second at the District 7 Championships which qualified the team to compete [illegible] at the NCAA's. This was the first time in a number of years that UNM had [illegible] qualified as a team for nationals. The Lobos finished 14th out of 16. [illegible] teams, and Carole Roybal bacame a two-time All American.

The ski team qualified once again for nationals, where they maintained their 6th place finish from the year before. Two skiers received All American honors for a second time, Anders Peinert and Mia Wahlqvist, both from the alpine squad.

At the conclusion of golf competition in the spring, the Lobos were ranked 20th with the top 17 teams going to nationals. This was the first time in Lady Lobo history that the team did not qualify for nationals. But New Mexico was represented by Caroline Keggi who competed as an individual. Making up six strokes on the back nine on the Ohio State Course, Keggi tied for runner-up honors, one stroke behind the leader. Later in the summer, Keggi received All American honors when she was selected to Golf Week's gold team

The gymnastics team was plagued by injuries but still had two athletes that qualified for regional competition. Freshmen Lisa Pank and Amy Mategrano finished 21st and 23rd in the all around competition. They should be even stronger in the coming year.

The sports of swimming, tennis and track were competitive within the Conference, finishing in the middle of the pack. Swimming had two All Conference athletes; tennis had one All Conference athlete in singles; and track had two athletes that received All Conference honors.

The three team sports were also competitive within the conference. Volleyball lost two key players at the beginning of their season which had a definite effect on their outcome. Competing with a young squad, they finished sixth, but gained valuable experience that will be an asset next year. Basketball played one of their toughest schedules ever and with a young team. The inexperience showed when they lost several games by three points or less after leading throughout the game. They did,

however, finish fourth in the Conference, two spots higher than the sixth place finish they received in the HCAC preseason poll. Softball was once again nationally ranked much of their season. They too had a young team which competed well in the Conference Play-Offs, but the experienced Utah State team was more than the Lobos could handle. Senior, firstbaseman Kathy Dyer had an outstanding season receiving All American honors. This was the first time in Lobo history that a team sport has had an athlete receive All American recognition.

There were several assistant coaching positions that changed at the end of the year. Four year assistant basketball coach Frankie Walsh resigned to take a position with New Mexico Activities Association. Cross Country coach and assistant track coach Cindy Schmandt elected to choose marriage over coaching, and she was replaced by Judy Allen. Two promotions occured at the end of the year. Jeff Thompson was promoted to first assistant coach in basketball, with Lyn Anatasio being hired as the second assistant. Ken Johnson was promoted to co-coach with Susan Craig in softball.

In all, considerong the youth on a majority of the eams, the UNM athletes accomplished a great deal. These young athletes will only improve with experience. This year 22 New Mexico athletes from all ten sports were selected to All Conference teams or received honorable mention. Four women and one male skier obtained All American status, three of them for a second time. Four sports (cross country, golf, ski and softball) were nationally ranked during their season. Cross country, skiing and golf, went on to represent New Mexico in their respective NCAA Championships.

After a good summer of recruiting, UNM women's sports look to be in a much stronger position for the coming year. They should gain some ground against BYU and regain their position as a top contender in the High Country Athletic Conference. On the national level, New Mexico successfully made a bid to host the NCAA women's Golf Championship in 1987. The upcoming year should be an exciting one for women's athletics.

COACH RECORDS
SUMMARY

SPORT	COACH ASST. COACH	YEARS AT UNM	SEASON RECORD	UNM RECORD	CAREER RECORD	CONFERENCE FINISH	NATIONAL FINISH
Basketball	Doug Hoselton Frankie Walsh Jeff Thompson	6 4 1	11-18	78-89	78-89	4th(5-7)	-
Golf	John Speary	2	No way to compute win-loss record.			2nd	Caroline Keggi runner-up All-American
Gymnastics	Pete Longdon	4	4-14	50-45	50-45	4th	Regional 2 qualified finished 21st & 23rd
Skiing	George Brooks Klaus Weber	16 11	No way to compute win-loss record.			3rd	6th 2 All-American
Softball	Susan Craig Ken Johnson	9 6	22-15	248-189-1	248-189-1	3rd	1 All-American
Swimming	Bill Spahn	5	No way to compute win-loss record.			3rd	-
Tennis	Kathy Kolankiewicz	1	7-15	7-15	7-15	3rd	-
Track	Mike MacEachen	4	No way to compute win-loss record.			4th	-
Cross Country	Cindy Schmandt	3	No way to compute win-loss record.			3rd	14th
Volleyball	Laurel Kessel Blase Czerniakowski	3 1	8-17	52-45	52-45	6th(2-10)	1 All-American

HIGH COUNTRY ATHLETIC CONFERENCE

TEAM FINISHES

1985-86

	UNM	BYU	CSU	NMSU	UTAH	UTAH ST	WYO	*CREIGHTON	**UTEP
BASKETBALL	11-18 5-7 4th	16-11 9-3 2nd(t)	7-21 4-8 6th	20-8 9-3 2nd(t)	21-8 11-1 1st	3-28 0-12 7th	9-18 4-8 5th	-	-
CROSS COUNTRY	3rd	1st	4th	-	6th	7th	5th	-	2nd
GOLF	2nd	3rd	4th	1st	-	-	5th	-	-
GYMNASTICS	4th 171.60	3rd 177.75	-	-	1st 186.85	2nd 181.15	-	-	-
SOFTBALL	22-15 5-5 3rd	-	13-17 3-7 6th	21-26 5-5 4th	15-25 4-6 5th	26-8 8-2 1st	-	35-20 5-5 2nd	-
SKIING***	3rd	-	-	-	1st	-	2nd	-	-
SWIMMING	3rd	1st	2nd	4th	6th	-	5th	-	-
TENNIS	3rd	1st	5th	4th	2nd	-	-	-	-
TRACK & FIELD	4th	1st	5th	-	7th	3rd	6th	-	2nd
VOLLEYBALL	8-17 2-10 6th	32-9 10-2 2nd	25-8 11-1 1st	15-16 5-7 5th	20-11 8-4 3rd	1-33 0-12 7th	18-16 6-6 4th	-	-

* Affiliate member - softball
** Affiliate member - cross country, track & field
*** - Regional finish

UNM Women's Athletics Awards

Basketball
- MVP - Tracy Satran
- Defense - Winifred Foster
- Offense - Connie Jensen

Cross Country
- MVP - Carole Roybal
- Coach's Award - Dawn Eriacho
- Most Improved - Dolores Zamora

Golf
- MVP - Caroline Keggi
- Most Improved - Tara Fleming
- Coach's Award - Sarah Zwemke

Gymnastics
- MVP - Molly Frots

Skiing
- MVP, alpine - Danielle Labrie
- MVP, nordic - Heidi Sorensen
- Most Improved - Karen Currie

Softball
- MVP - Kathy Dyer
- Offensive - Kathy Dyer
- Defensive - Sue Inman
- Lobo Award - Beth Unterbrink

Swimming
- MVP - Karen Snyder
- Lobo Award - Karen Nixon
- Most Improved Diver - Melanie Marshall

Tennis
- MVP - Karen Curry
- Most Improved - Ute Schroff

Track
- MVP - Carole Roybal
- MVP, runner - Carole Roybal
- MVP, field - Kim Werner

Volleyball
- MVP - JoAnne O'Connell
- Most Improved - Jewel Johnson

All American Awards

Cross Country - Carole Roybal, first team
Skiing - Mia Walhqvist, alpine, first team
Anders Piernert, alpine, second team
Softball - Kathy Dyer, first team
Golf - Caroline Keggi, gold team

All Conference Awards

Volleyball - JoAnne O'Connell, honorable mention
Cross Country - Carole Roybal, first team
Dawn Eriacho, first team
Basketball - Connie Jensen, second team
Winifred Foster, second team
Tracy Satran, honorable mention
Skiing - Heidi Sorensen, nordic, first team
Wenche Hokholt, nordic, first team
Anders Peinert, alpine, first team (male)
Gymnastics - Amy Mategrano, all around, first team
Swimming - Karen Snyder, first team
Sarah Spoehr, first team
Tennis - Karen Curry, singles, first team
Softball - Arlene Hernandez, first team
Kathy Dyer, first team
Shelia Blonigan, first team
Sue Inman, first team
Beth Unterbrink, first team
Golf - Caroline Keggi, first team
Tara Fleming, first team
Susan Wineinger, first team
Track - Michelle Richardson, first team
Kim Werner, first team

UNM BASKETBALL
FINAL RESULTS - 1985-86

				UNM-OPP	Record	HCAC
Nov.	29-30		at Minnesota Tournament			
	29	L	Minnesota	57-68	0-1	
	29	L	Central Michigan	52-77	0-2	
Dec.	3	L	ABILENE CHRISTIAN	74-76	0-3	
	9	L	OKLAHOMA	61-73	0-4	
	14	L	SOUTHERN ILLINOIS	45-67	0-5	
Jan.	3-5		at Univ. of Hawaii Tourn.			
	3	L	Auburn	41-69	0-6	
	4	L	Oklahoma State	54-58	0-7	
	5	L	Cornell	53-54	0-8	
	7	W	Hawaii Pacific	94-41	1-8	
	10-11		at UCLA Tournament			
	10	L	Santa Barbara	62-65	1-9	
	11	L	Northern Arizona	37-41	1-10	
	14	W	SOUTHWEST TEXAS STATE	61-57	2-10	
	16	W	U.T.E.P.	67-60	3-10	
	17	W	ADAMS STATE	89-55	4-10	
	20	W	CLEVELAND STATE	64-62	5-10	
	25	L	NEW MEXICO STATE*	49-66	5-11	0-1
	28	W	Utah State*	62-45	6-11	1-1
	30	L	Brigham Young University*	48-70	6-12	1-2
Feb.	1	L	Utah*	54-63	6-13	1-3
	6	W	WYOMING*	64-59	7-13	2-3
	8	L	COLORADO STATE*	60-75	7-14	2-4
	11	L	Texas-El Paso	63-80	7-15	
	15	W	UTAH STATE*	72-45	8-15	3-4
	18	W	PAN AMERICAN	84-69	9-15	
	22	L	New Mexico State*	65-68	9-16	3-5
	27	L	UTAH*	49-68	9-17	3-6
Mar.	1	W	BRIGHAM YOUNG*	68-66	10-17	4-6
	6	W	Colorado State*	53-42	11-17	5-6
	8	L	Wyoming*	57-58	11-18	5-7

*denotes HCAC games
HOME GAMES INDICATED BY ALL CAPS
Season record: 11-18
HCAC record: 5-7

All Conference Team:
(2nd team) Connie Jensen
Winifred Foster

Honorable Mention:
Tracy Satran

87

BASKETBALL

UNIVERSITY OF NEW MEXICO LOBOS

1985-86 Roster

NO.	NAME	POS.	HT.	YR.	HOMETOWN
21	Kim Bradshaw	F	6'0"	So.	Reno, NV
11	Janice Branch	G	5'8"	So.	Albuquerque, NM
12	Winifred Foster	F	5'10"	Sr.	Aurora, CO
35	Suzanne Hum	F	6'0"	Jr.	Poway, CA
50	Connie Jensen	F	6'0"	Jr.	Casper, WY
15	Brenda Perry	G	5'8"	Jr.	Albuquerque, NM
22	Ann Reno	G	5'7"	Fr.	Billings, MT
44	Tracy Satran	F	6'1"	Jr.	Phoenix, AZ
25	Susan Sparks	G	5'4"	Jr.	Albuquerque, NM
32	Kandi Syryczuk	F	6'½"	So.	Thorp. WI
40	Sue Walsh	G	5'8"	Sr.	Tinley Park, IL

Head Coach: Doug Hoselton

Assistants: Francis Walsh

Jeff Thompson

1985-86 GOLF RESULTS

FALL SEASON

DATE		TOURNAMENT/LOCATION	FINISH TEAM	INDIVIDUAL
Sept.	5-7	Roadrunner Invitational Las Cruces, NM (318-315-304)	2nd/7	Caroline Keggi, 3rd Susan Wineinger, 7th
	16-18	BYU Invitational Provo, UT (298-304-307)	2nd/16	Tari Gadbaw,(t) 6th Caroline Keggi,(t) 6th Michelle Wooding,(t)6th
Oct.	3-5	MoGUIRE INVITATIONAL Albuq. NM (935)	3rd/16	Caroline Keggi,(t) 2nd Tara Fleming, 10th
	16-18	Nancy Lopez Invitational Tulsa, OK (313-316-rained)	6th/15	Caroline Keggi, 3rd
Nov.	1-3	Stanford Invitational Palo Alto, CA (314-310-312)	10th/18	

SPRING SEASON

Feb.	10-12	Arizona Invitational Tucson, AZ (310-313-304)	6th/18	Caroline Keggi,(t) 4th
	28-Mar. 2	Patty Sheehan Invitational Monterey, CA (324-316-322)	8th/12	
Mar.	14-16	Betsy Rawls Invitational Austin, TX (305-328-307)	10th/18	
	24-26	Edean Ihlanfeldt Invitational Redmon, WA (325-310-310)	2nd/7	Susan Wineinger, 3rd Tara Fleming, 4th Caroline Keggi, 9th
Apr.	14-16	Lady Sundevil Invitational Tempe, AZ (305-303-326)	11th/17	Wendy Werley (t) 6th
May	1-3	HCAC Championships Provo, UT (310-309-310)	2nd/5	Caroline Keggi, 6th Wendy Werley, 7th Tara Fleming,(t) 10th Michelle Wooding,(t) 10t
	28-31	NCAA Championships (1 individual qualified)		Caroline Keggi, 2nd Runner-up

Conference Finish: 2nd

All Conference Players: Caroline Keggi
Tara Fleming
Susan Wineinger

All-American: Caroline Keggi
gold team
Golf Week

GOLF ROSTER 1985-86
FALL SEASON

Missy Blackwelder	Fr.	Hobbs, N.M.
Tara Fleming	So.	Houston, TX
Tari Gadbaw	So.	Appleton, WI
Caroline Keggi	Jr.	Middlebury, CT
Bernadette Lucero	So.	Albuquerque, N.M.
Wendy Werley	Fr.	Littleton, CO
Susan Wineinger	Fr.	Green Bay, WI
Michelle Wooding	Fr.	Tacoma, WA
Sarah Zwemke	Jr.	Denver, CO

Head Coach: John Speary
Assistant: Theresa Schreck

FINAL GYMNASTICS RESULTS
1985-86

Dec. 13-14	at Rocky Mountain Open Colorado Springs, CO	non-scoring
Jan. 18	HOUSTON BAPTIST & OKLAHOMA ALBUQUERQUE, N.M.	1. Oklahoma 178.25 2. UNM 172.1 3. Houston Baptist 129.4
Jan. 29	at Nebraska & Penn State Lincoln, NB	1. Nebraska 182.05 2. Penn St. 178.70 3. UNM 171.90
Feb. 8	at Houston Baptist Houston, TX	1. Houston Baptist 169.0 2. UNM 161.80
Feb. 15	UTAH STATE & ARIZONA ALBUQUERQUE, N.M.	1. Utah St. 184.90 2. Arizona 183.70 3. UNM 182.30
Feb. 21	DENVER, OSU, ODESSA JR. COLLEGE ALBUQUERQUE, N.M.	1. OSU 178.30 2. Denver 176.05 3. UNM 174.15 4. Odessa Jr. 146.1
Feb. 22	ILLINOIS & STANFORD ALBUQUERQUE, N.M.	1. UNM 181.70 2. Stanford 180.85 3. Illinois 175.0
Feb. 28	at University of Arizona Tucson, AZ	1. Arizona 178.05 2. UNM 172.65
Mar. 7	at Stanford University Palo Alto, CA	1. Stanford 181.95 2. UNM 179.80
Mar. 9	at University of California Berkeley, CA	1. California 180.20 2. UNM 173.45
Mar. 22	at HCAC Championships Salt Lake City, UT	1. Utah 186.85 2. Utah State 181.15 3. Brigham Young 177.75 4. UNM 171.60
Apr. 4-5	at NCAA Midwest Regional Champ. University of Utah,	(Finished) 21st Lisa Pank, AA 36.25 23rd Amy Mategrano, AA 36.20

Head Coach: Pete Longdon(4th yr)
Season record: 4-14

All Conference team:

Amy Mategrano - All Around

GYMNASTICS 1985-86

Alphabetical Roster

NAME	YR	EVENT	HT	WT	HOMETOWN
Deneen Black	JR	AA	5-2	105	Houston, TX
Iliana Carrillo	SO	AA	5-0	95	Mexico City, Mexico
Molly Froats	FR	AA	5-2	95	Orlando, FL
Antoinette Gonzales	SR	AA	5-1	108	Houston, TX
Tanya Lemak	FR	AA	5-4	110	Denver, CO
Diana Lichtenstein	SO	AA	5-0	105	Houston, TX
Amy Mategrano	FR	AA	5-0	100	Chicago, IL
Lisa Park	FR	AA	5-2	115	Fairbanks, AL
Patty Rothwell	FR	AA	5-5	125	Roswell, NM

1985-86 SKI RESULTS

GYMNASTICS

DATE		EVENT	PLACE	FINISH
Jan.	2-3	Nevada, Reno Invitational	Reno, NV	4th/9
Jan.	10-11	Montana State Invitational	Bozeman, MT	4th/9
Jan.	24-25	Western St. College Invitational	Gunnison, CO	4th/9
Feb.	7-8	New Mexico Invitational	Albuquerque, NM	4th/7
Feb.	21-22	University of Colorado Invitational	Winter Park, CO	4th/7
Mar.	5-8	NCAA Championships	Stowe, VT	6th/18

Head Coach Alpine: George Brooks

Head Coach Nordic: Klaus Weber

All-Americans: Mia Wahlqvist
Anders Peinert

RMISA All-Conference: Anders Peinert
Heidi Sorensen
Wenche Hokholt

Women		
Karen Currie (NCAA)	Jr.	Mammoth Lake, CA
Danielle Labrie (NCAA)	So.	Quebec City, Canada
Sailia Miettinen (NCAA)	Sr.	Tampere, Finland
Mia Wahlqvist (NCAA)	Sr.	Karlstad, Sweden
Anna Johansson	Fr.	Froson, Sweden
Wenche Hokholt (NCAA)	Sr.	Oslo, Norway
Siv-Katrin Ramskjell	So.	Drobak, Norway
Heidi Sorensen (NCAA)	Sr.	Sorresisa, Norway
Ida Syversen (NCAA)	Fr.	Oslo, Norway
Karen Wilson	Sr.	Albany, N.Y.
Svea Christopher	Fr.	Homer, AK

Men		
Anders Bjurman (NCAA)	Jr.	Lindkoping, Sweden
Matthew Davidson (NCAA)	Fr.	Ashland, OR
Terence Larkin	Sr.	Pompey, N.Y.
Jonas Lundgren (NCAA)	So.	Karlskoga, Sweden
Anders Peinert (NCAA)	Jr.	Sundsvall, Sweden
Per Wassgren (NCAA)	So.	Karlskoga, Sweden
Arne Fossheim	Sr.	Drammen, Norway
Espen Jansen	Jr.	Oslo, Norway
Pekka Kemppi (NCAA)	Sr.	Otalampi, Finland
Kristian Naess (NCAA)	Jr.	Oslo, Norway
Vesa Suomalainen (NCAA)	Sr.	Kouvola, Finland
Richard Abruzzo	Sr.	Albuquerque, N.M.
Steve Wood	So.	Los Alamos, N.M.

Head Alpine Coach: George Brooks

Assistants: George Schmidt
Alex Avetikian

Head Nordic Coach: Klaus Weber

Assistants: Paul Beberg
Christina Sandal

Regional Finish: 3rd

National Finish: 6th

All Americans

Mia Wahlqvist - 1st team Women's Alpine

Anders Peinert - 2nd team Men's Alpine

1986 SOFTBALL RESULTS

DATE	OPPONENT	UNM	OPP	W/L	RECORD	HCAC	HOME AWAY/ NEUTRAL
2/22	New Mexico State	2	1	W	1-0		H
2/22	New Mexico State	7	1	W	2-0		H
2/23	New Mexico State	1	0	W	3-0		H
2/23	New Mexico State	4	2	W	4-0		H
3/1	Western New Mexico	24	0	W	5-0		H
3/2	Western New Mexico	25	1	W	6-0		H
3/6-8	at New Mexico St. Tourn.						
3/6	Northeast Louisiana	1	2	L	6-1		N
3/6	Western Michigan	2	1	W	7-1		N
3/6	Metro State	12	0	W	8-1		N
3/7	Arizona State	1	2	L	8-2		N
3/7	Kansas University	0	4	L	8-3		N
3/8	Minnesota	1	0	W	9-3		N
3/12	Creighton*	1	2	L	9-4	0-1	A
3/12	Creighton*	2	0	W	10-4	1-1	A
3/13-15	at Oklahoma Tournament						
3/13	Oklahoma City University	3	2	W	11-4		N
3/13	Southern Illinois	5	3	W	12-4		N
3/14	Iowa	0	1	L	12-5		N
3/15	Texas-Arlington	1	0	W	13-5		N
3/15	Indiana	4	1	W	14-5		N
3/15	Kansas	2	8	L	14-6		N
3/22	Colorado State	4	1	W	15-6		H
3/22	Colorado State	2	0	W	16-6		H
4/5	Arizona State	0	2	L	16-7		A
4/5	Arizona State	3	2	W	17-7		A
4/11	Utah State*	1	0	W	18-7	2-1	H
4/11	Utah State*	2	4	L	18-8	2-2	H
4/12	Utah*	5	7	L	18-9	2-3	H
4/12	Utah*	0	1	L	18-10	2-4	H
4/17-20	at Pacific Tournament						
4/17	Oregon State	1	2	L	18-11		N
4/18	San Francisco	3	7	L	18-12		N
4/25	Colorado State*	1	0	W	19-12	3-4	A
4/25	Colorado State*	4	2	W	20-12	4-4	A
5/3	New Mexico State*	1	2	L	20-13	4-5	A
5/3	New Mexico State*	8	2	W	21-13	5-5	A
5/9-10	at HCAC Championships						
5/9	Creighton	1	0	W	22-13		N
5/10	New Mexico State	2	3	L	22-14		N
5/10	Creighton	0	3	L	22-15		N

Head Coach: Susan Craig
Assistant: Ken Johnson

Season record: 22-15
HCAC record: 5-5
Conference finish: 3rd

All Conference Team: Arlene Hernandez
Kathy Dyer
Sheila Blonigan
Sue Inman
Beth Unterbrink

All-American: Kathy Dyer (Senior)

SOFTBALL NUMERICAL ROSTER

No.	Name	Cl.	Pos.	Hometown
3	Jana Harrison	Fr	Infield	Warren, MI
7	Beth Unterbrink	Fr	Outfield/Pitcher	Chelsea, MI
9	Tierney Cahill	Fr	Pitcher/Catcher	Sacramento, CA
12	Amy Minick	Fr	Catcher	Arcadia, CA
13	Karla Ismay	Fr	Catcher/Third	Tucson, AZ
14	Kathy Dyer	Sr	First	Ann Arbor, MI
16	Diane Gabaldon	Fr	Utility	Albuquerque, NM
18	Arlene Hernandez	So	Pitcher	Irvine, CA
22	Liz Bogdanovic	Fr	Outfield	Lyons, IL
26	Amy Lucero	Sr	Second/Outfield	Los Alamos, NM
27	Sue Inman	Sr	Center Field	Midlan, MI
28	Sheila Blonigan	Sr	Shortstop	Golden Valley, MN

Head Coach: Susan Craig

Assistant Coach: Ken Johnson

Student Assistant: Dee Sanchez

SWIMMING ROSTER

1985-86

96

Elizabeth Ahlgren	Fr.	Sweden
Jinny Aki	So.	Honolulu, HI
Shannon Beauford	Fr.	Anderson, SC
Amy Burgeson	Jr.	Albuquerque, NM
Joann Chatfield	So.	Albuquerque, NM
Christine Collins	Fr.	Laramie, WY
Susan Durkee	Fr.	Albuquerque, NM
Gorel Hagelin	So.	Sweden
Suzanne Jones	Fr.	Albuquerque, NM
Laverne Lopez	So.	Santa Fe, NM
Mariann Brandiger	Jr.	Albuquerque, NM
Melanie Marshall	Jr.	Albuquerque, NM
Karen Nixon	Jr.	Albuquerque, NM
Teri Sexton	So.	Albuquerque, NM
Karyl Simmons	Fr.	Albuquerque, NM
Karen Snyder	So.	St. Louis, MO
Sarah Spoehr	So.	Honolulu, HI

FINAL SWIMMING RESULTS

1985-86

DATE	MEET	LOCATION	FINISH/TEAMS
Nov. 2	CHERRY vs SILVER	Albuquerque, NM	non-scoring
9	Wyoming	Laramie, WY	1/2
Dec. 7-8	Arizona Invitational	Tucson, AZ	3/4
Jan. 17	University of Utah	Salt Lake City, UT	1/2
18	Brigham Young University	Provo, UT	2/2
25	Texas Tech	Lubbock, TX	2/2
Feb. 1	CSU & NMSU	Albuquerque, NM	2/3
15	Air Force Academy	Albuquerque, NM	2/2
Feb. 27-Mar. 1	HCAC Championships	Laramie, WY	3/6

Head Coach: Bill Spahn

Final Season Record: 5-5

All Conference team: Karen Snyder
Sarah Spoehr

97

TEAM'S COMPOSITE DUAL-MEET RECORD - TENNIS
UNIVERSITY OF NEW MEXICO
TENNIS

	DATE	RECORD RESULT	OPPONENT	SCORE	HOME/AWAY NEUTRAL
Fall	10-19-85	L 0-1	Midland Jr. College	8-1	N
	10-20-85	W 1-1	U.T.E.P.	6-3	A
	10-25-85	L 1-2	Univ. of Northern Colorado	6-3	A
	10-26-85	W 2-2	Colorado State	8-1	A
	11-15-85	L 2-3	New Mexico State	6-3	H
	11-20-85	L 2-4	Brigham Young	8-1	A
Spring	2-20-86	L 2-5	Kansas	9-0	N
	2-21-86	W 3-5	Whichita State	6-3	A
	2-22-86	L 3-6	Minnesota	7-2	N
	3-7-86	L 3-7	South Carolina	8-1	N
	3-8-86	L 3-8	University of Oklahoma	6-3	N
	3-9-86	L 3-9	University of Houston	9-0	A
	3-24-86	L 3-10	Arizona State	9-0	A
	3-25-86	L 3-11	University of Arizona	8-1	A
	4-4-86	L 3-12	Texas Christian University	8-1	A
	4-5-86	L 3-13	Texas A & M	9-0	A
	4-10-86	W 4-13	U.T. San Antionio	6-3	N
	4-11-86	L 4-14	Midland Jr. College	6-3	N
	4-12-86	W 5-14	U. Texas Permian Basin	5-4	N
	4-18-86	W 6-14	Northern Arizona	8-1	H
	4-19-86	W 7-14	U.T.E.P.	5-4	H
	4-23-86	L 7-15	Weber State	6-3	A
	4-24/25-86		HCAC Championships Salt Lake City, UT	3rd place	

Head Coach: Kathy Kolankiewicz (1st yr)

All Conference: Karen Curry

TENNIS ROSTER
1985-86

	Nancy Rath	JR	Omaha, NB
	Karen Curry	JR	Kansas City, MO
Germany	Ute Schroff	SO	Germany
	Kim Moore	FR	Portland, OR
	Denise Ready	FR	Albuquerque, NM
	Karen De Sota	FR	Grants, NM
	Karen Temple	FR	Pittsburg, PN

All [illegible] Karen Curry All Conference:

99

CROSS COUNTRY RESULTS

-1985-

DATE		RACE	LOCATION	FINISH/TEAMS
Sept.	14	George Kyle Classic	Flagstaff, AZ	1st/2
	28	San Diego Invitational	San Diego, CA	2nd/22
Oct.	12	California Invitational	Berkeley, CA	(t)1st/6
Nov.	2	LOBO INVITATIONAL	ALBUQUERQUE, NM	1st/4
	10	HCAC Championship & District 7 Championship	Boise, Idaho	3rd/13
	25	NCAA Championship Carole Roybal	Milwaukee, Wis.	14th/16 6th/129 (individual)

OUTDOOR TRACK & FIELD RESULTS

1986

DATE		RACE	LOCATION	FINISH/TEAMS
Mar.	8	Arizona Invite	Tucson, AZ	non-scoring
	15	UNM vs Wayland Baptist & WTS	Albuquerque, NM	non-scoring
	22	UNM vs USC & SDSU	Los Angeles, CA	0/2
	29	LOBO INVITATIONAL	Albuquerque, NM	2nd/6
Apr.	5	UNM vs Wyoming & CSU	Albuquerque, NM	non-scoring
	12	UNM vs AFA, NAU & UTEP	Albuquerque, NM	2nd/4
	20	UTEP Invitational	El Paso, TX	non-scoring
	26-27	Mt. SAC Relays	Walnut, CA	non-scoring
May	7-10	HCAC Championships	Provo, UT	4th/7
	25	Pacific Coast Championships	Berkeley, CA	non-scoring
June	4-7	NCAA Championships	Indianapolis, Ind.	

Head Coach: Michael MacEachen

Assistant: Cindy Schmandt

All Conference Team: (Cross Country)
Carole Roybal
Dawn Eriacho

All American - Carole Roybal

All Conference Team: (Track)
Michelle Richardson
Kim Werner

100

Diana Baca	5k & 10k	So.	Albuquerque, NM
Annette Dilorenzo	Long Jump	Fr.	Albuquerque, NM
Dawn Eriacho	3k & 1500m	So.	Zuni, NM
Yvette Haran	5k & 10k	Fr.	Albuquerque, NM
Tina Hodge	400m	Fr.	Albuquerque, NM
Susan Jordan	400m hurdles	Jr.	Albuquerque, NM
Ida-Lisa Leyba	1500m	So.	Albuquerque, NM
Pam Posey	100m & 200m	Jr.	Albuquerque, NM
Michelle Richardson	400m & 800m	Jr.	Albuquerque, NM
Carole Roybal	1500m & 3k	Jr.	Albuquerque, NM
Trish Shoemaker	Javelin	Jr.	Albuquerque, NM
Tonia Thompson	100m hurdles & triple jump	So.	Albuquerque, NM
Kim Werner	High jump	Jr.	Garden City, KS
Gwen Willink	800m	Fr.	Corrales, NM
Dolores Zamora	3k & 5k	So.	Albuquerque, NM
Terrian Florence	100m & 200m	Fr.	Albuquerque, NM

Head Coach: Michael MacEachen (4th yr)
Assistant: Cindy Schmandt (3rd yr)

All Conference: Michelle Richardson (400m hurdles)
Kim Werner (high jump)

CROSS COUNTRY ROSTER
1985

Diana Baca	So.	Albuquerque, NM
Dawn Eriacho	So.	Zuni, NM
Julie Farrer	Fr.	Las Cruces, NM
Dawn Gale	Fr.	Gillette, WY
Yvette Haran	Fr.	Albuquerque, NM
Lori Larson	Fr.	Albuquerque, NM
Ida-Lisa Leyba	So.	Albuquerque, NM
Jennifer Pollard	Fr.	Mut. Waverly, Australia
Carole Roybal	Jr.	Albuquerque, NM
Gwen Willink	Fr.	Corrales, NM
Dolores Zamora	So.	Albuquerque, NM

Head Coach: Cindy Schmandt

All Conference Team: Carole Roybal
Dawn Eriacho
All-American: Carole Roybal

DATE		OPPONENT	SCORE	W/L	OVER-ALL RECORD	HCAC RECORD
Sept.	5-7	DOMINO'PIZZA CLASSIC	(All Tourney-Jocelyn Funk)			
	5	PEPPERDINE	11-15,14-15,7-15 (0-3)	L	0-1	-
	6	UNLV	10-15,10-15,15-6,5-15 (1-3)	L	0-2	-
	7	TEXAS	5-15,4-15,6-15, (0-3)	L	0-3	-
	15	ARIZONA ST.	10-15, 7-15,9-15 (0-3)	L	0-4	-
	20-21	Domino's Pizza Classic, Montana St. (All Tourney - JoAnne O'Connell)				
	20	Southwest MO St.	15-13,10-15,8-15,15-3,15-4 (3-2)	W	1-4	-
	20	Montana St.	15-7,3-15,9-15,13-15 (1-3)	L	1-5	-
	21	Washington	6-15,15-9,14-16,15-8,15-8 (3-2)	W	2-5	
	21	Louisiana St.	6-15,15-10,15-11,4-15,15-7 (3-2)	W	3-5	-
	26-28	Rhode Island Tournament				
	26	Rhode Island	6-15,2-15,10-15 (0-3)	L	3-6	-
	27	South Carolina	15-10,15-7,15-5 (3-0)	W	4-6	-
	28	Providence College	4-15,7-15,9-15 (0-3)	L	4-7	-
Oct.	4	Wyoming*	7-15,5-15,15-17 (0-3)	L	4-8	0-1
	5	Colorado St.*	8-15,12-15,2-15 (0-3)	L	4-9	0-2
	12	ORAL ROBERTS	15-8,15-9,15-12 (3-0)	W	5-9	-
	17	New Mexico St.*	9-15,7-15,6-15 (0-3)	L	5-10	0-3
	19	UTAH ST.*	15-11,15-13,15-9 (3-0)	W	6-10	1-3
	23	Utah*	12-15,10-15,6-15 (0-3)	L	6-11	1-4
	25	BYU*	2-15,12-15,15-10,6-15 (1-3)	L	6-12	1-5
	26	Utah St.*	15-11,15-10,13-15,8-15,15-11 (3-2)	W	7-12	2-5
Nov.	1	COLORADO ST.*	3-15,11-15,4-15 (0-3)	L	7-13	2-6
	2	WYOMING*	13-15,8-15,15-7,13-15 (1-3)	L	7-14	2-7
	8	NEW MEXICO ST.*	5-15,8-15,8-15 (0-3)	L	7-15	2-8
	9	NORTHERN ARIZONA	12-15,15-4,15-8,15-11 (3-1)	W	8-15	-
	15	UTAH*	15-9,8-15,3-15,13-15 (1-3)	L	8-16	2-9
	16	BRIGHAM YOUNG*	11-15,15-12,7-15,5-15 (1-3)	L	8-17	2-10

Head Coach: Laurel Kessel
Assistants: Blase Czerniakowski
Fred Weller

Season record: 8-17
HCAC record: 2-10
Conference finish: 6th

*denotes HCAC matches

HOME MATCHES INDICATED BY ALL CAPS

All Conference Team:
Honorable Mention - JoAnne O'Connell

LOBO VOLLEYBALL

1985 ROSTER

#	NAME	YEAR	POSITION	HEIGHT	HOMETOWN
9	Julie Barrett	So.	RH/S	5'9"	San Diego, CA
6	Lori Forrest	So.	RH/S	5'11"	Cedar Rapids, Iowa
1	Jocelyn Funk	Jr.	S	5'7"	Portage La Prairie, Manitoba
3	Michelle Joyner	So.	OH	5'8"	Albuquerque, NM
15	Jewel Johnson	Jr.	MH	6'4"	San Bernadino, CA
12	JoAnne O'Connel	Sr.	LH	5'9"	Albuquerque, NM
2	Marlo Pennington	Fr.	RH/S	5'9"	Albuquerque, NM
8	Cathy Peterson	So.	MB	5'9"	Edina, MN
7	Daven Quelle	So.	MH	5'11"	Espanola, NM
5	Alicia Ramos	Fr.	Backcourt Specialist	5'6"	Albuquerque, NM
4	Karen Saavedra	Fr.	LH/S	5'9"	Albuquerque, NM

Head Coach: Laurel Brassey Kessel (2nd yr.)

Assistant: Blase Czerniakowski (1st yr.)

THE REPORT OF THE DEPARTMENT OF
POLICE AND PARKING SERVICES
JULY 1, 1985 - JUNE 30, 1986
BERRY D. COX, DIRECTOR

MAJOR OFFENSES

The following statistics represent reported major offenses for the period, August 1, 1985 - June 30, 1986:

	NO. OF REPORTS	VALUE
1. Homicides	0	
2. Sexual Offenses:		
Forcible Rape	0	
Attempted Rape	0	
Indecent Exposure	10	
3. Robbery	4	$ 57.85
4. Assault:		
Aggravated	12	
Simple	46	
5. Burglary:		
Private	73	30,656.25
University	22	47,847.00
6. Larceny:		
Private	617	129,196.42
University	127	118,707.98
7. Motor Vehicle Theft	37	
8. Narcotics	1	
9. Arrests	67	

PATROL DIVISION

The three patrol shifts of the UNM Police Department were involved in the following activities for the period:

Offense Reports	1,824
Arrests	84
Moving Citations	239
Parking Citations	1,604
Tows	94
Assists/Hospital	138
Assists/MHC	120
Escorts	2,186
Court Appearances	171

INVESTIGATIONS DIVISION

The Detective Division, comprised of two detectives, supervised by Lt. Robert Raymond, worked in conjunction with the District Attorney's office, the Albuquerque Police Department, the Bernalillo County Sheriff's Department, and other police departments throughout the state, as well as out-of-state police agencies, assisting with cases having UNM connections. They also worked with Risk Management in returning recovered properties which had already been covered by insurance; they assisted in handling numerous personal crises in the lives of others; and conducted security surveys of the UNM tunnel system, as well as seven other campus facilities. Approximately 260 cases were assigned to them with 82 cases completed and closed; 7 arrests were made; recovered property totaled $1,450.65; and 11 cases were referred to the District Attorney's office for prosecution. The Division fingerprinted 853 individuals.

DEFENSE INDUSTRIAL SECURITY PROGRAM

During 1985-1986 there were several changes in the Defense Industrial Security Program. The challenges confronting those involved in the program have grown more intimidating. There has been a substantial increase in the emphasis applied to evaluating security measures. In the past, emphasis has been placed on reporting requirements, protection of classified information and reductions in personnel clearances. We have now reached the point where these considerations have broadened into a more compelling interest in every facet of classified activity. This increased awareness is due in part to the increase in espionage cases throughout the country in the past few years.

Another important change in the Defense Industrial Security Program was the clearance control program. It was standard procedure to process personnel for clearance into closed areas and clearances were required for unescorted entry. These clearances were processed for personnel just to get on-site but they did not have access to classified information. Because of the physical location of the work areas and the irregular hours of badging personnel, it was just not cost effective to send uncleared personnel who must be escorted to these sites. This problem has now been resolved, and personnel are no longer processed for clearance unless they will actually have access to classified information.

DEFENSE INDUSTRIAL SECURITY PROGRAM (Continued)

Some growth in the program has been realized as new offices were provided for University of New Mexico employees at 2650 Yale, SE. This group is known as the Readiness Technology Assessment Group, a division of the New Mexico Engineering Research Institute.

The Defense Investigative Services designated Thursday, June 19, 1986, as "clean-out" day. All cleared facilities were to review their classified material and reduce their holdings. The more classified documents accountable, the more likely a security compromise. We were successful in reducing our holdings; however, it is the general consensus of the security officers that we can reduce our holdings even further.

During the fiscal year, one surprise inspection was conducted by the Defense Investigative Service. This inspection did not reveal any discrepancies. As of this date, the Industrial Security Program is operating smoothly.

TRANSITIONS

Separations:

Linda Tsadi
John Romero
Larry Gallegos
Fred Couffer
Patricia Bicknell
Stephen Lewis
Carol Hendry
Lawrence Martinez
Robert Van Reeth
Albert Rodriguez
Carla Gonzales
Wayne Rivali
Roseann Martinez
Earl Wisemann
Christine Dahl

TRANSITIONS (Continued)

Appointments:

Victoria Zeller
Dawn Drzewicki
David Newell
Norman Knox
Ruben Moya
Anthony Powell
Sandra Stone
Joseph Stacy
William Espetia
Dorothy Gallegos
Tomm Kailey
Robert Moody

Promotions:

Richard Carbajal . . . . . to Corporal

John Lasusky . . . . . to Manager, Parking Services

Viola Padilla . . . . . to Office Manager

Victoria Zeller . . . . . to Administrative Secretary

New Positions:

Felix Barreras . . . . . Bus Driver

TRAINING

The Department of Police and Parking Services patrol officers received in-service training in the following areas:

a. Effective Human Relaitons
b. Intoxilyzer
c. Firing Range
d. Industrial Security and Report Writing
e. Fingerprints
f. Criminal Law and Rules of Evidence
g. Side Handle Baton
h. CPL
i. The Parking Dilemma Relating to UNM
j. Telephone Tracing
k. Safety Bell Use Act; Child Restraint Laws
l. Fatal Accidents

Basic Police School: Four patrol officers received 425 hours each of basic police training at the New Mexico Law Enforcement Academy.

DEFENSIVE DRIVING COURSE

In August 1985, the University of New Mexico Police Department assumed responsibility for the administration and presentation of the Defensive Driving Program. At the same time, UNMPD became responsible for the issuance of New Mexico State Driving Permits.

Between August 1985 and May 1986, two classes per month were held with an average of 30 people per class attending. In June, July, and August 1986, one class per month was held with 50 people attending each class.

Defensive Driving classes are held in the Tucker Room at the UNM South Golf Course.

Material for the class is provided by the National Safety Council and the classes presented by UNMPD are sanctioned by the NSC.

Parking

During this fiscal year, studies of many parking systems of other major Universities were undertaken for comparative analyses of the parking system at the University of New Mexico and other institutions. Applying the results of those comparisons and analyses to the parking dilemma reported during last fiscal year, a ten-point parking proposal was developed. The proposal was presented to the Regents after student leaders and concerned administrators within the University structure were provided opportunities for input. On June 17, 1986, this writer presented the ten-point parking proposal to the UNM Board of Regents and Regents approved the parking proposal as presented. The ten-point plan follows.

The reader should understand that, to a large degree, the ten points are philosophical in nature and can only be implemented by successive approximations over no less than a two to three-year time frame.

TEN-POINT PARKING PROPOSAL

The following recommendations for the near future of the University of New Mexico parking system are prefaced on three principles:

a. The system is to be self-supporting;

b. The services should be improved with emphasis on effective lighting, security, and improved surface conditions; and

c. The proposal is based on compromise between views expressed by concerned parties.

1. **It is recommended that the shuttle system operation from the north parking lots to the central campus be improved.**

The hours of operation, which are presently 7:15 a.m. to 6:30 p.m., should be extended to 9:30 p.m., Monday through Thursday, on all regular academic days.

To improve service, a cul-de-sac should be created at the intersection of Yale and Roma for a bus turnaround.

The shuttle route should be extended northward approximately 200 yards at its "N" lot terminus, thus making the northern and western extremes of the lot more desirable as parking areas. A new, well-lighted, covered bus terminal should be added at this northern terminus.

2. It is recommended that an annual fee of $18.00 per academic year ($9.00 per semester) be initiated as soon as is feasible for the "N" zone (currently free areas).

   Students, faculty, and staff employees would be able to purchase "N" zone permits at the rate of $18.00 per year. This fee would be paid in full at the time of purchase (no payroll deductions).

   A special evening staff permit would be made available for purchase applicable from 4:30 p.m. to 6:30 p.m. at a rate of $18.00 per year (e.g., for janitorial staff, etc., who typically begin work at 4:00 p.m.).

3. It is recommended that the rebate program now in effect for dormitory students be terminated for new students effective in Fall 1986 and phased out for current dormitory residents by 1990.

4. It is recommended that the hourly rate for meter parking be increased to 25¢ per hour from its current rate of 10¢ per hour.

   The daily time schedule for meter parking would also be extended from its current hours of 7:00 a.m. to 4:00 p.m. to 7:00 a.m. to 6:30 p.m., Monday through Friday.

5. The following recommendations are made relative to use of the new parking structure and the relationship between the hospital and the University parking systems:

   a. Allocation of Spaces: The third and fourth floors of the parking structure (approximately 382 spaces) will be dedicated to the exclusive use of the hospital;

   b. Capital Contribution: The hospital will transfer annually (until the bonds are retired) Ninety-Five Thousand Dollars ($95,000.00) to the main campus for use in retiring the revenue bonds which were used to fund the University's portion of the capital cost of the parking structure. The hospital will make no "up-front," lump-sum capital contribution and the $95,000.00 annual contribution is the full extent of the hospital's financial responsibility to the main campus with respect to the parking structure.

   c. Administration: All hospital parking (lots one through six north of Lomas and the top two floors of the parking structure) will remain under the administration of the hospital, although pursuant to the Regents' parking policy. This will require some modification of the existing Regents' policy on parking to allow the hos-

pital to charge employees for parking. It should be noted that the agreement with respect to charging hospital employees is that this is entirely up to the hospital. While it is expected that the hospital will charge its employees, whether it will and in what amount is independent of the hospital's financial contribution described in "b." above. Thus, if the hospital fails to charge its employees, or charges them less than would raise $95,000.00 annually, the hospital still must make the $95,000.00 annual payment to the main campus. Conversely, if the hospital charges an amount that would raise more than $95,000.00 annually, the hospital will keep the excess. Enforcement of the parking policy will be handled by hospital personnel under authority delegated to them by the University Police and Parking Office. The cost of enforcement and security will be borne by the hospital. This agreement will be memorialized in an appropriate document. The agreement will be for thirteen years (until the bonds are retired) at which point it will be subject to good faith renegotiations between the parties. This means that the hospital's financial contributions are limited to thirteen (13) years and concommitantly, the University's obligation to dedicate the top two floors of the structure

to hosptial use is limited to thirteen years. After that time elapses, the parties must negotiate a new deal.

In addition to the resolution of these major points of contention, several minor points were agreed upon, thusly:

i. The hospital will retain its own shuttle service;

ii. UNM hospital employees may purchase "N" zone parking stickers under the terms and conditions applicable to University employees;

iii. UNM hospital employees may purchase "M" zone stickers under the terms and conditions applicable to University employees; and

iv. Revenues from sales of "M" and "N" zone stickers to hospital employees will go to UNM Parking Services.

d. <u>It is recommended that the ground and second floors of the parking structure be designated as "S" zone parking; the third and fourth floors will be designated as hospital-dedicated parking.</u>

e. It is recommended that the "G" zone be designated for dormitory students and faculty and staff members whose places of employment are geographically within the "G" zone.

6. It is recommended that the University contract with a private towing company in conjunction with the creation of a University-operated, on-site impoundment area.

Towing of vehicles is now accomplished using private wrecker companies. Considerable revenues can be gained by contracting with a private company providing them with exclusive towing rights for the contract period, and remittance of a fixed percentage of a "reduced" tow fee to the University. A "reduced" fee would be possible if the University provided an on-site (University) impoundment area. Thus, travel time for the wrecker would be minimized, official administrative delays would be minimized, and the vehicle owner would suffer less inconvenience and perhaps experience a reduced expenditure to reclaim the vehicle than is now common practice.

7. It is recommended that the boundaries of the parking zones be readjusted due to physical changes in the campus (i.e., closed roads, new buildings, etc.). See the accompanying map for the proposed zone designations.

8. It is recommended that the entrances to the University of New Mexico be well identified with adequate signage and that several information/traffic control centers (kiosks) be established.

The poorly-marked entrances to the University of New Mexico are responsible for our primary failure to provide necessary guidance, direction, and control. Signs at the entrances are too small and too insignificant in color and design to attract the attention of the confused or hurried driver.

The central campus has more entrances than are necessary, again contributing to inefficient information dissemination and weakened internal security. By eliminating minor entrances and establishing manned information/traffic control centers (kiosks), the deficiencies cited can be significantly minimized. The public image of the University of New Mexico would, undoubtedly, improve by providing a well-informed, first-contact person to assist the public.

9. It is recommended that parking permit hours be extended from 4:30 p.m. to 6:30 p.m.

The evening parking pattern on the central campus is not easily managed with current staffing limitations of the Department of Police and Parking Services. Presently there are 3,509 legal parking spaces (including metered spaces)

on the central campus which are more than adequate for evening parking needs. With increased staffing and extended hours of applicability for paid permit parking, effective proactive controls can be employed, thus dispersing parking patterns for increased safety and effective utilization of all central campus parking facilities.

10.(a) It is recommended that the Regents impose an administrative fee for all citations issued for alleged violations of the UNM parking and traffic regulations.

(b) It is further recommended that the Regents endorse the concept of on-campus adjudication of citations issued for alleged violations of the UNM parking and traffic regulations.

A suggested target date for implementation is August 1988.

The above recommendations should carry the parking system into the next decade. Meanwhile, it is imperative that the University conduct ongoing, in-house parking studies which address the long-range issues of growth patterns, physical changes to the campus, relationship to the surrounding community, and the economics of a self-sufficient parking system (including innovative forms of financing, bonding, etc.).

Please see Appendix A and Appendix B for further reference.

UNIVERSITY OF NEW MEXICO

June 3, 1986

TO: Regents Finance and Audit Committee

FROM: Joseph Goldberg, University Counsel

SUBJECT: Parking Garage

A "Ten Point Parking Proposal" has now been before the Board of Regents twice. It first came before the Board in the March 1986 meeting and commanded some considerable controversy. The Regents remitted the matter to the administration to provide to the students more input. In the May 1986 meeting, the matter again came before the Board and it continued to be controversial. The Board again remitted the matter to the administration, this time to provide the Medical Center more input. The direction was to attempt to reach an agreement that was acceptable to all parties, if possible.

The President asked me to handle this matter in his absence. I am pleased to report what I think is a compromise acceptable to all parties. The only point in contention at the May Board of Regents meeting had to do with the parking garage presently being constructed on Lomas, across from UNM Hospital. There were three areas of dispute between the Medical Center and the main campus concerning this parking garage; (1) allocation of spaces within the structure between Hospital use and main campus use; (2) financial contributions by the Hospital to the capital costs of the parking structure; and (3) administration of Hospital employee parking.

Representatives from the Medical Center and representatives of the main campus met twice (May 30 and June 2). At the latter meeting, the President of ASUNM was present. On the points of contention described above, all parties reached the following agreement:

(1) Allocation of Spaces: The third and fourth floors of the parking structure (approximately 382 spaces) will be dedicated to the exclusive use of the Hospital;

(2) Capital Contribution: The Hospital will transfer annually (until the bonds are retired) Ninety-Five Thousand Dollars ($95,000) to the main campus for use in retiring the revenue bonds which were used to fund the University's portion of the capital cost of the parking structure. The Hospital will make no "up-front," lump-sum capital contribution and the $95,000 annual contribution is the full extent of the Hospital's

financial responsibility to the main campus with respect to the parking structure.

(3) Administration: All Hospital parking (lots one through six north of Lomas and the top two floors of the Parking structure) will remain under the administration of the Hospital, although pursuant to the Regents parking policy. This will require some modification of the existing Regents' Policy on Parking to allow the Hospital to charge employees for parking. It should be noted that the agreement with respect to charging Hospital employees is that this is entirely up to the Hospital. While it is expected that the Hospital will charge its employees, whether it will and in what amount is independent of the Hospital's financial contribution described in (2) above. Thus, if the Hospital fails to charge its employees, or charges them less than would raise $95,000 annually, the Hospital still must make the $95,000 annual payment to the main campus. Conversely, if the Hospital charges an amount that would raise more than $95,000 annually, the Hospital keeps the excess. Enforcement of the parking policy will be handled by Hospital personnel under authority delegated to them by the University Police and Parking Office. The cost of enforcement and security will be borne by the Hospital.

This agreement will be memorialized in an appropriate document. The agreement will be for thirteen years (until the bonds are retired) at which point it will be subject to good faith renegotiations between the parties. This means that the Hospital's financial contributions are limited to thirteen years and concommitantly, the University's obligation to dedicate the top two floors of the structure to Hospital use is limited to thirteen years. After that time elapses, the parties must negotiate a new deal.

In addition to the resolution of these major points of contention, several minor points were cleared up. As to point one in the Ten-Point Proposal, it was made clear that the Hospital would retain its own shuttle service. As to point 2, it was made clear that UNM Hospital employees may purchase "N" Zone parking stickers under the terms and conditions applicable to University employees. Similarly, Hospital employees may purchase "M" zone stickers under terms and conditions applicable to University employees. The revenue from sale of "M" and "N" stickers to Hospital employees would go to UNM Parking Services.

Two final points. First, the Hospital wished me to emphasize that this compromise has not been approved by the Hospital Board of Trustees. Kaiser Michael assured me that he will call a special meeting of the Board to consider the matter, prior to the June 17 meeting of the Regents. Second, the President of ASUNM, Mark Hartman, expressed content with the compromise so long as some action was taken to provide adequate student parking proximate to the dorms. All agreed that some pressure to use the parking structure for student parking would be relieved if some

vacant land in the vicinity were paved and dedicated to dorm parking. Carroll Lee is looking into the matter. The Hospital expressed some willingness to cooperate.

I believe that with the substantive points of this compromise reflected in a modified "Ten-Point Proposal", the matter is ready for Regent action and approval. I think that all parties should be commended for their reasonableness in the matter and their willingness to reach an acceptable solution.

JG:cf

cc: Tom Farer, President
Robert Desiderio, Vice-President for Academic Affairs
Mark Hartman, President, ASUNM
Dean Leonard M. Napolitano, Director, Medical Center
William Johnson, Administrator, UNMH
James A. Wiegmann, Director, Budget
Carroll J. Lee, Assoc. VP for Business/Comptroller
Berry D. Cox, Director, Police & Parking Services

CHANGES IN REGENTS' PARKING POLICY NECESSITATED
BY MAIN CAMPUS/UNM HOSPITAL COMPROMISE

Section 3.5 (A) The Police and Parking Service of the University of New Mexico shall have the general authority to administer and enforce the Parking and Traffic Regulations. The Director of Police and Parking Service is empowered to delegate this authority to UNM Hospital security officers, but limited to the purpose of enforcing the Parking and Traffic regulations within the confines of parking facilities and lands designated specifically for UNM Hospital use. Any such delegation of authority, however, shall not include the authority to issue citations for moving vehicle violations or the authority to effect arrest.

Section 6.4 (A) * * * * [University] UNM Hospital personnel will be issued [a] permits for "M", "N" and [University] UNM Hospital zones only.

University Hospital Personnel: Application for "M" and "N" zone permits shall be made to the Office of Parking Services. With respect to permits for UNM Hospital zones, application is made to the Office of Parking Services by filing an application with the [University] UNM Hospital Department of Security and Safety.

* * * *

(E) (2)

* * * *

(k) [University] UNM Hospital Personnel: [no charge] as determined by the UNM Hospital Board of Trustees.

ANNUAL REPORT

OFFICE OF PLANNING AND POLICY STUDIES

July 1, 1985 through June 30, 1986

Richard H. Cady, Director

I. SIGNIFICANT DEVELOPMENTS DURING 1985-86

1. Reassignment on July 16, 1985, of Institutional Research from Vice President of Academic Affairs (Provost) to President Farer with subsequent assignment to Vice President Jones. There was also significant expansion of responsibilities of the unit and its re-designation as the Office of Planning and Policy Studies (PPS).

2. There was substantial involvement of Planning and Policy Studies with the external relations of the University. This work involved the legislative program, testimony given at committee hearings of the legislature, testimony by President Farer to the meetings of the Legislative Higher Education Re-Evaluation Committee, testimony before the Governor's Higher Education Reform Task Force, staff work for the Council of Presidents, and a major presentation to the Bernalillo County Legislative delegation by President Farer.

Consulting services were also provided to the staff of the Commission on Higher Education (CHE) and its paid consultants on a proposed statewide higher education

information system. Assistance was also provided to the CHE's funding formula committee which is (or should be) working toward a wholesale revision of the formula.

3. In 1986, the legislative committee was reconstituted (LHERCII). Planning and Policy Studies coordinated testimony, monitored the committee processes, and prepared testimony for these hearings. PPS also provided staff to cover the Privatization Subcommittee of the Legislative Higher Education Reevaluation Committee. Duties included researching the topic of privatization of university services, attending hearings of the subcommittee, reporting to UNM legislative liaison team, Vice President/Academic Affairs (VP/AA), Comptroller, and other interested parties.

4. Patricia Burris-Woodall, Associate Director, is a member of the Task Force on Enrollment Management, a committee concerned with university-wide efforts to more effectively attract and retain students at UNM. Committee is currently in the process of finalizing its recommendations. Burris-Woodall is co-chair of the affiliated subcommittee on Institutional Research. This subcommittee looked at what research efforts might facilitate enrollment management. Recommendations were made to the members of the Task Force.

5. We provided an improved regression model of factors related to employment levels in public higher education in the fifty states, and issued two versions of

reports summarizing overstaffing issues and the results of the regression analyses with respect to the state of New Mexico. The most complete form of the report, titled "Is the Higher Education Labor Force in New Mexico Too Large?," was distributed to persons in the State Personnel Office, members of the Governor's Higher Education Task Force and legislators in LHERC in the form of legislative testimonies, the CHE and the LFC, and the President and the VP/AA at UNM.

6. PPS made a thorough summary of three instructional workload measures covering three fall semesters and all academic units, for various categories of faculty and for T.A.'s. The report, made for the Strategic Planning Committee and the deans and department chairs, included description of rationale for the workload indices chosen and the potential uses of the indices provided.

7. We updated and modified the 1983 edition of the booklet, Selected Indicators on UNM Students and distributed it to the UNM Regents, selected members of central administration, the Deans, all academic departments and divisions, community relations organizations, public TV and radio, public affairs, and various student organizations, etc. The report includes demographics and student characteristics of greatest interest and utility for planning and policy analysis at UNM.

8. We began a five-year retention and persistence study of Fall 1981 beginning freshmen, tracking the cohort

through drop-outs, stop-outs, transfers, and graduation, relating the occurrence of these events to a constellation of demographic, academic, and social variables of potential relevance. The objective is to develop a predictive model for use in intervention.

9. We compiled: (a) the UNM Degree Program Inventory (draft), as nearly accurate and complete a degree program listing as exists anywhere on campus; and (b) a complete crossover table (draft) of UNM degree programs with their associated CHE, A & R, and IPEDS codes. It should be noted that these two products have enjoyed wide distribution even in their draft form. They have been requested for use by the following: committee working on computer assisted advising, alumni/development offices, CHE support team, LFC staff person, VP/AA Faculty Contracts Office -- all of whom have indicated how very useful these products are/have been to them in completing certain of their own tasks.

10. We compiled "Good News" items from UNM faculty, staff, and departments for use by President Farer during the legislative session, with the press, and with individual legislators during visits by the liaison teams.

11. We recommended to the Faculty Senate's Admissions and Registration Committee a modification to the freshman admission standard, i.e., entry via equivalent performance prediction equation. Recommendation was discussed, then voted down.

12. We continued to serve in an unofficial capacity

on statewide formula funding review committee. Recommendations were made and implemented concerning methodology to assess fixed-cost component of four-year degree granting institutions in New Mexico. We provided analyses to support activities of this group, including information on other NM institutions as well as UNM.

13. We prepared support material for the UNM Strategic Planning Committee, distributed in notebook form to subcommittee chairs. We also responded to requests for additional information from Paula Sabloff, Coordinator for the Strategic Planning Committee.

14. We maintained steady attendance at Deans Council and staff meetings for Vice President Academic Affairs. We distributed and discussed periodic reports in both fora.

15. We made improvements to the standard faculty salary comparison reports, especially NASULGC comparison and comparison of UNM to selected peer institutions.

16. We reviewed and analyzed several documents, such as the report of the Governor's Task Force on Higher Education Reform, legislative bills and memorials, legislative committee reports and recommendations, etc..

17. We prepared an elaborate, accurate summary of characteristics of full-time tenured or tenure track U.S. citizen faculty to provide central administration with needed information for reports on affirmative action and true reporting to the Regents.

18. We modified the standard Contribution and

Consumption Report, to facilitate timely production at a variety of levels of aggregation.

19. Within the office we implemented upgrades to personal computer software, both for OfficeWriter and Lotus 123. We developed rules for the augmented printing capabilities with the HP LaserJet printer. Informal tutorials were provided on demand to a number of outside offices and other users.

20. We acquired BITNET computer network capability to interact with other institutional operations around the U. S.

21. We arranged with the CHE staff, the State Department of Education, the Council of Presidents and UNM for the use of the College Board's materials on better preparation for college in the high schools.

II. SIGNIFICANT PLANS AND RECOMMENDATIONS FOR THE NEAR FUTURE

Assuming that the President and Vice Presidents continue with the need for staff support on institutional policy, decision-making and external relations, the Office of Planning and Policy Studies expects to be working on the following topics:

1. Continued support for the strategic planning effort, especially on "environmental scan."

2. Continued support for UNM's participation in

state-level higher education reform. We would stress the statements of problems and alternative solutions. We believe that high school preparation, transfer articulation, financial incentives for improvement of quality, and an overhaul of the funding formula are topics on which we can contribute most.

3. Prodding the CHE on the design of a useful state-level higher education information system.

4. The beginning of a program of assessment of talent development or "value-added" by students.

5. Suggesting ways of improving learning through higher and more effective involvement in the process by students and faculty.

6. Improvements in the capabilities of the staff to communicate results and to understand the problems on which administrators seek help.

III., IV. APPOINTMENTS TO AND SEPARATIONS FROM STAFF

(none)

V. PUBLICATIONS NOT OTHERWISE MENTIONED

(none)

VI. PROFESSIONAL ACTIVITIES

PATRICIA BURRIS-WOODALL

1. Professional Associations: American Psychological Association, International Communication Association,

Association for Institutional Research, and Rocky Mountain Association for Institutional Research. Attended annual conference of the Rocky Mountain Association for Institutional Research and attended the annual convention of the International Communication Association.

2. Outside Professional Activity: Adjunct Assistant Professor, UNM Psychology Dept. Taught one section of Psychology 450, Special Topics: Psychology of Women, Fall, 1985.

3. Community Service: (a) as member of ten-person Wildlife Committee of the Albuquerque Sierra Club, organized and presented a one-day, educational "Endangered Species Fair" (co-sponsors were NM Natural History Museum and NM Game and Fish Department). The fair featured speakers, films, displays and live animal and plant exhibits having to do with endangered animal and plant species, with special focus on New Mexico's endangered species. Speakers came from across the US and from throughout NM. Attendance at this first annual fair was three-four thousand. (b) volunteer consultant to the United Way of Greater Albuquerque for writing grant proposal for statewide information and referral service for developmentally disabled, and (c) serving as Friendship Family through UNM's International Programs for a Korean UNM graduate student in Physics--and his family. Serving

in same capacity for two Japanese students at UNM's Intensive English Institute.

TOM FIELD

1. Professional activities outside the office: Graduate student in Educational Foundations program at UNM, beginning Spring 1986. Completion of six hours toward masters degree. Term papers on the "The Funding Formula for the Six New Mexico Four-Year Degree Granting Institutions, Comparison of the Current Formula to Proposed Changes in the Formula, Analysis of Incentives and Disincentives and Philosophic Implications" and "Studies of Faculty Salaries at UNM with Respect to Sex Equity, a Methodological Critique." Personal emphasis in degree program is to augment current quantitative methodological skills and to acquire complementary qualitative methodological skills.
2. Member of Association for Institutional Research and Rocky Mountain Association for Institutional Research. Participation in data exchange with other Association members.

LYN CANHAM

1. Professional activities outside the office: Full-time Ph.D. candidate in Cognitive Psychology in the UNM Department of Psychology. Is currently developing dissertation experiments examining issues

in spoken word recognition in sentence comprehension, to be proposed before dissertation committee in Fall 1986. Spent Fall 1985 as (unpaid) Teaching Assistant for the upper division laboratory in Psycholinguistics, held concurrently with position as Project Assistant in Planning and Policy Studies.

2. Professional associations: Member of American Psychological Association. Gave paper entitled "Generating a topic: Thematic influences on sentence production," coauthored by Dr. Jean E. Newman, at the 1985 meeting of the Southwestern Psychological Association. Member of Human Factors Society. Is waiting to engage in activities of newly-formed local human factors chapter out of Kirtland AFB.

RICHARD CADY

1. Member of Association for Institutional Research (AIR) and Society for College and University Planning (SCUP).
2. Member of the College Board's national Advisory Committee on Research and Development which meets semi-annually in New York.
3. Participated with informal faculty committee in development of a recommended curriculum for a minor in Peace Studies. Team taught three sessions of 400-level class.

4. Member of organizing and program committee for the Trinity Conference, held June 26-28, 1986 in Santa Fe. UNM was cosponsor for this conference on international security affairs. Participation consisted of advice on the program, contact with speakers, and clerical support.
5. Taught Political Science 342, U. S. Foreign Policy, in Fall 1985 and Spring 1986 on overload adjunct contract. Qualified for list of teachers rated "excellent" by students on ICES forms in Spring 1986.
6. Participated in two debates and discussions of the U. S. government's Strategic Defense Initiative (Star Wars) with technical personnel from Sandia National Laboratory at St. Pius High School and the Albuquerque Academy.
7. Faculty participant in a seminar on strategy, Political Science Dept., summer 1986.

VII. OUTSIDE SPONSORED RESEARCH

(none)

ANNUAL REPORT OF THE ROBERT O. ANDERSON SCHOOLS OF MANAGEMENT
1985-86
RAY RADOSEVICH, DEAN

1. GENERAL INFORMATION

A. ASM ADMINISTRATION

In March, 1985, Dr. Raymond Radosevich assumed the Deanship of the Anderson Schools, filling the vacancy created by the resignation of Dr. Jerry Jordan. Dr. Radosevich was Associate Dean of the Anderson Schools from 1976-79, at which time he returned to full time teaching as Professor of Management. He was the driving force in the establishment of the New Mexico Technological Innovation Program, in which he is still very active.

The Associate Dean of the Anderson Schools is Dr. Rodrigo Lievano, who assumed that position in 1983. He also acts as Director of the MBA Program.

Mr. John Warner, Director of the ASM Management Development Center, is the Assistant Dean for External Affairs, a position he assumed in November, 1984.

Associate Professor James L. Porter was appointed the BBA Program Director; Professors Howard Smith and Dwight Grant were appointed Research Program Director and Ph.D. Program Director, respectively. Area coordinators for 1985-86 were: Professor Ed Philips, Accounting; Professor Don Panton, Finance; Associate Professor Roger Jehenson, Human Resources Management; Professor William Peters, Management Science/

Management Information Systems; Associate Professor James Porter, Policy and Planning; and Visiting Associate Professor Roger Lattanza, Marketing, International and Travel and Tourism Management.

B. APPOINTMENTS TO FACULTY

Dry, Eddie - Lecturer and Director of Travel and Tourism, Ph.D., Texas A & M University.

Grant, Dwight - Professor of Finance, Ph.D., University of Pennsylvania.

Hogg, Robert - Assistant Professor of Accounting, Ph.D. in progress, Pennsylvania State University.

Mouck, Tom - Visiting Assistant Professor of Accounting, Ph.D. in progress, Oklahoma State University.

C. SEPARATIONS FROM FACULTY

Christman, Karl - Associate Professor (Accounting)- retired May 31, 1986, after 31 years of teaching and dedication to the University of New Mexico.

Mann, Kerry - Lecturer II (Finance)- accepted a position at the University of Virginia, May 31, 1986.

D. FACULTY ON LEAVE

Professors Patrica Elliott and William Bullers were on Sabbatical Leave Fall, 1985, and Professor Joseph Champoux was on Sabbatical Leave Spring, 1986. Assistant Professor Paul Koogler was on LWOP during the academic year 1985-86.

E. ENDOWED PRESIDENTIAL PROFESSORSHIPS AND LECTURESHIPS

Dr. Dwight Grant was appointed Presidential Professor for 1985-86 for five consecutive years - $5,000 salary supplement per year plus $2,500 discretionary expense fund per year.

Dr. William Bullers and Dr. Helen Muller were appointed Presidential Lecturers for 1984-85 and 1985-86 - $2,500 salary supplement per year plus $500 discretionary expense fund per year.

F. SPONSORED RESEARCH

Suleiman Kassicieh and Stephen Burd - Summer Research Grants for 1985 and 1986 presented to Sandia Labs and awarded.

G. REACCREDITATION

In Spring 1986, the American Assembly of Collegiate Schools of Business informed the Anderson Schools of Management of its reaffirmation of the Schools' accreditation. The Schools' undergraduate and graduate programs have been nationally accredited since 1975.

2. EVENTS OF NOTE

A. Advisory Council

While the ASM has had an Advisory Council for many years, in the Fall of 1985 the Council was restructured for the purpose of creating a more active and volunteer-oriented focus. The Council was divided into seven sub-committees consisting of: Legislative Affairs, Selection Committee, Alumni Committee, Student Recruitment and Placement Committee, Program Development Committee, Management Development Center Committee and Public Relations Committee. Robert Wertheim, Lee Bray, Dean Ray Radosevich, Assistant Dean John Warner, and other volunteers are developing committee structures, goals and mission statements, and scope of activities for all the committees.

Members of the Advisory Council are: Larry Adams, Robert Bailey, Ray Berube, Tom Bonafair, Bud Brasher, Lee Bray (Chairman), Gig Brummell, Irvin Diamond, Judith George, Dick Heim, Valerie Ladeau, Amy Lawrence, Bob Luna, Roger McClelland, Jack McElroy, Fred Ragland, Jim Randel, Penny Rembe, Bruce Seligman, Paul Silverman, Alan Spencer, Brad Steward, Stephanie Stinnett, Tom Taylor, Lee Trussell, Waneta Tuttle, Jim Wall, Robert Wertheim, and Judy Zanotti.

B. ASM Foundation

The ASM Foundation was set up in 1971 as a nonprofit trust for the following stated purpose:

> The Trust is organized and will be operated exclusively for public, charitable, literary or educational purposes. The general purpose of the Trust will be to assist the University of New Mexico Robert O. Anderson School of Management in all of its duties and activities and to encourage and promote the study of Business, Management, and Adminis-

> trative Sciences, and to engage in any and all projects and activities relating to the study and teaching of these sciences. The Trust may receive and maintain real or personal property, and, subject to the restrictions and limitations contained in the Restated Declaration of Trust, the Trust will use and apply the Trust property exclusively for public, charitable, literary or educational purposes as an exempt organization under Section 501(c)(3) of the Internal Revenue Code and its Regulations as they now exist or as they may hereafter be amended.

During 1985-86 the Foundation was reorganized with a redefinition of mission. The Foundation is becoming more actively involved in helping the Schools raise monies, as well as provide advice about the Schools' mission. Paul Silverman became chairman, replacing Al Hamilton. Several new members have been recruited to serve on the Foundation Board. Many of these new members reflect an orientation toward a more executive-level makeup of Foundation members. The ASM Foundation has been changed from a trust organization to an incorporated organization and has been renamed the UNM Schools of Management Foundation. Its restated purpose is:

> The Corporation is organized and will be operated exclusively for charitable or educational purposes. The general purpose of the Corporation is to assist the University of New Mexico Schools of Management in all of its duties and activities and to encourage and promote the study of Business, Management and Administrative Sciences, and to engage in any and all projects and activities relating to the study and teaching of these sciences.

One of the most significant activities during the past year has been the design and development of a revitalized affiliate fund raising drive, since the Affiliate Program

at ASM had not grown in a number of years. New brochures, recruiting materials and charges have been given to the Foundation Board. Each member is to recruit five new affiliate members during a five-month period of time. It is hoped that this new affiliate drive will be able to raise $100,000 for the Foundation. The Assistant Dean's Office is coordinating this affiliate fund-raising drive. In addition, the Foundation Board continues to provide financial and budgeting guidelines for Foundation monies.

1986 Foundation Board members are: Edgar A. Amsden (Vice chair and Treasurer), William S. Davis, Diane Denish, Bill Elder, Al Hamilton, Allan Hisey, Henry A. Ingalls, Robert E. Jancar (on leave), Ken Johns, Rick Johnson, Harry Kinney, Amy Lawerence, Martha McDonald, John McGerigle, Don Padgett, Penny Rembe (Vice chair and Secretary), Paul Silverman (Chair), Morgan Sparks, and James W. Stretz.

C. Alumni Activities

Several activities geared toward ASM alumni were conducted by the Assistant Dean's Office during the past year. Among these activities was a breakfast with Arthur Hausman as featured speaker. In addition, Tait Elder presented a morning coffee talk regarding high technology industries and trends. Professor Michael Daly was the featured speaker at ASM Homecoming activities during October, 1985, when he spoke about business ethics.

The first annual ASM Alumni Fund Raising Drive was coordinated during November and December 1985. The drive raised approximately $4,000. An Annual Alumni Fund Raising Drive will become a featured event.

Events were coordinated with the UNM Alumni office as well. The Assistant Dean made trips on behalf of the UNM Alumni Office to Alamogordo and Socorro as featured speaker for UNM Lobo Day. In addition, ASM was featured in two issues of the UNM Alumni magazine "Mirage."

D. ASM Career Planning and Placement Office

Plans were developed to operate the ASM Career Planning and Placement Office as a satellite office with the UNM Career Planning and Placement Office. This will allow students to sign up for interviews and be interviewed by recruiters on-site at ASM. Funding for a half-time clerical position to operate the ASM CP&P was obtained during Spring 1986. An on-going job referral service was established to assist ASM students and alumni who are seeking full-time and part-time employment opportunities.

ASM internship and co-op positions are also being recruited. Prospective employers are being sought and ASM faculty are asked to participate in the internship and co-op program.

A student career resource packet is being developed through solicitation of professional consultants and organizations in cooperation with the Assistant Dean's Office. This student resource packet should be available at the time the Fall 1986 semester begins. The purpose of this packet is to provide students with a step-by-step

orientation toward the development of a successful career strategy.

E. Student Recruiting

Student recruiting for ASM at both BBA and MBA levels is being facilitated by developing an ongoing relationship with a variety of UNM organizations. This includes the Testing Division, which provides printouts of those students who have taken the ACT and scored above a certain cut-off level, so that letters providing information about ASM, its programs and services, can be sent to the better student prospects.

A statewide network of school administrators is also being developed by the Assistant Dean's Office. This network includes principals, superintendents, counselors, deans, provosts, admissions representatives, faculty, etc., throughout New Mexico. The purpose of developing this network is to provide more information regarding ASM and to develop a more direct capability of following up and monitoring student populations at a variety of high school and college level institutions.

Articulation agreements are also being pursued with a variety of post-secondary academic institutions throughout New Mexico. If these agreements can be established, they will benefit the transfer ability of student credit hours throughout many New Mexico management and business schools.

F. Public Relations

During the past year, the Assistant Dean visited six New Mexico communities on behalf of ASM: Roswell, Hobbs, Carlsbad, Las Cruces, Alamogordo, and Socorro. The purpose of the visits was to recruit students at local high schools and colleges, contact businesses to recruit ASM students and graduates, develop fund-raising contacts and activities with local business organizations, develop alumni relations by suggesting activities that might be developed, offering the opportunity for MDC's support services throughout local communities as well as general public and media relations work. A secondary purpose was to gather information from these local communities on their perceptions and concerns regarding ASM and UNM.

Media relations activities were upgraded significantly through the regular appearance of ASM stories in Albuquerque and New Mexico newspapers and magazines. A series of marketing brochures on behalf of ASM were developed by the Assistant Dean. This series consisted of eight pieces of literature, including a general mailout on ASM programs and services as well as one page detailed descriptions of all of the ASM programs and services. These brochures have been mailed to a variety of businesses and organizations, as well as used for personal visits by ASM faculty and administrators.

The Assistant Dean also worked with the New Mexico

Business Journal in providing a feature on ASM during the Summer of 1985. This feature highlighted ASM, its change in administration, and new programs. Space was provided by statewide advertisers for the purpose of promoting ASM and its programs.

The Assistant Dean's office was instrumental in forming and organizing the UNM/Kirtland Steering Group. The group, which has about 25 members, is charged with enhancing interface between government agencies and academic institutions, providing advice on high tech curriculum opportunities, and improving and expanding the technology base in New Mexico.

G. Fund Raising

In keeping with the ASM objective of resource base expansion, considerable time and effort were expended by the Dean and the Assistant Dean in fund raising from the private sector. Collaboration with the UNM Foundation Development drive was the highest priority and the ASM Foundation's fund raising plans were placed in abeyance until the former drive was completed. The first annual ASM Alumni Drive was organized and implemented. A collaborative plan for the next alumni drive was developed with the UNM Office of Alumni Relations.

At the seventh annual ASM Awards Ceremony, about 100 business leaders attended, and many received awards for their support of the Anderson Schools. (Please see the attached list of financial contributors.)

143

CONTRIBUTORS
1986 ANDERSON SCHOOLS OF MANAGEMENT AWARDS CEREMONY

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Peat, Marwick, Mitchell & Co. Endowed Professorship in Accounting
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144

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Endowed Chair	$450,000	Corporate Affiliate	$1,250 (minimum)
Endowed Professorship	$67,500	Small Business Affiliate	$500 (minimum)
Endowed Lectureship	$22,500	Individual Affiliate	$250 (minimum)
Endowed Fellowship	$12,500	Donors	$100-$499
Sponsors	$5,000-$9,999	Friends	Under $100
Patrons	$1,000-$4,999		

H. Distinguished Lecture in Accounting

Dr. Robert Sterling presented this year's Distinguished Lecture in Accounting on Friday, April 11. Dr. Sterling is Professor of Accounting at the University of Utah in Salt Lake City. His lecture was one of a series dedicated to bringing distinguished accountants to the campus of the University of New Mexico and was made possible by a grant from Atlantic Richfield Company.

I. Awards Ceremony

The Seventh Annual Awards Ceremony took place on April 18, 1986, at the Hilton Inn. This special event, which previously had been primarily awards given by the ASM student organizations to students and faculty, was enlarged to include awards to the many contributors from the business community. Besides awards given to companies and individuals who had made significant monetary contributions to the Anderson Schools' various entities, the Dean awarded Outstanding Service Awards to three individuals who have given many years of service to the Anderson Schools: Ed Amsden, Al Hamilton and Bob Wertheim. Another special award is to the "Outstanding Faculty Member of the Year", who is selected by the BBA and MBA graduating classes each year. This year's recipient was Professor Arley Howard. Other faculty members honored by the students for their outstanding teaching and dedication to students were: Ken Baker,

Eddie Dry, John Finkelstein, Howard Finston, George Hozier, Kerry Mann, Bob Rogers and John Yeakel. Alice Coats, Assistant to the Dean, coordinates this event.

J. Convocation Ceremony

The Anderson Schools' Ninth Annual Convocation Ceremony was held Saturday, May 17, 1986, at Popejoy Hall, with a reception following. The main speaker was Mr. Jerry Geist, President of the Public Service Company of New Mexico. Dean Ray Radosevich was master of ceremonies. Martin Casaus, BBA class president, and Jan Philippi, MBA class president, also addressed the graduates and their guests. A special award was given to Professor Karl Christman upon his retirement after 31 years of teaching and dedication to the University of New Mexico. The 1985-86 graduating class was comprised of 265 BBA graduates, 112 MBA graduates, two Master of Accounting graduates, and 23 Master of Management graduates. The ASM convocation has become an event that is much looked forward to by students, faculty, and their families and friends, who more than filled Popejoy Hall. Coordinator of this event for the past nine years is Alice Coats, Assistant to the Dean.

3. REPORTS OF ACADEMIC DEGREE PROGRAMS

A. BBA PROGRAM (Lea Gondek, Undergraduate Student Director)

Degrees Granted: We are holding remarkably steady on the number of degrees granted (82-83, 233; 83-84, 268; 84-85, 264; 85-86, 265). Accounting continues to be the most popular concentration, as it has been for the past ten years. However, Accounting numbers dropped for 85-86, from 81 to 59 graduates. This is the first year that Financial Management was the second most popular concentration (53), followed by Marketing (51), Business Computer Systems (47) and General Management (33).

Enrollments: These have stayed relatively the same despite increasing numbers of applications.

Applications: These have increased by roughly 13% for the year. Despite some changes in calculation of the grade point average in "Specific Requirements", low grade point average remains the most frequent single basis for rejection.

Faculty-Student Ratio: This has begun to rise from 1:21.81 Spring 1985 to 1:23.97 Spring 1986. Course credit hours remained roughly the same.

Male-Female Ratio: This is 50:50 for all practical purposes. Females make up 49% of 1985-86 graduates. They had outnumbered males the previous two years.

Minority Enrollment: this has remained roughly the same since last year: 28.3% for 1984-85, 28% for 1985-86.

Concentration choices for ethnic groups closely parallel those for the school as a whole: Accounting first, followed closely by General Management, Finance, Business Computer Systems and Marketing.

Attrition: The number of students who withdraw from all classses has diminished slightly from 5.91% of total enrollment to roughly 3.1%. This attrition rate appears slightly lower than that of the university as a whole. (See BBA statistical data following.)

BBA PROGRAM ENROLLMENT STATUS REPORT
Spring 1986

Semester	Total BBA Students	Admits	Returning & Readmits	Undergrad Hours	FTE's	FTFE	Faculty/Student Ratio
Spring 1986	# 727	141	586	11,667	777.80	32.44	1/23.97
Fall 1985	# 712	175*	537	11,040	736.00	32.77	1/22.45
Spring 1985	# 725	135	590	10,508	700.53	32.11	1/21.81
Fall 1984	# 693	162*	531	11,092	739.46	33.00	1/22.40

Hours = Total hours taught by ASM (undergraduate only)
FTE's = Undergraduate hours ÷ 15
FTFE (Full-time Faculty Equivalents) = Total credit hours ÷ 9
Faculty/Student Ratio = FTE's ÷ FTFE
#21 day figure, disregarding withdrawals
* The select criteria for the computer program does not include those students admitted for summer who do not attend classes in the Summer Session but first attend Fall. Please see list below for accurate number of admissions processed.

ADMISSIONS

Semester	Total Applied	Admitted	Denied	Basis for Denial: CST	"Specifies" GPA - 2.4	Both	Other
Spring 1986	229	158	71	0	36	0	35
Fall 1985	278*	190*	88	6	26	3	53
Spring 1985	199	140	59	1	33	3	22
Fall 1984	250*	177*	73	7	36	6	24

* Fall total includes summer applicants
Both = CST and GPA
Other = Failure to process petition of transfer, insufficient hours or courses, cancellations, low UNM overall GPA

150

GRADUATION STATISTICS FOR THE BBA PROGRAM

CONCENTRATION	Sum '84	Avg GPA at grad	Fall '84	Avg GPA at grad	Sprg '85	Avg GPA at grad	TOTAL
Accounting	4	2.76	24	3.10	53	3.00	81
Financial Mgt	1	2.64	20 (3)	2.77	20 (2)	2.80	41 (5)
International Mgt			1	3.42	2 (1)	2.97	3 (1)
General Management	9 (1)	2.88	9 (2)	2.77	15 (2)	2.77	33 (5)
Human Resources Mgt	1	3.53	2	2.78	6 (1)	2.83	9 (1)
Management Science							0
Bus. Computer Systems	5	2.75	10 (2)	3.14	23 (2)	3.04	38 (4)
Marketing Mgt	9 (1)	2.61	19	2.68	23 (1)	2.14	51 (2)
Prod. & Oper. Mgt			3	2.83	5	3.16	8
TOTAL BBA GRADUATES	29		88		147		264
Males	11		40		72		123
Females	18		48		75		141

	Sum '85	Avg GPA at grad	Fall '85	Avg GPA at grad	Sprg '86	Avg GPA at grad	TOTAL	% Between "84-85" & "85-86"
Accounting	3	2.50	27 (1)	3.13	29	3.01	59	-27.16%
Financial Mgt	6	2.60	24 (2)	2.94	23	2.77	53	+29.26%
International Mgt			2 (1)	2.90	2 (1)	2.94	4	+33.33%
General Management	2 (1)	2.71	12	2.40	19 (3)	2.96	33	no change
Human Resources Mgt	2 (1)	3.01	4	2.56	5	2.82	11	+22.22%
Management Science					1	2.81	1	+100%
Bus. Computer Systems	2	2.81	22	2.90	23	2.85	47	+ 23.68%
Marketing Mgt	4	2.90	20	2.83	27	2.86	51	no change
Prod. & Oper. Mgt			4	2.82	2	2.90	6	-25%
TOTAL BBA GRADUATES	29		88		147		264	+.37%
Males	11		40		72		123	+9.75%
Females	18		48		75		141	-7.8%

NOTE: NUMBER ( ) NEXT TO CONCENTRATION IS THE SECOND CONCENTRATION FOR THOSE STUDENTS WHO ATTEMPTED A DUAL CONCENTRATION

BBA

ETHNIC DISTRIBUTION (%) BY CONCENTRATION

FALL 1985

Concentration	American Indian Alaskan	Black	Asian Pacific Islander	Hispanic	Other	Foreign
Accounting	.28	.28	.56	5.91	20.70	.14
Finance	.14	.14	.28	3.80	9.71	.70
General Management	.70	.28	.42	5.35	15.49	.28
Human Resources Management				1.12	2.25	
International Management				.84	2.25	
Marketing	.28		.28	2.25	9.71	.70
Business Computer Systems	.14	.42	.14	3.38	10.56	.14
Management Science				.28	.70	
Production Operations Mgt.		.14		.14	.42	
Travel & Tourism					.42	

SPRING 1986

Accounting	.13	.27	.68	6.34	21.37	.13
Finance	.27	.27	.41	3.72	9.65	.68
General Management	.68	.27	.41	4.41	14.06	.27
Human Resources Management				1.24	1.79	
International Management			.13	.82	1.79	
Marketing	.91		.27	2.20	11.03	.96
Business Computer Systems	.13	.27	.27	2.75	10.62	.13
Management Science				.55	.27	
Production Operations Mgt.				.27	.13	
Travel & Tourism				.68	1.24	

BBA Profile - Spring 1986

Semester	BBA Students	Admits	Returning & Readmits	Male	Female	Full Time	Total School	Non-BBA
Spring 1986	# 727	141	586	356	371	372	1,852	1,125 (60%)
Fall 1985	# 712	175*	537	350	362	361	1,824	1,112 (60%)
Spring 1985	# 725	135	590	355	370	357	1,587	862 (54%)
Fall 1984	# 693	162*	531	347	346	360	1,781	1,088 (61%)

Full Time = Number of students carrying 15 hours or more

Total School = Number of students enrolled in one or more ASM course(s) (including Service Courses)

Non-BBA = Number of students enrolled in MGT courses (including Service Courses) but not enrolled in ASM

* The select criterion for the computer program does not include those students admitted for Summer who do not attend classes in the Summer Session but first attend the Fall Session. Please see admissions list next page for number of applications processed.

ATTRITION

Semester	BBA Students	Headcount of Those Withdrawn
Spring 1986	# 727	23
Fall 1985	# 712	31
Spring 1985	# 725	33
Fall 1984	#1693	41

= 21 day figure, disregarding withdrawals

Concentration Distribution

BBA

	Fall 1985		Spring 1986	
	Number	Percentage	Number	Percentage
Accounting	197	27.7	209	28.82
Finance	100	14.08	104	14.34
General Management	158	22.25	144	19.86
Human Resources Mgt	24	3.38	22	3.03
International Mgt	23	3.23	20	2.75
Marketing	89	12.53	101	13.93
Business Computer Syst	104	14.64	102	14.06
Management Science	7	.98	6	.82
Production & Operations	5	.70	3	.41
Travel & Tourism Mgt	3	.42	14	1.93

Ethnic Distribution

American Indian/ Alaskan	11	1.54	12	1.65
Black	9	1.26	8	1.10
Asian/Pacific Islander	13	1.83	16	2.20
Hispanic	163	22.95	167	23.03
Other	514	72.39	522	72.00
Foreign	14	1.97	16	2.20

B. MBA PROGRAM (Sue Podeyn, MBA Student Director)

The 1985-86 academic year saw several significant events at the Anderson Schools. Our reaccreditation review was successful and the program continued to prosper. All categories of activity in the MBA program remained stable in academic 1985-86.

Degrees Conferred: The Anderson Graduate School conferred 112 M.B.A. degrees in academic 1985-86, and 99 in the preceding year. In addition, two Master of Accounting degrees were awarded in 1985-86.

Application and Admissions: Applications to the MBA program increased over the previous academic year. 67% of the applicants were offered admission. The number of new students enrolled in the program increased from 205 in 1984-85 to 304 in 1985-86.

C. PH.D. PROGRAM (Dwight Grant, Director)

Mr. Thomas Becker successfully completed the Ph.D. program in International Management. Mr. Becker defended his dissertation in the spring. He is currently teaching International Management and Marketing Management at the University of South Alabama.

The School of Management has not accepted any new students in the Ph.D. program for several years. In April, 1986, the faculty voted not to plan to activate the program for Fall, 1987. Among the reservations expressed at

that time was a concern that the program would not be adequately funded in advance and that prospects for university funding in the future were bleak.

4. ANDERSON SCHOOLS OF MANAGEMENT AREA REPORTS

A. ACCOUNTING AREA (Ed Philips, Area Coordinator)

A major activity of the Area was recruiting of new faculty. This began with interviews of approximately twenty prospective candidates at the American Accounting Association meetings in Reno in August, 1985. After campus visits by five candidates, we made offers to Alan McNamee and Paul Bahnson. McNamee accepted a position to start Spring Semester 1987. Bahnson declined; we then wanted to extend an offer to Dennis Togo, but we were not allowed to do so because of the freeze on new offers.

Karl Christman retired at the end of the Spring Semester, 1986; he will be missed by his colleagues and students. Pat Bost, who taught three years as a visiting faculty member, left for Washington, DC, where her husband was transferred. Paul Koogler spent the academic year on leave visiting the University of Arizona. He will continue his leave for 1986-87. Peat, Marwick, Mitchell & Co. endowed a Professorship in Accounting. The Area faculty and Dean Radosevich adopted a procedure for selecting faculty to hold the professorship. Rogoff, Diamond & Walker funded an endowed Lectureship.

A support group for the Accounting Area was formed during the year. This was started at meetings with prominent local CPAs Irv Diamond, Jerry Atkinson, and Gail Reese. Professor Pat Elliott was selected to be the

faculty liaison person with the group. Robert Sterling was the distinguished lecturer in the ARCO series in May, 1986.

The Area faculty requested a Ph.D. program in Accounting be established, but this was not put in effect because the ASM faculty voted to postpone implementation of the programs.

B. FINANCE AREA (Don Panton, Area Coordinator)

Published Research

John Finkelstein: "Variable Rate Financial Instruments' Impact Upon Monetary Policy and Stability", forthcoming in The Mid-Atlantic Journal of Business

Dwight Grant: "Optimal Hedging of Uncertain and Long-Term Foreign Exchange Exposure" with Mark Eaker, The Journal of Banking and Finance, 9(1985), pp.221-31.
"Theory of the Firm with Joint Price and Output Uncertainty and a Forward Market" The American Journal of Agricultural Economics, 67 (August 1985), pp. 630-35.

Don Panton: "Approximating the Cumulative Distribution Function in Programming the B-S Call Valuation Model", The Journal of Financial Education, Fall 1985, pp. 86-91.

Working Papers and Papers Under Review

John Finkelstein: "A Note on the Demand for Labor by Firms and the Phillips Curve Phenomenon"
"The Simple Analytics of Depository Intermediary Soundness Regulation: A Pedagogic Note"
"An Optimal Capital Standard for the Banking Industry and Stability"
"Default Penalties, Uncertainty, and the Multiplicity of Financial Intermediaries: A Pedagogic Note"

Dwight Grant: "Optimal Futures Positions for Farmers Who Face Price and Output Risk". Presented at the 1986 WFA meetings.
"Futures Contract Delivery and Volatility of Spot Exchange Rates" (with Mark Eaker). Presented at the 1985 FMA meetings.
"Foreign Exchange Risk Management with Cross-Hedging and Swaps" (with Mark Eaker).

Don Panton: "A Minimax Estimation of the Coefficients for the Maclaurin Series Expansion of the Symmetric, Stable Paretian Distribution Function"

Lectures by Visiting Scholars

The following visiting scholars presented lectures for the ASM faculty and students:

Professor Seha Tinic, Mosle Professor of Finance, Graduate School of Business, University of Texas

Professor David Dale-Johnson, Associate Professor of Real Estate and Finance, University of Southern California

Dr. Jerome Baesel, Princeton-Newport Partners

Teaching

Kerry Mann received an award from the student accounting organization in the Anderson School as the Best Finance Area Teacher. John Finkelstein received an award as the Outstanding Untenured Faculty Member at the annual awards ceremony. Dwight Grant and John Finkelstein were listed in the Spring 1986 "Incomplete List of Excellent Instructors."

C. HUMAN RESOURCES MANAGEMENT AREA (Roger Jehenson, Area Coordinator)

New Faculty Member: Assistant Professor Helen Muller joined the Human Resources Management Area at the beginning of the 1985-86 academic year. During this year Helen Muller completed her two-year tenure as a University of New Mexico Presidential Lecturer.

New Courses: Four new courses were introduced this year in the HRM Area curriculum. At the undergraduate level: "Women in Management," and "Power and Influence." At the graduate level: "Women in Management Graduate Seminar," and "Creative Leadership."

Student Chapter of the ASPA

The student chapter of the American Society for Personnel Administrators had been discontinued for almost

ten years due to lack of student interest. It has been reconstituted this year with the assistance of several members of the regular chapter of the ASPA, the New Mexico Personnel Association. Mr. Ken Fanning, of Rust Tractor, and Professor Roger Jehenson were particularly helpful, and their outstanding contributions were recognized in May at the ASM annual Awards Ceremony.

Highlights of HRM Area Faculty - Professional Activity and Recognition

Joseph Champoux signed a contract in April, 1986, with West Publishing Company for his organization behavior text tentatively titled Behavior in Organizations: An Analytical Perspective. The text is expected to be published in 1988.

Howard Finston was given recognition by Delta Sigma Pi for his outstanding teaching and service to students.

Roger Jehenson was invited to present a paper entitled "Critical Phenomenology of Domination" at a conference organized at Ohio University by the Center for Advanced Research in Phenomenology.

Helen Muller's paper, "Management Strategies Can Successfully Help Hospitals Resist and Reserve Prospective Payment-driven Retrenchment," published in Hospital Topics, was given a "Recommended Article" citation by Hospital and Health Services Administration Quarterly.

Robert Rehder has been doing research on National United Motors Manufacturing, Inc. (NUMMI), the Toyota/General Motors joint venture in Fremont, California. He will present this research at the forthcoming meeting of the American Institute for Decision Sciences. Several universities, including Rice, the University of California at Irvine, the University of Colorado, the University of Arizona, Columbia University, and the General Motors Research Institute have invited him to present his NUMMI research later this year.

160

D. MANAGEMENT SCIENCE/MANAGEMENT INFORMATION SYSTEMS AREA (William Peters, Area Coordinator)

The area full time faculty in 1985-86 were: Paul Alpar, Bullers, Stephen Burd, Terrye Gregory, Suleiman Kassicieh, Rodrigo Lievano (Associate Dean), William Peters, Richard Reid, and Carl Schultz.

The area part time faculty in 1985-86 were: John Abbott, William Adkins, Eddie Kramer, Len Malczynski, Marian Marrs, Linda Miller, Doug Neeley, Terry Othick, Glenn Pfeifer, Richard Russell, and Louis Sullo.

Professors Bullers and Kassicieh were granted tenure at UNM and Professor Schultz was promoted to the rank of Associate Professor to commence in 1986-87.

Recruiting for three positions (MIS, Management Science, and Operations Management) required a major effort by the area during the year. The number of vitae reviewed numbered over one hundred. People interviewed at professional meetings numbered over thirty, and five prospects visited UNM at our invitation. We extended three offers. H. V. Ravinder accepted our offer in the Management Science position. Paul Swamidass and Byron Finch declined our offers in the Operations Management position. We were unable to extend an offer in MIS to Mr. Koushik owing to a "freeze" on offers in April, and were unable to extend additional offers in Operations Management.

Presentations at professional meetings were made by professors Bullers (Western Decision Sciences), Burd (Times/ORSA), Reid (Western AIDS), and Schultz (Summer

Computer Simulation Conference). Regularly published research of the faculty is noted in individual progress reports.

E. MARKETING MANAGEMENT, INTERNATIONAL MANAGEMENT, and TRAVEL AND TOURISM AREA (MIT) (Roger Lattanza, Area Coordinator)

The MIT Area consists of the following individuals and functional areas: Marketing Management: Kenneth G. Baker, Ph.D., George C. Hozier, Jr., Ph.D. Roger Lattanza, M.B.A., Robert D. Rogers, Ph.D., Avraham Shama, Ph.D.; International Management/Management: Robert A. Lenberg, Ph.D., Daniel M. Slate, Ph.D., Lothar Winter, Ph.D.; Travel and Tourism: Eddie Dry, Ph.D.

During the past year the MIT Area has been very active and has accomplished many objectives. The results are summarized below:

Research: The nine MIT Area members were very productive as evidenced by published articles in nationally refereed journals. Ten person articles (seven different articles) were accepted for publication. The MIT Area has several articles currently under review at nationally refereed journals. The MIT Area members are actively engaged in numerous on-going research projects which will very likely yield additional high quality published articles in nationally refereed journals. Over half of the MIT members attended and presented papers at conferences during the past year.

Teaching: Members of the MIT Area are regularly listed in the Outstanding Professors list each year. This is evidence that the students are very satisfied with the

classroom performance of the MIT Area members.

Service: Members of the MIT Area provide an important service to ASM by serving on its committees as well as to the public and business community by undertaking activities that enhance ASM's visibility in the community. Activities range from research projects to invited presentations.

Mission:

Excellence in research and teaching. Our research has two orientations; one is research in our individual areas of interest and the other is a group focus on marketing issues in the Southwest. This is expected to create synergism and contribute to our knowledge of marketing phenomenon in general and in New Mexico in particular. We are also focusing on areas that will contribute to the economic development of the State. Teaching is focused on creating new ways to present information to students and maintaining a very high level of enthusiasm in the classroom. One major focus is using "hands-on" experience activities to enhance theoretical foundations developed in a classroom setting.

Relevance of our program offerings to our students. This activity entails upgrading and modernizing our curriculum as the business environment changes.

Responsiveness to the needs of the marketplace. This

activity entails responsiveness to the skill needs of potential employers of our students.

Long-run Objectives:

- Actively engage in scholarly and professional research
- Provide professional assistance to the business community
- Maintain an accredited, high quality undergraduate and graduate program for students who wish to specialize in the area of marketing
- Develop students into high quality marketing professionals
- Attend professional meetings in order to share and gain new knowledge
- Assist and participate in the programs of our Robert O. Anderson Schools of Management, enhancing the image of the Robert O. Anderson Schools of Management.

1986-87 Objectives:

- Maintain research productivity
- Continue to upgrade the BBA and MBA marketing specializations
- Continue our on-going dialogue with the business community of Albuquerque
- Continue to support The American Marketing Association Professional Chapter in Albuquerque

Accomplishments: Research productivity was improved by increasing the number of papers submitted, papers accepted, papers in progress, and papers presented. Several research projects focusing on leisure time use in the State of New Mexico were initiated. The BBA marketing curriculum was upgraded, and the marketing management courses for all ASM students were restructured and standardized. Plans are in place for a Doctoral Program.

Report on the First Year of the Travel & Tourism Management Program

The goal of the Travel & Tourism Management Program

is to provide management education for New Mexico's largest private sector employer. The first year saw significant progress toward that goal:

- Press kit and distribution of news releases to 37 news organizations
- Brochure developed
- Information packet sent to all 600+ ASM students
- Advisement kit/orientation meetings for students
- Internship handbook and training program
- Extensive counseling of students in career opportunities and internships
- Sixteen students started or completed internships
- Two articles on internships in the tourism industry in trade journals
- N. M. Ski Survey, largest skier survey ever done in New Mexico. Funded by Ski New Mexico, Inc. Funded for next year also. 26 students got valuable experience in design and administration of a large scale research project.
- Forty students enrolled in the first course
- Nineteen students began or completed internships
- Eight presentations were made to professional tourism organizations on the program, tourism research, and internships. Numerous presentations to social and civic organizations on tourism education at UNM.
- Regular attendance at professional organizations and conferences (American Marketing Association, Hotel & Motel Association, Hotel Sales Marketing Association, Innkeepers, Ski New Mexico, and New Mexico North, Inc. Chambers of Commerce Executives Association, N. M. Restaurant Association).
- Start of Tourism Data Bank & Resource Center at Parish Library
- $350 donated by Hotel Sales Marketing Association. First of three gifts
- Two student projects completed for Marriott Hotel and Holiday Inn

Concerns

Although as an AREA we undertook deliberate plans and actions to improve our performance, we are concerned with issues that impact on our performance and yet are beyond our control. Such issues pertain to resources and

overall managerial direction. Our concerns include the following:

- Lack of consistent direction for the University of New Mexico
- Absence of meaningful resources for research
- Lack of resources for professional travel
- Overall resource problems due to State's financial constraints

F. POLICY AND PLANNING AREA (James Porter, Area Coordinator)

A brief overview of the Policy and Planning Area, its members and their activities during Fall, 1985 and Spring, 1986 follows. In the following order, this review covers Staffing, Recruiting, Courses, Curriculum Development, Research, Service and Immediate Plans of the Area. Further detail may be found in relevant primary sources, such as the activity reports of individual faculty members, the 21 day enrollment reports, and so forth.

Staffing:

The following full-time faculty members comprise the Area: Michael Daly (Visiting, 3/4 time), Allen Parkman, James Porter, Ray Radosevich, Daniel Slate, and Howard Smith. Professor Lothar Winter was with the Area through the Fall Semester.

Part-time/Adjunct faculty members included Daniel Behles, William Davis, Douglas Francis, William Ingersoll and William Kouba. Steven Meilleur, Roger Lattanza and John Warner also provided instructional services for the Area.

Recruiting: The Area failed in its efforts to fill the Albert Franklin Black Professorship in Entrepreneurship. The top candidate for the position declined the Schools'

offer and accepted a post at Stanford University. The Area chose not to pursue other applicants just before the University withdrew its authorization to fill the slot. The Area hopes to be able to resume its efforts to fill the Albert Franklin Black Professorship in the near future.

Courses:

The following courses were offered through the Area during the academic year: MGT 113 Management - An Introduction, 308 Organizational Environment, 309 Man, Society and Law, 310 Law of Contracts, 490 T/Tech. Entrepreneurship, 495 Seminar in Small Business, 496 Seminar - Venture Capital, 498 Senior Seminar, 504 Organizational Economics I, 505 Organizational Economics II, 508 Organizational Environment, 509 Organizational Environment - Law, 554 Public Control of Business, and 598 Seminar in General Management.

Curriculum Development: The Area was successful in its proposal to the ASM faculty for a new concentration in Small Business/Entrepreneurial Studies. The new concentration will be implemented as soon as resources allow.

Research: Members of the Area wrote and published in a variety of fields during the past academic year — health, economics, and ethics are but three which suggest the diversity of interests within the Area. While much of this work was single-authored, a good amount was also the result of collaborative effort. Considering the extensive involvement of Area members in other activities at the Schools and University, on the whole this past year was a productive one in terms of research.

Reference to the activity reports of individual Area members is suggested.

Service: Area members were actively engaged in a wide range of activities which provided service to the Schools, the University, and the larger community. For example, the ASM research program, the Small Business Institute, and the undergraduate program were directed by Area members. Area members were also centrally involved in the Symposium of Capitalism and Ethics, and in the White House Conference on Small Business. Members of the Area also gave numerous speeches, played leadership roles within many committees and organizations within the University and State, and contributed time and energy to a number of professional groups and societies. In terms of service, it was a very full year for members of the Area.

Immediate Plans of the Area: The Area hopes to implement the Small Business/Entrepreneurial Studies Concentration approved by the faculty this past year as soon as feasible. Its implementation is conditioned on the designation of an individual to assume responsibility for the Concentration. This is presumably tied to receiving authorization to reinitiate recruiting for the Albert Franklin Black Professorship, and, of course, being successful in that effort. Implementation of this Concentration is presently the Area's top priority.

5. SPECIAL REPORTS

A. NEW ASM BUILDING

Construction of a new Graduate School of Management building was begun during the Fall 1985 semester on the parking lot west of the existing ASM building. The $5.8 million building will double the space available to the Anderson Schools, and will house an expanded Parish Library, classrooms, the Management Development Center, and administrative offices. The building is scheduled for completion in February, 1987, and is due to be occupied and functioning by the Fall 1987 semester.

B. ASM RESEARCH PROGRAMS (Howard Smith, Director)

During 1985-86 the ASM Research Programs solidified ongoing research activities among faculty members and began to expand into several new areas. At the end of the Spring Semester, 1985, the faculty selected Professor Howard L. Smith as the director of research. Professor Smith, along with the ASM Research Allocations Committee (Professors Caplan, Grant, Reid and Rogers) spent considerable time clarifying the goals and policies of the research program. This culminated in funding programs for three different research efforts:

- Developmental Research Projects — research projects proposed by Assistant and First-year Associate Professors at ASM
- Competitive Research Projects — research projects proposed by ASM faculty that are evaluated and funded on a competitive basis according to quality

- Grant Proposal Projects — projects proposed by ASM faculty that result in submission of a formal research proposal to non-UNM funding agencies.

These projects were supported by an allocation of $40,500 from the Dean and the UNM Office of Research.

Research colloquia presented by ASM faculty were reinstituted on a monthly basis. Among the topics presented were the following:

- Professor Grant: "Optimal futures positions for producers who face price and yield risk"
- Professor Schultz: "An expediting heuristic for slack-based priority scheduling rules"
- Professor Hogg: "Exploring Congressional intent: the case of the earned income credit"

C. NEW MEXICO SCHOOL OF BANKING (Roberta Ponto, Staff Assistant)

The New Mexico School of Banking held its twelfth annual on-campus session May 22-30, 1986. Sixty-four students were enrolled in the Freshman (or basic year) Class and fifty-nine students returned for their Senior Year, each of whom was awarded a diploma from the school. Enrollment in the school is limited and applicants must be employed by a commercial bank or state or federal regulatory agency and be sponsored by their employers. Some 190 banks and regulatory agencies in New Mexico,Colorado, Utah, Wyoming, Texas, California and Oklahoma have been served by the NMSB.

Purpose: The New Mexico School of Banking was established in October, 1974, for the purpose of providing the highest possible quality of education for intermediate-

level career officers and supervisory employees of commercial banks and employees of state and federal regulatory agencies. The mandate of the New Mexico Bankers Association and the Robert O. Anderson Schools of Management requires faculty standards to be of the highest quality. The NMSB Admission Committee selects only applicants with integrity, determination, and a desire to pursue excellence in increased bank-managerial responsibility. The School established a foundation for lifelong education, including possible attendance at a graduate school, and will prepare students for more rapid advancement to senior management positions. Instruction stresses a comprehensive managerial point of view and strives to increase student understanding of the organizational and policy-making aspects, as well as the economic and monetary contexts, of modern banking.

The New Mexico School of Banking receives no direct University funding and relies totally on revenues from tuitions, fees and gifts.

Operation: The NMSB operates under a Board of Trustees. The Board establishes policies relative to curricula, faculty, budget, admissions and standards and long-range planning. The Board of Trustees is presently soliciting funds for the purpose of establishing an endowed chair in banking with the provision that the chair holder will be

the director of the school. At the present time the NMSB staff is comprised of a Staff Assistant working as Acting Director and part-time student assistants.

Faculty: The School has a renowned faculty of both academicians and practitioners from ASM, New Mexico and throughout the states.

Curriculum:

Course studies include: Funds Management I and II, Legal Aspects of Banking I and II, Economics and Regulation I and II, Commercial and Consumer Credit I and II, Strategic Planning for Financial Institutions, Marketing I and II, Bank Operations, Cash Management, E.F.T. Developments, Trust, Human Relations, Personnel Management, Bank Management Simulation, and Micro-computer Orientation.

Awards and Recognition: Each year the school gives recognition and a monetary award to a student for outstanding performance. The Class of 1985-86 award recipient was Mr. Bomi Boman of the First National Bank in Albuquerque. A certificate is also given to the First and Second Runners-up, as well as to the outstanding performer in the Legal Aspects of Banking course study.

In 1985 the Board of Trustees gave the first scholarship to an employee of a regulatory agency to attend the school. This is a matching scholarship in that if the agency selects two students to attend the school, NMSB will pay the tuition and fees for one and the agency pays for one. This year's scholarship went to Art Trujillo, Deputy Director of the Financial Institutions

Division, State of New Mexico.

Board of Trustees of the New Mexico School of Banking

Governing Members: James Clark, President, First Interstate Bank; J. William Craig, President, United New Mexico Bank; Henry Jaramillo, Jr., President, Ranchers State Bank; John Lovell, President, First Interstate Bank; Don Kidd, President, Western Commerce Bank; Earl Spruiell, President, Deming National Bank; J. Paul Boushelle, Jr., Executive Vice President, First National Bank (Chairman of Board); Mahlon Love, Senior Vice President, Sunwest Bank; Robert I. Spengler, President, Arapahoe National Bank (Vice-Chairman); Sharon Janecka, Executive Vice President, NM Bankers Association; Raymond Radosevich, Dean, R. O. Anderson Schools of Management

Ex-Officio Members: James Foley, President, First National Bank of Belen, President, NM Bankers Association; Steven R. Chamberlin, Federal Home Loan Bank (President, Class of 1985-86); David Paulsen, Management Trainee, Green Mountain Bank (President, Class of 1986-87)

D. SMALL BUSINESS INSTITUTE (Dan Slate, Director)

Over the past year many improvements have been made in the management and operations of the Small Business Institute. The following outline highlights the major accomplishments.

Refined and Improved Standard Operating Procedures for Client Processing

A detailed Procedure Manual was developed for the SBI client case teams. This SBI Procedures Manual not only provides necesssary scheduling information but also explains the role of the SBI client case teams in coordination with SBA, SCORE, and the SBI clients. This manual has been helpful in clarifying the responsibilities of the SBI client case teams and in creating a more pro-

fessional image of the Small Business Institute.

Increased Public Awareness of the Small Business Institute

A formal advertising campaign was launched in October, 1985 and again in March, 1986. These campaigns included the following components:

1) placing advertisements in the Albuquerque Journal and the Albuquerque Tribune,
2) sending a sample copy to the newspapers in an attempt to get an article printed,
3) acquiring public service announcements (10 secs and 30 secs) on a number of local radio stations,
4) sending letters to all the SBA borrowers from both the SBA Coordinator and the SBI Director,
5) distributing brochures explaining the SBA to a variety of referral services, including banks and savings and loan institutions.

Important secondary responses have also occurred, including mention of the SBI in an article in the New Mexico Business Journal, and an increasing number of referrals made by "word of mouth."

Increased Client Responsiveness

As a result of the formal advertising campaign, the Small Business Institute obtained a client pool of 43 potential candidates for the Spring, 1986, semester. From this pool 13 excellent cases were selected. The remaining cases were directly referred to the Service Corps of Retired Executives and will be kept as potential clients for the next semester.

Increased Resources Available to Students

1) Library: Placement of excellent case studies and pertinent literature on file at the library. This

reference material is continually assessed and up dated.

2) SBI/SCORE Office: Reference materials are also available within the office, including previous cases and a variety of literature pertaining to the management of small businesses.
3) Utilization of SCORE: Each team has a SCORE representative assigned to it. This member works closely with the team and the client to aid the assessment and the problem solving.
4) Agreement with Clinical Law Program at the UNM Law School: A working relationship with the law students has been developed so that the SBA clients' legal problems could be solved along with their business problems.

In summary, the Small Business Institute has striven toward:

1) creating a more professional relationship between the students and clients,
2) improving public relations with the community,
3) making itself more available to the students, SCORE, and SBA, and
4) acting as a liaison beween all the involved parties.

To remain effective the Small Business Institute must be perceptive to the needs of the community, SCORE, SBA, and UNM and be willing to refine, grow, and adapt as the situation demands. The Small Business Institute's activities this past year have illustrated its ability to evolve and progress in a positive direction.

E. TECHNOLOGICAL INNOVATION CENTER (Gary Smith, Director)

The UNM-TIC completed its third successful year as a state-funded program and its fifth year overall. Although results have been encouraging, political turmoil and financial troubles for the state have threatened the program's funding. The State Legislature voted to cut the appropriation for

fiscal 1987 by 80 percent to only $100,000. Reorganization of the program to be better coordinated through Economic Development and Tourism has resulted in a commitment to continue funding for the UNM-TIC at about the same level as last year, approximately $350,000. Belts have to be tightened in several areas of the program, but the overall efforts are expected to increase through better utilization of resources. Management of the program anticipate developing new strategic initiatives to accomplish self-sufficiency and to direct the evolution of the program to its optimum structure as a tool for diversifying the economy of the state.

Highlights of the year's accomplishments include:

- Handled 74 inquiries
- Assisted in the start-up of 9 ventures
- Participated in classes that trained 149 students in technological entrepreneurship
- Helped to create 27 jobs
- Assisted in securing $7,221,500 in capital investment for clients

F. MANAGEMENT DEVELOPMENT CENTER (Steven Meilleur, Associate Director)

The general mission of the Management Development Center (MDC) is to provide quality adult, continuing education training opportunities to the management and professional communities of Albuquerque, New Mexico, and the United States. The MDC has been in operation since 1971, with steadily expanding operations during these years. The MDC has been offering more non-degree and customized workshops and seminars on a continuous basis for the past eight years. Previously, the Master's

of Management Program (MMP) was the primary offering of the MDC.

Significant Achievements During Fiscal Year 1985-86

This section contains an account of all significant activities which took place during the past year. Activities are listed and described in some detail.

1983-85 MMP: This cycle of the MMP was completed in August, 1985, with forty participants graduating. Fifteen MMP participants pursued the MBA option.

The MMP is a two-year 45-hour credit academic program leading to the degree of Master of Management. This program is designed for the working manager, with classes held on alternate weekends. In addition to meeting the MBA Program admission requirements, applicants must have at least three years of significant management experience.

1985-87 MMP: The eighth cycle of the MMP was recruited during early 1985, and began in July, 1985. Fifty-five participants were recruited. Despite an 18% increase in tuition (from $7,200 to $8,500 per cycle), there was no significant decrease in the demand for the MMP.

Basic Management Program: During fiscal 1985-86, three cycles of the BMP were presented. The BMP is a one semester, non-credit diploma program. The BMP was established to teach newly appointed managers and supervisors the fundamental principles of management.

Community Seminars: A series of short, non-degree training seminars was offered in 1985-86. Fifty-two seminars and programs were offered on a variety of subjects, attracting a wide range of participants.

In-house Training Programs: In addition to the community programs described above, the MDC also worked with several organizations to design and deliver training programs for personnel of those specific organizations. These programs vary depending upon the unique requirements of different client organizations. Fiscal 1985-86 represented an increase in the number of in-house training programs.

Executive Management Association: The MDC has expanded its relationship with the EMA, an MMP Alumni Association, to develop a more formal MMP alumni network. One major event was a breakfast featuring Mr. R. O. Anderson as guest speaker, which was attended by more than 60 people.

Competition to the MDC for the Albuquerque and New Mexico Training Market: Continuing a recent trend, several training organizations and consulting groups increased their attention to the Albuquerque market during 1985. In 1986, however, we began to see several of these organizations either cut down or eliminate their activity in Albuquerque.

MDC Program Participants Analysis: Including the Basic Management Program with other community seminars, 67% of

the total participants in MDC programs, 599 out of 889, come from the Albuquerque metropolitan area. 29% of the participants come from other locations in New Mexico, while 4% come from outside New Mexico. Particpants in in-house training programs totaled 565, with many of these programs provided on-site in locations outside Albuquerque. Approximately 1,500 persons were involved directly or indirectly with MDC programs, activities, or services during fiscal 1985-86.

Not-for-profit Seminar Series: The Center offered its fifth annual Not-for-profit Seminar Summer Series, with six specialized programs for NFP and community organizations. This series attracted 62 participants to the programs.

6. REPORTS OF STUDENT ORGANIZATIONS

A. DELTA SIGMA PI (Natalie Valencia, President)

Delta Sigma Pi is a professional business fraternity organized to foster the study of business in colleges and universities internationally. The Gamma Iota Chapter was first established at the business school on May 19, 1949. The members of Delta Sig have had a long history of being a very active organization on the University campus.

The past academic year of 1985-86 has not been different in that the Gamma Iota Chapter has accomplished a significant amount of their goals. Approximately forty-five new members have been initiated this past year which proved to be a successful recruiting program. The professional speaker program has included fifteen speakers who vary from politicians to bankers to administrators throughout the community. Delta Sig is also active in fund raising projects which include selling film at the Balloon Fiesta and selling coupon books, stationery, carnations for Valentine's Day, and several car washes. Community service projects over the past year have included collecting toys at Christmas for needy children, taking kids from the All Faith's Home to the Albuquerque Museum, and working on a call-a-thon for the Anderson Schools of Management.

A significant accomplishment of the Chapter was establishing a scholarship for the entering students at

the Anderson School. We are very proud of this because we feel we are supporting the future business leaders of tomorrow.

Delta Sig is concentrating on including faculty members in our activities in order for the faculty to better understand what we do as a chapter and so that the members may become acquainted with the faculty members at the Anderson School.

Delta Sigma Pi will be sending several representatives this October to the Regional Conference in Denver, Colorado, where the Gamma Iota Chapter may have a chance of winning an award for "Most Improved Chapter" in our region.

We welcome people who are interested in pursuing a business degree and are highly motivated to learn as much as possible about business before graduating from college.

B. Association of Graduate Business Students (Len Malczynski, President)

The Association of Graduate Business Students completed a very active year in '85-86. The focus of the Association moved more and more toward the participating student body instead of the entire Anderson student body.

With that focus in mind, several programs were funded, both social and academic. The traditional Christmas party was held; in addition two new traditions were begun. The first was a Luncheon Seminar series held

at the Garden Court Restaurant. This series provided a chance for Anderson faculty, staff, and students to meet informally over lunch. ASM faculty members spoke on topics such as divorce, the MBA, technological innovation, and artificial intelligence. Secondly, a Spring barbecue was held prior to exam week. At least 150 steaks were prepared for a "damp" crowd; however, the rain dampened no one's spirits.

On the academic side AGBS was instrumental in funding and publicizing a symposium, "American Capitalism: Power and Responsibility", held on December 12 and 13, 1985. AGBS' seed financing encouraged others to contribute, and AGBS volunteers put in an extraordinary organizing effort.

Another high point of the year was the funding of students in the management information systems concentration to give free short courses to ASM students. Many graduates and undergraduates have not had access to microcomputers in their course work. The MIS students provided a chance for them to get into this essential technology. The two primary classes were an introduction to word processing and an introduction to Lotus 1-2-3.

7. SIGNIFICANT PLANS AND RECOMMENDATIONS

The ASM presented a five-year strategic plan to the Regents and the Central Administration in August of 1985. Throughout the year, efforts were made to review the plan with the Central Administration and to secure acceptance or modification so that implementation could commence. By the end of the year, no feedback was received and, hence, the Schools continued their operation without a strategic direction defined. (Please see the attached summary of the ASM 1985 Strategic Plan.)

ATTACHMENT - Significant Plans and Recommendations.

THE ROBERT O. ANDERSON SCHOOL AND GRADUATE SCHOOL OF MANAGEMENT

1985 FIVE-YEAR STRATEGIC PLAN

I. Introduction

During the next five years, the Robert O. Anderson School and Graduate School of Management (the ASM) will continue to expand their offerings in terms of programs and options within those programs. Additionally, the ASM will perform their missions while reaching a broader and larger client base. The general objectives contained in their mission statement will be achieved along with the specific goals described below for the 1985-1990 planning horizon. (Please see Appendix One, ASM Statement of Mission.)

II. Enrollment Growth

A. Goals

In the decade preceding 1985, the ASM total student credit hours (SCH) grew by 85 percent (107 percent at the undergraduate level and 36 percent at the graduate level). Over the same time period, total enrollment of students grew 108 percent and the total number of degrees awarded increased 127 percent. Within these general trends, it should be noted that the number of student credit hours has been relatively flat for the last several years. (See Appendix Two, ASM Summary Table.)

The ASM have adopted an ambitious goal of increasing overall student credit hours by 50 percent during the next five years assuming adequate resources are available to promote and develop the necessary programs and to increase the operational capacity. If this goal is achieved, it will represent a growth rate that is two or three times the national growth rate for business schools as projected by most sources. Growth in the number of SCH at ASM during the next year or two is expected to be below the average for the next five years until the strategies and actions described below begin to take effect.

The decline in the number of SCH taken by the average student (a pronounced trend over the past several years) is likely to continue as traditional sources and amounts of student financial assistance decline and as students increase their employment. This means that ASM enrollments will have to increase faster than SCHs if the goal of 50 percent increase in SCH is to be achieved.

B. Strategies

The general strategy for increasing ASM enrollments will be to attract more management and business-oriented students to UNM rather than depend on attracting students already at UNM who are undecided in their career choices. The latter will be, however, a secondary strategy.

The general strategy will be implemented by creating greater interest in business careers among primarily New Mexican high school students for the undergraduate program. Efforts to attract students from throughout the region beyond New Mexico will emphasize graduate programs. At the same time, the availability of scholarships and financial aid will be increased by soliciting support from the private sector, particularly for Presidential Scholarships. The Assistant Dean of the ASM will organize volunteers from ASM alumni and businessmen while traveling to small towns around the state. In addition, he will leave promotional literature on business careers and ASM educational opportunities with high school teachers and counselors. The ASM will also collaborate with the Association of Commerce and Industry, the Chambers of Commerce across the state and other organizations promoting awareness of careers in business.

The ASM will design and implement at least three new concentrations during the next five years in addition to the new Production and Operations Management Program. Program plans anticipate initiation of Travel and Tourism, Real Estate Management, and Entrepreneurship and Small Business before 1988. These programs will enhance full-time employment opportunities in New Mexico upon graduation and part-time employment as interns during the latter stages of the students' studies.

Simultaneously, the Anderson School of Management will provide UNM freshmen and sophomores with better information about business career options and ASM degree requirements so that a greater proportion of the qualified University College students will be attracted toward the degree in management. In addition, the ASM will expand service courses as practicable and consider redesign of the business minor to provide a more comprehensive business education to non-BBA students.

At the MBA level, the Anderson Graduate School of Management (AGSM) will plan and consider the implementation of a full-time MBA program. Concentrations initially available in the BBA program will be consi-

dered for graduate credit. An analysis of the feasibility of matriculating an annual Master of Management Program class will be performed with the intent of implementation as early as 1987, depending upon availability of resources. The Post Masters Program will be more heavily advertised in order to keep local managers up to date in their professions while increasing graduate enrollments in ASM electives. As these changes are implemented in graduate programs, strong promotional efforts will focus on attracting out-of-state students from Arizona, Colorado and the western portions of Texas, Kansas and Nebraska.

At the doctorate level, limited enrollment growth will be achieved by removing the moratorium on admissions and by expanding concentration offerings.

III. Program Growth and Diversification

A. Goals

As described above, the number of concentrations in instructional programs will expand dramatically during the next five years if sufficient resources can be provided by the state and the private sector. Three "named" programs will seek private sector sponsors in Travel and Tourism, Real Estate Management and Entrepreneurship and Small Business. About $500,000 in endowment will be sought from each sponsor to defray expenses above the level provided by the state. Interest on the endowments will also provide scholarships and summer research grants to aid faculty recruiting.

At the doctorate level, it is expected that there will be five concentrations with a total of about 25 students by 1990.

Diversification of programs at the graduate level may increase during the latter part of the five-year horizon.

Growth and diversification will be sought in scholarly research activities as well as instructional programs. The ASM have traditionally had few faculty involved in sponsored research. Of the few contracts performed in the past, most had a heavy service orientation to the contracting agency. It is expected that there will be at least four faculty FTE involved in sponsored, scholarly research by 1990.

B. Strategies

Increases in graduate student enrollments and

diversification of programs can be attained in collaboration with other units of UNM and other institutions within New Mexico. For example, a Masters in the Management of Science and Technology (or Engineering Management) is being planned through a collaborative effort between the College of Engineering and the AGSM. Similar opportunities are being sought to collaborate with NMSU on graduate agri-business programs and NMIMT for three-two programs or joint graduate programs in science or engineering with management (similar to the current joint programs with the UNM Law School and College of Engineering). Development of video class offerings will be investigated to facilitate these inter-campus joint programs as well as the MBA at the Los Alamos Graduate Center.

The AGSM Ph. D. progam will train students for careers in teaching and research. It will be a small "apprenticeship" style program; faculty members who are actively engaged in research will attract and work closely with promising students.

The program will seek to attract limited numbers of highly-qualified students. Financial aid will be sought in the form of private endowed scholarships to supplement the university RA/TA stipends. Aid for minorities and women appears to be most easily secured. Ph.D. students will be expected to teach between one and three lower division ASM courses per year during the latter stages of their individual programs. This will not only help prepare them for their academic careers but also improve the opportunities to staff ASM courses normally taught by part-time faculty. (Please see Appendix Three, ASM Program Plans.)

IV. Resource Enhancement

A. Goals

It is expected that the budget of the ASM will be approximately equal to that suggested by the state funding formula for the SCHs generated by this ambitious plan. (Please see Appendix Four.) The target for private sector support is $500,000 per year in additional endowments for professorships, lecturerships, chairs and scholarships. In addition, the revenues to the programs and solicitations of the ASM Foundation are expected to increase to a level that permits an annual increase in the permanent fund as well as annual budget increases of about 20 percent.

Adequate facilities are also critical to the achievement of this plan. The new building is expected to be completed by the summer of 1987 along with the refurbishment of the present structure. By 1988, it is anticipated that planning will be initiated for an addition to the new building that will allow for expansion westward to what is now the side yard of the President's residence. The expansion would be needed by 1990 or 1991.

Faculty recruitment and retention will remain a priority goal of the ASM. The numbers of additional and replacement faculty are shown in Appendix Four, ASM Projected Budgets. To achieve the projected additions, the Central Administration must be prepared to authorize sufficient new slots in advance recognizing that two or three recruiting seasons (academic years) are often required to fill a position in the current and anticipated supply-short market. Given the addition of the Ph. D. program, additional faculty must be available to keep the student/faculty ratio below 25 as new programs and concentrations are added.

The administrative structure and staff of the ASM must also be expanded as shown in the appended budgets. It is anticipated that the ASM will have two associate deans -- one for undergraduate programs and one for graduate programs. Two assistant deans will also be required -- one for external relations and one for administration.

B. Strategies

The funding formula is not overly generous in its allocation of state resources to education. If the ASM were to continue to receive budgets below the levels suggested by the formula, it would be difficult to achieve the ambitious goals stated herein.

In addition, the ASM are fortunate to have a direct constituency (the business community) to which they can appeal for support. This plan reflects considerable input from that constituency and, if accomplished, will develop the ASM in such a manner that the community, the university, the legislature and the members of the schools can be justifiably proud. The Dean, the Assistant Dean for External Relations, the UNM Development Office, the ASM Foundation Board and the ASM Advisory Board will all play key roles in soliciting private sector support.

Endowed positions for faculty will be top priority along with grants and gifts which support course releases and summer research. As endowed positions become available and are rotated amongst the most productive faculty, the pool of available money to support non-sponsored research may be spread across fewer faculty. In this manner, it is anticipated that the ASM will be able to be more competitive in faculty recruiting and therefore able to develop the projected faculty resource base.

Although the projected budgets require approval of a substantial number of new faculty positions by the Central Administration, there is little risk in so doing. The ASM faces a severe attrition problem by retirement alone; if the normal loss to more competitive offers is factored in, faculty recruiting and retention deserves the highest administrative attention. Nine senior faculty will be eligible for retirement within the next eight years (nearly one-quarter of the existing full-time faculty). If the growth in enrollments materializes at a slower rate than anticipated, the efforts to secure sponsored research will justify the additional faculty. To achieve this plan, the greatest risk will be the ability of the ASM to recruit and retain sufficient faculty. The danger of over-expanding faculty resources is extremely remote.

1984/85 Report from the School of Architecture and Planning

TABLE OF CONTENTS

	Page
Programs and Courses	4
Administration	6
Activities	13
Community	17
Faculty	22
Students	29
Alumni	34
Friends	35

1984/85 Report from the School of Architecture and Planning

From Dean Anselevicius

Another school year has gone by. It has been a good one for the School as well as for me personally. I was elected to the College of Fellows of the American Institute of Architecture, for both design and education. I received the FAIA medal at a fine convocation and enjoyed meeting many old friends and colleagues. After returning from San Francisco, I was honored by the Albuquerque AIA chapter at a luncheon, at which I showed slides of my work and talked about the development of the School.

On July 1 I became president of the Association of Collegiate School of Architecture (ACSA). I am expected to attend a good number of board meetings, conferences, and special meetings with the presidents and boards of other architectural associations, such as the American Institute of Architects (AIA), the National Council of Architectural Registration Boards (NAAB), and the American Institute of Architects Students (AIAS). As president of the ACSA, I can choose the site for the annual meeting. I decided on New Orleans. Two years ago this meeting was held in Santa Fe, with our school as host. I also chose as theme "The Spirit of Home" for the annual meeting and for the year. I consider this an extremely relevant subject at a time when new housing becomes ever more expensive and beyond the grasp of many. I hope the meeting will deal with relevant issues such as the cultural, social, environmental, functional, and economic aspects of housing, house, and home.

Our Resource Center (mini-library) is being further developed and now holds 600 books. This is not a substitute for the main library but makes important books available at the School convenient for our students.

Our weekly lecture series continues to draw students and professionals and has become a regular Monday night institution,

despite competition with Monday night football. We also offered a record number of exhibitions during 1984-85 and have planned for new ones in 1985/86, one of them being the "Work of Skidmore Owings and Merrill." We were one of eight schools of architecture chosen to show this exhibit.

We continue our public community efforts through the Design and Planning Assistance Center. This year we also organized the first public meeting to discuss the controversial proposal for a downtown Festival Marketplace and provided an opportunity to view three alternative proposals. The meeting, held at the old public library, was well attended with standing room only.

Graduate applications continue to increase, and we are out of space, despite last year's remodelling and the acquisition of new space not far from the School.

The Board of Examiners for Architecture of the State of New Mexico now requires a first professional degree for licensing. This is the Master of Architecture degree from our School. The same is true for certification by the National Council of Architectural Registration Boards. I would therefore expect further increases of students applying to enter our graduate programs, and this will make competition for acceptance more intense.

A "RUDAT" team came to Albuquerque and made a study of the Central Avenue corridor. A number of our students participated as "aides" to the professional team, and I received letters praising the work of these students.

As to curricula, both architecture and planning have refined and consolidated their programs. The first group of students graduated with the degree of Master of Community and Regional Planning, and in architecture the first students graduated with the Emphasis in Energy Conscious Design. The Curriculum Committee also approved two new graduate emphasis programs in architecture, one in behavior and design and the other in planning. We

were very pleased to add a new faculty member to our planning program. He is Ric Richardson with degrees in both planning and architecture.

Support from Friends of the School of Architecture and Planning continlues to increase, and there are now 159 members. We were able to increase the number of merit scholarships. I hope that those of you who are not yet members of the Friends will join.

Report from the Architecture Curriculum Committee

The new Master's of Architecture requirements have been in place for one year now. Under the new program, all students receiving the M.Arch will have to complete the same exit requirements. A student who takes more of the exit requirements as an undergraduate may specialize during the last two years. A student who has an undergraduate degree in some other field, or a student who received a Bachelor of Arts in Environmental Design, will have to complete the exit requirements as a graduate student. These students have less flexibility in the last two years.

The M.Arch program allows students with available elective hours to select a graduate emphasis if they wish. In 1983, we initiated the Energy Emphasis. This past year we added a Behavior Emphasis and a Planning Emphasis. In response to student interest, the Curriculum Committee next year will consider defining a fourth emphasis in theory and history.

At the undergraduate level, the Curriculum Committee began work on redefinition of the Bachelor of Arts in Environmental Design (BAED). Generally, this degree has a greater emphasis on liberal arts and lesser emphasis on technical courses than the Bachelor of Arts in Architecture. The

newly organized BAED is intended for students interested in pursuing careers such as in landscape architecture or physical planning. Detailed curriculum design for the Landscape Emphasis has been accomplished with the assistance of Bob Johns and Baker Morrow, landscape architects who teach our existing landscape courses. We hope to have landscape and planning requirement revisions in place by December 1985.

Community and Regional Planning Program

The Community and Regional Planning Program is now entering its fifth year of operation. As the program has developed, considerable effort has been made to adjust the training and curriculum to meet the current issues of the profession and the particular needs of the American Southwest.

Even though fifty credits of work are still needed for completion of the master's degree, there are now only five required courses -- one in general planning, two in methods, and two in studio work. This gives considerable flexibility to the students and allows them a real opportunity for specialization.

The dual-degree programs in Latin American Studies and Public Administration have worked out very well, and enrollment in both is strong. Several dual degrees have already been awarded in Community and Regional Planning and Public

During the school year, four new courses were added to the program -- transportation planning, land use controls, human settlements, and community growth and development.

The planning faculty joined forces with colleagues at Arizona State University and the University of Nevada at Reno to establish a continuing land use consortium to investigate common planning problems and issues in the American Southwest. Three meetings were held throughout the year.

This past spring semester, Dr. Gilda Bruna of the University of Sao Paulo offered a special seminar entitled "Planning in Brazil: Queries on Urban Regional Development." Dr. Bruna's course expanded the programs offerings in Latin American planning. She came to the program under the joint auspices of the Latin American Institute and the School of Architecture and Planning.

By the close of the year four students were graduated from the program and twelve new students had been admitted. Most of the incoming students were admitted to joint-degree programs.

The major task for the coming year will be the securing of accreditation to the program. The School of Architecture

and Planning will submit the application for accreditation this coming September.

The Beijung Urban Design Studio

James R. Richardson, Assistant Professor of Architecture and Planning has spent the summer as an instructor in the Beijing Urban Design Studio at Tsinghua University in Peking, China. Tsinghua University, the Massachusetts Institute of Technology, and the University of New Mexico have agreed to support jointly the studio, bringing together North American and Chinese students for the first time to work together on current development projects in China's capital city.

The studio, which includes twenty students from North America and twenty students from China, is structured around two redevelopment projects in Peking, and includes lectures on Chinese architecture and urbanism as well as presentations on American approaches. The participants interact with local and regional government officials and work closely with Chinese professionals to develop design solutions for projects underway in the city.

In the course of their work, the participants take walking trips to neighborhoods and visit designated project sites. Visits are made to traditional residential neighborhoods,

nearby communes, new housing developments, shopping precincts, and industrial complexes. The participants travel to parks and recreation areas, as well as to historic sites.

The results of the studio will be exhibited and presented to a broad audience of students, faculty, practitioners, and government officials. The studio will be the first forum of its kind to initiate an on-going dialogue about urban form, historic preservation, and development in the context of China's rapid modernization. The outcome will build understanding of urban change in both societies.

Graduate Emphasis in Energy Conscious Design

This summer and fall, we will see the first graduates of this program, which allows an emphasis in energy responsive design within the general requirements of the Master of Architecture program. Students in the first group of M.Arch graduates with an Energy Emphasis are:

James Davis
John Li-Ching Ma
Ricardo Ferreyros
Michael Hill
Stephen Kahn
Frank Fuchs.

Currently there are fourteen graduate students who are enrolled in the Energy Emphasis plus many others who take specific classes within the program. There are eight to ten course offerings each academic year -- one of the most extensive energy programs in a school of architecture in the U.S.

In addition, two one-day seminars will be offered in the fall semester for design professionals on the use of micro-computers in developing energy-conscious buildings. These seminars will emphasize the analysis of design options during the schematic design phase. Enrollees in these seminars will have follow-up access to the software and hardware at the School of Architecture to insure that skills and techniques introduced in the seminars will be developed to a useful level. Dates and times are to be announced.

Continuing support for the Energy Emphasis has been received from the Public Service Company of New Mexico in the form of technical and teaching assistance and from the New Mexico Energy and Minerals Department (EMD) in the form of a $13,850 grant for support of new coursework, the professional seminars, and the design and energy evaluation of several small retrofit projects.

Computer Program

During the past year, the School of Architecture and Planning has made some important steps to build a foundation for its computer program. An equipment grant from the University has funded the purchase of hardware and software, oriented toward graphics and CADD applications. The School has purchased two Macintosh computers and an IBM AT with high-resolution graphics. Software acquisition has included a variety of general purpose and graphic applications and 3D CAD package.

The School is cooperating with the UNM Computing Center to develop a University Microcomputer Pod in the Architecture Building that would provide ten Zenith PCs for student and faculty use. The existing Computer Lab will be remodeled and upgraded by the beginning of the fall semester, we hope.

A funding request has been submitted to the University for additional hardware and software, including three additional Macintoshes and two more IBM ATs, with supporting graphics and CADD software.

The School's program will continue to offer an introductory microcomputer course, to develop courses focusing on areas of special interest such as energy, computer graphics, and planning applications, and to integrate computing into a wide range of "regular" courses.

Evening Courses in Continuing Education

Seven courses were offered by the School, most of them in conjunction with the Division of Continuing Education:

Fall semester

1. Architectural Photography. Instructor: Kirk Gittings
2. Resolving Disputes in the Natural and Built Environment. Instructor: An Painter.
3. Legal Issues for Architects: (Staying out of Court). Instructor: Stanley C. Sager.
4. Structures - A Study of Structural Systems and Forms. Instructor: Terry Conrad.

Spring semester

1. Earthen Architecture: Instructor. Paul Graham McHenry, Jr.
2. Energy Efficient Renovation of Older Structures. Instructor: Perry Wilkes
3. Southwestern Historical Architecture. Instructor: Michel Pillet.

Finish Architects at the School

As part of the ongoing program that brings foreign professionals to teach in graduate architecture studios, two Finnish architects visited for eight weeks each during the past spring semester. Simo Jarvinen led a studio dealing

with a number of projects related to housing and public buildings in the Helsinki area. Students were asked to choose the project that interested them most. Jan Soderland led a studio dealing with a cultural center for the town of Kerava.

ACTIVITIES

Lecture Series

The following lectures were offered at the School in 1984-85.

Fall semester

Paul Kennon, President and Design Principal, CRS Architects, Houston: "The Work of Paul Kennon"

Peter Land, Professor of Architecture, Illinois Institute of Technology: "United Nations Experimental Housing Project, Lima, Peru"

Charles Gwathmey, Partner Gwathmey, Siegel & Associates, Architects, New York: "Recent Work"

James Rush, New Community Developer, Phoenix, Arizona: "New Community Development in the Southwest"

Donlyn Lyndon, Professor of Architecture, Berkeley, Lyndon, Buchanan Architects: "Architecture in Place"

Bart Prince, Architect, Albuquerque: "The Work of Bart Prince"

Udo Kulterman, Professor of Architectural History, Washington University, St. Louis: "Recent Architecture in the USSR and Eastern Europe"

Robert N. Royston, Royston, Hanamoto, Alley, Abey, Landscape architects, San Francisco: "Landscape Architecture and Planning in the West and Southwest"

Lewis Davis, Architect, New York: "The Work of Davis Brody & Associates"

E. Fay Jones, Professor of Architecture, University of Arkansas: "Architecture for an Arcadian Landscape" (The Ron Hutchinson Memorial Lecture)

Spring semester

Anthony Jones, Director of the Glasgow School of Art: "The Wkork of Charles Rennie Macintosh"

John M. Johansen, Architect, New York: "The Three Imperatives of Architecture - An Exhortation"

Jeffrey Cook, Professor of Architecture, Arizona State University: "The New Organic Architecture"

Joan Goody, Architect, Boston: "Recent Work"

John Russell, Professor of Landscape Architecture: "Problem Solving: A Discovery and Interpretation of Values"

Simo Jarvinen, Architect, Finland: "Recent Architecture in Finland"

William Weismantel, Professor of Planning, University of Florida: "Thousand Years of Cities in New Mexico"

Richard Stein, Architect, New York: "Direactions in Architecture"

John Macsai, Professor of Architecture, University of Illinois, Chicago: "Regionalism in Hungarian Architecture from Pre-modern to Post-modern"

Gene Dyer, Architect, Albuquerque: "Urban Design in Jerusalem - the Damascus Gate Triangle"

Calvin S. Hamilton, Director of Planning, Los Angeles: "Should Albuquerque Become a Los Angeles?"

Jan Soderlund, Architect, Finland: "Finnish National Romanticism"

Arie Rahamimoff, Architect, Jerusalem, Israel: "Recent Work in Jerusalem"

Exhibits

The following exhibits were shown at the School during 1984-85:

The Work of Frei Otto
Modern Housing Prototypes by Roger Sherwood
Images from the Azores, photographs by Vernon Salvador
Spaces and Places, Aspirations and Aesthetic values of Afro-Americans as reflected in Architecture
The Work of Richard Stein
Urban Design in Jerusalem "The Damascus Gate Triangle"

Film Series

This series has been supported by the Graduate Architecture Students Association in 1984/85:
"Palladio: the Architect and his Influence" the buildings of Palladio are examined.
"The Eye of Thomas Jefferson" the influence of his travels to London and Paris.
"Jefferson the Architect" his contribution to American architecture.
"Architect of the New American Suburb: H. H. Richardson" the life and working method of Henry Hobson Richardson"
"Louis Kahn: Architect" Kahn discusses with students, Vincent Scully discusses Kahn's career, and Peter Blake interviews Kahn.
"Beyond Utopia: Changing Attitudes in American Architecture" Robert Venturi, Denise Scott Brown, Michael Graves, Frank Gehry, Peter Eisenman, and Philip Johnson talk about their work.

MASS

The 1984 issue of MASS, the journal of the School of Architecture and Planning with its theme on House and Housing, was well received. It received the Governor's Award of Honor for Historic Preservation. The citation states: "In recognition of a scholarly forum for the exchange of ideas and views on the built environment of the Southwest." On May 17th, Dean George Anselevicius and Editor Eileen Devereux attended the ceremony to receive the award.

The Design and Planning Assistance Center

The Design and Planning Assistance Center (DPAC) of the School of Architecture and Planning was established in 1969 as a community service organization that provides research, planning and design assistance to low-income families, minorities, community groups, and nonprofit organizations throughout the State of New Mexico.

During the past year, students at the DPAC have undertaken a variety of projects under the direction of faculty member Edward Norris, Director of DPAC. A total of thirty projects were undertaken by DPAC 1985-85; among projects developed were:

Housing rehabilitation at Zuni Pueblo; measured drawings for Project "New Life"; restoration proposal for the Old St. Joseph's Academy in the South Valley; planning studies for Red Rock State Park in Gallup; construction manual for a rural housing project in the State of Chiapas in Mexico; design for the Jicarilla Apache Children's Ranch; economic development proposal for Acoma Pueblo; remodel of community facilities at Santa Ana Pueblo; park design for the Glenwood Hills Neighborhood in Albuquerque; playground design for Rio Rancho Elementary School; park design for the City of Bayard; softball fields for the Albuquerque Little League; design for an earth-sheltered house in Guadalupita; design of a therapeutic pool building for the handicapped; community building design for the Alamo Navajo Band; building rehabilitation for Santa Clara Pueblo; swimming pool building for the New Mexico Boys Ranch in Belen; passive solar laundramat for the Canoncito Navajo Chapter; building rehabilitation at Zuni and San Felipe Pueblos; design of a multi-educational facility for Taos; site development for Alamosa Elementary School in Albuquerque; design of a community building for Holy Family Parish; mall design for the UNM Minority Coalition; and programming for a Rural Agricultural Center in Michoacan, Mexico.

Several DPAC projects from previous years have received funding and are now under construction. These include:

The Commercial Center at Acoma Pueblo; a warehouse building at Delancey Street in Alcalde; the Rio Grande Center at Embudo; and the Commercial and Arts and Crafts Center at Santo Domingo Pueblo. The Community Service Center in Portales has just received funding from the state legislature for phase one; students will begin design work on phase two this summer.

Main Street/Nob Hill Project

The School of Architecture and Planning was part of a team effort that succeeded in having Albuquerque chosen by the National Trust for Historic Preservation as one of four U.S. cities to be included in the Trust's Main Street Program. Albuquerque was in good company. Other cities chosen were Boston, Chicago, and Pittsburgh. This is the first time the Trust's Main Street Program will be applied to larger cities. In Albuquerque the Trust will study the Nob Hill area of Central Avenue, Albuquerque's "Main Street."

The Festival Marketplace Controversy

The School of Architecture and Planning was the first to call a public meeting, at the Old Main library, to discuss the Enterprise Developments Corporation proposal for a Festival Marketplace in downtown Albuquerque, as well as the three alternative proposals by Berent Groth, Antoine Predock, and Don Schlegel. More than 200 people attended to listen to a panel of speakers discussing the pros and cons of all four proposals. Moderated by Dean Anselevicius, the panel included: Pat Bryan, former City Attorney; Bob McCabe, Chair of the AIA's Urban Design Committee; Jack Leaman, City Planning Director; V. B. Price, Editor of New Mexico Magazine; Hildreth Barker, Architect; Signe Rich, Associate Director of the Department of Community and Economic Development; and Harold Stewart, Executive Director of Albuquerque Center, Inc.

Drawings of all four projects were exhibited at the School of Architecture and Planning, giving citizens of Albuquerque their only opportunity to view these proposals.

San Ysidro is Focus for Rural Planning Studio

The Rural Planning Studio is a second-semester practice studio for graduate students in the Community and Regional Planning Program of the School. This studio allows students to apply skills they have learned or have brought to the program and wherever possible, to provide a service to some of the citizens and taxpayers of the state.

In the spring semester, a unique opportunity to practice skills and provide such a service resulted from the request by the mayor and council of the village. San Ysidro is a small, 200-year-old, Spanish land grant village located on the Rio Jemez at the intersection of State Highways 44 and 4.

This semester, seven graduate planning students with skills in economics, public administration, public health, political science, landscape design, and architecture were joined in the Studio by three undergraduate environmental design students with skills in landscape design and geography. In January, the students, studio instructor Paul Lusk, and contributing faculty members Ric Richardson, Jose Rivera, and Maria Varela were invited to a special public meeting in San Ysidro called by the mayor and village council to identify issues and to set priorities for tasks to be undertaken by the Studio during the semester. The diversity of issues and the wide range of opinions, even facts, presented at the meeting led to the request that the members of the Studio conduct a survey of the entire community to better define significant issues, priorities, and goals.

Areas of concern identified at the public meeting included water availability and quality, jobs and economic survival, tourism and traffic, recreation, and the village park. Also discussed were health services, daycare, programs for the elderly, zoning,

and issues such as the pursuit, avoidance, or management of growth.

After a period of research and scoping of these issues, a personal interview survey was designed, tested, and administered to every household in the village by the members of the studio. The summary of the survey and the insight gained from the interviews, as well as from the research, helped to define specific projects undertaken in the balance of the semester by studio participants. Findings and recommendations from these projects were presented together with a summary of survey results at a public open house held in San Ysidro during finals week on May.

The work of the Studio, including refinements resulting from the public presentation to the Village Council and input from the citizens of San Ysidro at the open house, will be incorporated into a summary document to be edited and published during the summer session by a team from the Studio. Financial assistance for materials used to prepare graphic exhibits and mapping and for publication of the summary document was provided through a grant from the Special Projects and Speakers Committee (SPSC) of the UNM Graduate Students Association, and by in-kind contributions from the Student Planners Association and from the School of Architecture and Planning.

In Memoriam

Morton Hoppenfeld, Dean of the School from 1975-1980, died of a heart attack on March 26, 1984, in Columbia, Maryland. Before coming to UNM, Hoppenfeld was vice-president and chief of planning at the Rouse Company for twelve years and was principal planner of Columbia, Maryland. After leaving the School he practiced architecture in Washington, D.C., and rejoined James Rouse as senior vice-president in charge of design and planning of the Enterprise Development Co. He is survived by his wife, Jeanne, two sons, and one daughter.

Lee A. Daily, (BA in Architecture, 1964) died in January 1984 in Albuquerque following an illness. He became a well-known commercial artist and obtained many fine arts awards. He is survived by a son, two brothers, and his mother.

Brett Menaul (BA in Architecture 1978) died tragically in an automobile/motorcycle accident on June 7, 1983.

FACULTY

Faculty Statistics:

Full Time Faculty	15*
Permanent Part-Time	4
Temporary Part-Time	13

*Anne Taylor, a full-time faculty member, was on leave of absence in 84/85.

Full-time Faculty

Professor Richard Anderson is director of the Community and Regional Planning Program. He was involved in revising the planning curriculum and initiated new exchanges with the University of Sao Paulo (Brazil). He is editing a monograph: "Planning in Brazil, Queries on Urban Regional Development" by Professor Gilda Bruna.

Associate Professor Edie Cherry chaired the UNM Faculty Senate Undergraduate Committee and also the Schools' Architectural Curriculum Committee. She was vice chair of the State of New Mexico Cultural Properties Review Committee and on the Albuquerque Public Schools Advisory Board of Drafting Programs. Eeds/Cherry/See Joint Venture Architects received an award from the Western Mountain Region AIA for the Longfellow Elementary School in Albuquerque. The Belen Junior High Vo-Ag Building, also by Eeds/Cherry/See Joint Venture Architects was selected for exhibit at the 1985 national convention of the American Association of School Administrators.

Professor Robert Cohlmeyer completed the design and supervision of the expansion and renovation of the Millicent Rogers Museum in Taos. As assistant dean he has reorganized the School Archives for use by teachers and students.

Associate Professor Stephen Dent has been awarded tenure. He continues as coordinator of the Energy Emphasis program. His book The Low-Cost Passive Solar House written jointly with Perry Wilkes, was accepted by Van Nostrand Reinhold. He was chairman of the Mayor's Task Force on Solar Zoning Code Revisions and served on the AIA National Energy committee. He was involved in

obtaining a grant of $13,850 from the New Mexico Department of Energy and Minerals for developing several new energy-related courses, including a seminar for the local profession on computer use in energy-conscious design and, with the assistance of graduate students Larry Thal and Ricardo Ferreyros, will prepare design drawings and energy conserving retrofit projects. Two houses designed by Professor Dent are now under construction in the Albuquerque area.

Assistant Professor Ted Jojola is also director of the Native American Studies at UNM. In summer 1984 he received a certificate in Studies of International Human Rights at the University of Strasbourg, France. During 1984 he was visiting professor at the Graduate School of Urban Planning at UCLA and Post-doctoral Fellow at the Institute of American Culture at UCLA. He was appointed on the U.S. Advisory Committee for the ninth Inter-American Congress by the Department of State. He was chair at the American Indian Studies Association Annual Meeting in Los Angeles and is on the Advisory Board for the Zuni Tribal Museum project. Jojola has lectured in France and in this country, and has written on American Indian policy, regional planning, and community development.

Associate Professor Richard Nordhaus is chair of the School's Computer Committee and has been involved in developing the School's computer facilities and courses. He completed a handbook for designing accessible outdoor recreation environments, Accessible Fishing, in conjunction with Min Kantrowitz and William Siembieda. A paper written jointly with Min Kantrowitz "Access Problems and Outdoor Sites, a level of accessibility approach," was accepted for presentation at the Environmental Design and Research Association (EDRA) National Conference in June 1985.

Professor Wolfgang Preiser helped to develop the new architecture graduate emphasis in Design and Behavior of which he will be coordinator. He taught a three-week course on post-occupancy evaluation at the School of Architecture, the University of Sao Paulo, Brazil. His book Programming the Built Environment is in production at Van Nostrand Reinhold, and a handbook on post-occupancy evaluation is in progress. He was elected

president of the U.S. Society for Human Ecology. He is a member of the Program Planning Committee, the Building Research Board, the National Academy of Sciences for 1984-85, and chairs their committee on Enhancing the Planning/programming Process for the Delivery and Use of Buildings. Preiser lectured in July 1984 at the IAPS conference in West Berlin and was chair and presenter at the International Symposium on Design for Disabled Persons in Tel Aviv Israel in November 1984. He received travel grants from the German Marshall Fund of the USA and the Mellon Foundation to go to Berlin and Sao Paulo.

Assistant Professor James R. Richardson has worked on redefining and focusing the planning program. In summer 1985 he was instructor in the "Beijung Urban Design Studio" in collaboration with Professor Gary Hack, head of the Department of Human Studies and Planning at MIT and with Professor Zhu-Zhi-Xuan, director of the Teaching and Research Group in Urban Planning at the Department of Architecture of Tsinghua University, China's oldest and most distinguished architectural school. He is a member of the inter-university research consortiums in land use planning in the Southwest, a member of the Innovative Educators group at UNM, and sits on a committee to review the dual-degree program linking planning with Latin American Studies. Richardson received a Presidential Scholarship Award from the University of New Mexico, presented a paper entitled "Managing Environmental Disputes" at an Arizona State conference, and was selected as the lead mediator for the Harvard Negotiation Project's effort to hold mediated negotiations on an electric utility rate case in New Mexico.

Professor Don Schlegel is president of the New Mexico Society of Architects, a member of the Master Jurors Committee of the National Council of Architectural Regulations Boards (NCARB) team visiting the Oregon School of Design. His office completed a number of buildings, among them the Church of the Good Shepherd and the Sunrise Video Studio in Albuquerque.

214

Associate Professor Robert Walters is taking his sabbatical leave (1985-86) in Europe (mainly to Spain). He expects to study both traditional and contemporary architecture in Spain as it may be linked to New Mexico traditions. In summer 1985 he organized and directed a ten-day workshop on the "Genesis of Form," an intensive study of Indian and Hispanic traditions in New Mexico. Professor Walters' entry in the National Design Competition, "Columbus Carscape," was selected to tour the country as part of an exhibition, which was also shown at our school.

Lecturer David Kal will be leaving the School of Architecture and Planning for the West Coast. During 1985 he has continued to work on two books, Anthology on Design Syntheses and Design Process for Beginning Students. He has been with the school for nine years. Everyone wishes him the best in his new endeavors, and thanks him for his fine contributions to the school.

Lecturer Paul Lusk served as an evaluator for the history/folklore research project for Atrisco. He was invited to present urban design options to the Santa Fe City Council for flood protection and design enhancement of the Santa Fe River. Under contract with the City of Albuquerque and as part of his courses, criteria and geographical analyses for the alternative land-use plans for the southwest quadrant of the City of Albuquerque were developed.

Lecturer Ed Norris is director of the School's Design and Planning Assistance Center (DPAC) and was the principal investigator for a grant from the New Mexico Department of Energy and Minerals for Passive Solar Retrofit to Housing for the Elderly in McKinley County, New Mexico. He has been visiting lecturer at the School of Architecture, Universidad Michoacana in Morelia, Michoacan Mexico, and at the School of Architecture, Universidad Autonoma de Chiapas, Tuxtla Gutierrez, Chiapas Mexico. He was also the architect for the design of self-help rural housing for the village of Suchiapa, Chiapas, Mexico. Professor Norris has written articles about these and similar

efforts for Mass the School's Journal and for the Partners of the Americas.

Part-time Faculty

Terry Conrad developed a special elective course in structural systems. The result of the course were two Tensegrity structures, now installed at the School. He is consultant to the New Mexico Arts Division, Artists in School program. With the help of students from our school, special projects were developed at local high schools.

Lisette Ellis works with McHugh, Lloyd, Hand, and Associates, Santa Fe, and was designer and job captain on the Tucumcari State Office building with special concern for daylighting as well as for the La Cuma condominium project in Santa Fe.

Don Felts presented a paper at the 1985 AIA Research and Design Conference on Microcomputer Energy Graphics and a paper on daylighting in School Buildings at the 1985 Passive Solar Conference. He has been given a grant to attend the annual Illuminating Society workshop for teachers of lighting design. His professional work includes daylighting designs for a high school, residences, and a medical clinic.

Marc Ciaccardo is an associate with the firm of Barker, Bol and Associates where he has been doing construction administration for the new UNM-Valencia Campus. He will be leaving Albuquerque to take a full-time teaching position at the Department of Architecture, Catholic University, Washington, DC.

Bruce Hilditch helped develop the School's proposal for a computer "pod." He has a full-time appointment at the UNM Computer Center. He is a consultant to the Santa Ana Pueblo on administrative data processing.

G. B. Johns is in charge of the Albuquerque office of Poyston, Hanamoto, Alley and Abbey Associates, Landscape Architects. He

is chairman of the Albuquerque Beautification Committee and past president of the New Mexico Chapter of the American Society of Landscape Architects.

Min Kantrowitz continues her private work in research and writing. In a joint venture with Jay Farbstein & Associates, she was awarded a major design research project by the U.S. Postal Service to evaluate design changes affecting the image of Post Office buildings. She completed a three-year project for the U.S. Department of Energy and Lawrence Berkeley Laboratory on occupant effects, interactions, and satisfaction in twenty passive solar nonresidential buildings located across the United States. She has written articles for the National AIA, the Journal of Architectural Education, and Environment & Behavior.

Richard Marshment is chief transportation planner for MRGWG. He has worked on many Albuquerque transportation issues, presented a paper on the use of videocomputers in transportation system forecasting to the National Conference on Micro-computers in Urban Transportation, the American Society of Civil Engineering in San Diego, June 1985. He is secretary treasurer (vice president elect) of the Institute of Transportation Engineers, New Mexico Section.

Baker Morrow received a number of awards for his firm's work in landscape architecture for projects in Albuquerque, Las Cruces, and Santa Fe. He has completed a dictionary on landscape architecture, to be published by the University of New Mexico Press. He directed and completed the Botanical Garden Study, under a grant to the School from the City of Albuquerque, and is a member of the Albuquerque Urban Enhancement Committee. Baker Morrow was a speaker at the National Conference of State Historic preservation officers in Washington and was a witness before the Interior Affairs Committee of Congress on the Olmsted Historic Landscape Act.

Donald Peterson has been involved in a large number of planning projects for the Albuquerque City Council, among others Code

amendments, revision of the Regional Planning Act, and revision of the Comprehensive Plan.

Michel Pillet has continued his studies for a Ph.D. in American Studies. At UNM, he offered a new course, "Architecture of the Southwest until 1821," and is a founding member of the UNM Southwest Institute.

Maria Varela was elected to the board of directors at the National Rural Development Finance Corporation, Washington, DC, and to the Board of Directors of the Center for Community Change, Washington, DC. She was speaker on a keynote panel of the Rural Coalition Annual Meeting in May 1985 and keynote speaker on "Wool on a Small Scale" at Utah State University.

Faculty Seminars

The School continued its Faculty Development Seminars, which are held at the houses of different faculty members who act as hosts. Organized by Professor Wolfgang Preiser, the seminars are intended to encourage faculty members to discuss issues of educational and professional interest in an informal environment.

Fall Semester

1. Richard Nordhaus on computer-aided design.
2. Richard Anderson: a report on Saudi Arabia.
3. A discussion with Gerard Dizinno, adjunct Professor, UNM Department of Psychology.

Spring Semester

1. Simo Jarvinen, visiting Finnish architect on Finnish architecture and planning.
2. Gilda Bruna, visiting educator, architect and planner from Brazil, on planning in Brazil.
3. Van Dorn Hooker, UNM Campus Architect, on planning issues on the UNM Campus.

Student Statistics

	Number of Students Fall '84	Spring 85	Credit Hours (total year)
Undergraduates	117	126	4793
Graduate Architecture	87	91	952
Graduate Planning	32	38	587

Number of Minorities

	Am. Indian	Black	Oriental	Hispanic	Women
Fall '84	6	1	3	30	104
Spring 85	5	1	4	36	103

The following students graduated from the School in 1984-85:

Bachelor of Arts in Architecture

Michael Robin Benning
Charlene Beth Brown
Steven Matthew Burke
Mary Jo Coash
Elizabeth Gayle Dabbs
David Francis Dick
Teresa Marie Evanko-Wolfe
D. Juan Pedro Fabres
Bruce Michael Farmer
Jerry D. Francis
Lawrence M. Garcia
John M. Gardner
Gabriella Gutierrez
Bill K. Hanges
Stephen James
Joe D. Jenkins
Merri Jean Dale Jones
Karl T. Koning
Mark Levine
Ian Lawlor
Kenneth Markunas
Cynthia Figueroa McInteer
Steve Craig Patterson
Nicholas J. Rossouw (with distinction)
Sandra Ann Satterlee
Curtis J. Scharfenaker (with distinction)
Michael Smith
John Scott Taylor
William David Tripp
Lisa Fay Wachter
Benjamin P. Wilson
Kramer Eugene Woodward

Bachelor of Arts in Environmental Design

Carl D. Berglund
Brian William Degani
Lex Dominey
Michael D. Gallegos
Elizabeth Buttolph-Grubb (with distinction)
Gloria Mendoza Hoff

Thomas Skitbitski
Anita Tallarico
Karen Marie Van Citters

Master of Architecture

Ritva Elina Beard (with distinction)
John Glenn Beverly
John Allan Briscoe
Ronald Burstein
Patricia Davis (with distinction)
Jonathan Floyd Degray
Eileen Devereux
Barry Stephen Hoyne
Mitra Kanaani
Elizabeth Gae Smith
James Scott MacGillvray

Master of Community and Regional Planning

Michael Edmund Brands
Mary Christina Broemel
Vera Virginia Darter-Dobles
Paula Joan Donahue
James Vernon Lewis
Marjorie A. Slater-Kaplin

Phi Kappa Phi

The following students were elected to Phi Kappa Phi Honor Society
Curtis J. Scharfenaker (Bachelor of Arts in Architecture)
Patricia Davis (Master of Architecture)
Eileen Devereux (Master of Architecture)
James Vernon Lewis (Master of Community and Regional Planning)

National Deans List

We want to congratulate these undergraduate students in the School of Architecture and Planning who have attained a cumulative grade point average of 3.5 or higher and have been nominated to the National Deans List:

Julia Jane Berman
Elizabeth Alice Calhoon
Christopher Caroselli
Linda Cruise
Charles David Day
Jessica Rachel Dixon
Steven Iane Hergert
Jennifer Susan Jones
Michael Leonard Jones
Pastrick Harrison Kelly
Susan Kathleen Lechner
Kenneth Markunas
Neil Major Robinson
Martin Tarafdar
Jon David Vangaasbeek

Student awards 1984-85

NATIONAL AIA AWARDS

Henry Adams Medal, to the first ranked graduating student: Patricia Davis.
Certificate of Merit, to the second ranked graduating student: Alvaro Neuenschwander.
Alpha Rho Chi Medal, to the graduating student who has shown leadership, sesrvice, and merit: Eileen Devereux.
National AIA Foundation ($800): Philip Lust.

FRIENDS, SCHOOL OF ARCHITECTURE AND PLANNING MERIT AWARDS

To a first-year undergraduate (book award): Denyse Matysiak and Janine Moss.
To a second-year undergraduate ($250): Elizabeth Calhoon
To a third-year undergraduate ($600): Jennifer Jones
To a fourth-year undergraduate ($600): David Reddy
To a fifth-year undergraduate ($600): Marion Nelly
To a graduate planning student ($600): Jonathan Teague

LA CIENEGA PRIZE ($250) to an outstanding student in design: Peter Marquez

ALBUQUERQUE AIA CHAPTER John Heimrich Scholarship ($350) to a fifth-year Architecture student: Philip Lust

ALBUQUERQUE AIA CHAPTER Scholarship ($100) to a third-year Architecture student: Luis Campos

JACK CORBETT MEMORIAL ACHIEVEMENT AWARD ($1,000) to an outstanding third-year undergraduate architecture student: Michael Jones

WOMEN IN CONSTRUCTION ($1,000 to an outstanding architecture student with outstanding scholastic achievement: Debbie Fernandez

LATH AND PLASTER INDUSTRY SCHOLARSHIP ($1,200) to an undergraduate or graduate student with financial need and academic ability: Jay Mills

NEW MEXICO MASONRY ASSOCIATION SCHOLARSHIP ($340) to an undergraduate or graduate student with financial need and academic ability: Peggy Favor.

First Prize in a National Competition

James I. Williams, graduate architecture student, won first place in the open submissions category of the 1984 National Association of Collegiate Schools of Architecture Student Design and Energy Competition. The competition encouraged students to address the importance of energy-conscious design through efficient and economical integration of the building services and functions with the aesthetic challenges presented by the complex urban situation.

Williams' project, for which he received $2,000 and the School an additional $1,000, was a "Museum of Native American Art." Stephen Dent and Don Schlegel were faculty sponsors. The museum was designed for a site in "Old Town" Albuquerque. The jury consisted of William Pedersen, FAIA, of Kohn, Pedersen, Fox, New York City; Howard Elkus, FAIA, of the Architects Collaborative, Cambridge; and Ralph Johnson, AIA of Perkins and Will, Chicago. Among jury comments were the following:

"The details of the building give it its character, and certainly the interior spaces have almost Scarpa-esque sensitivity."

"There is a consciousness of the urban culture, the energy aspects are quite intriguing."

"It is the most seductive of the presentations we have seen today."

Students Win Award

The Albuquerque Conservation Association (TACA) gave one of its 1985 awards to a group of architecture students from our School. These students worked under the direction of a distinguished group of architects who came to Albuquerque as a Regional Urban Design Assistance Team (RUDAT). An outreach program of the American Institute of Architects, the team undertook

a study of the future of Central Avenue and made concrete proposals for action.

Poster Competition

Anthony Pennock, a third-year graduate architecture student, won the Albuquerque Journal-Duke City Marathon Committee poster contest held at the School and organized by Jason Moore. Other winners were Denise Lund, Jonathan Ward, and Cindy Terry.

ALUMNI

Alumni Statistics

Below are the results of a questionnaire that was sent to alumni in 1984/85. Out of 667 alumni, 116 answered (17.4%). Of the respondents, 85/5% were male, and 15.5% female. The span of years was from 1951 to 1984. The highest percentage of responses came from graduates between 1980 and 1984. It included all architectural degrees offered by the School, professional and preprofessional. Thus, the statistics below must be interpreted in this light. We have put the information into the computer, and our future questionnaires will be designed to make the information more relevant.

Employment:
64% stayed in the field of architecture
18% were in other occupations (mostly related to architecture)
12% were in government (related to architecture)
3% were in architectural education
3% were students.

Salaries:

The median salary (which was an optional question) was over $32,000 for all categories.

Salaries for graduates from 1980-84 (25 replies)

Graduates with professional degrees (M.Arch) average $28,100, median $34,000.

FRIENDS

The School is extremely thankful to all those who have helped us through the Friends of the School of Architecture and Planning. This support is used for Mass the School's journal and the newsletter, our two publications; for Student Merit Scholarships; for lecturers and exhibitions; and for books in our newly developing Resource Center. This facility situated in the School will have approximately 1,000 books available for easy access to students, but it is not a substitute for the architecture library at the College of Fine Arts.

Dean Anselevicius hosts a luncheon for all friends in the fall semester, and last year's luncheon was attended by more than fifty people. Special lectures have been organized for the Friends. The last one was by Finnish architect Simo Jarvinen on the work of Aalto and was hosted by the office of Flatow, Moore and Bryan. There is discussion of organizing an arts and crafts auction at the School in fall 1985.

The Friends now have 159 members.

Below is a list of Friends as of July 1, 1985:

Corporate

(suggested $2,000 for large organizations)

Albuquerque Chapter AIA, Albuquerque
Barker & Bol, Albuquerque
Bradbury & Stamm Const., Albuquerque
CCIC Design Group, Albuquerque
Dean & Hunt, Albuquerque
Design Professionals, Albuquerque
Flatow, Moore, Bryan & Associates, Albuquerque
Hutchinson, Brown, & Partners Inc., Albuquerque
New Mexico Masonry Industry Corp., Albuquerque
New Mexico Society of Architects, Santa Fe
Stevens, Mallory, Pearl & Campbell, P.A., Arch. Albuquerque
Sunstructure Assoc., Albuquerque
School Zone, Inc., Albuquerque
W. C. Kruger Foundation, Albuquerque

Patron

($250 and above)

AIA Santa Fe Chapter, Santa Fe
Edna F.Anderson, Bayside CA
Richard Engstrom, Albuquerque
Mr. & Mrs. Van W. Gilbert, Albuquerque
Lucia Anderson Halsey, Palm Springs CA
Long and Waters, Albuquerque
Peggy & VanDorn Hooker, Alameda
Robert Peters, Albuquerque

Mr. & Mrs. Robert Stamm, Albuquerque
T. J. Wagner, III, Amarillo TX
Louis L. Weller, Albuquerque

Sustaining

($100 and above)

AIA So. NM Chapter, Las Cruces
George Anselevicius, Albuquerque
Mr. David Blake, Compton NY
Edie Cherry & Jim See, Albuquerque
Dale Crawford, Albuquerque
Don Felts, Albuquerque
Manual Fernandez, Albuquerque
Walter H. & Evelyn Frost, Albuquerque
Garcia Tree & Lawn, Albuquerque
James M. Lisenby, Ozark AL
McHugh, Lloyd & Hand, Santa Fe
Michael Norton, Albuquerque
Antoine Predock, Albuquerque
Gilson Riecken, San Antonio TX
William J. Shelton, Albuquerque
Robert Strutcman, Taos
Frank R. Stubbs, Albuquerque
The Architectural Group, Albuquerque
John Throne, Albuquerque
Ray A. Trujillo, Albuquerque
John Peter Varsa, Albuquerque
Westwork, Architects, Albuquerque
Wiedersum Associates, Hauppauge NY

Regular

($25 or above)

Frank J. Accordino, Merrick, NY
Jon Anderson, Albuquerque
Richard Anderson, Albuquerque
Anthony Antoniades, Arlington TX
Thomas J. Balestri, Los Altos CA
Edna Heatherington Bergman, Albuquerque
Paul R. Birkhauser, Bradford MA
Herbert J. Bohannon, Albuquerque
Gordon Bosl, Albuquerque
John Brooks Boyd, Palo Alto CA
Richard Braun, Albuquerque
Ms. Carla Breeze, Albuquerque
Ms. Catherine Bromel, Nashville TN
Ms. Kathleen Brooker, Santa Fe
Joe Browning, Santa Fe
Gilda Bruna, Sao Paulo SP Brazil
R. J. Budnick, Dahlgren VA
Larry Caldwell, Albuquerque
Mack Caldwell, El Paso TX
Jean M. Cantu, Santa Fe

226

David Carr, Santa Fe
Stephen Carroll, Los Alamos
Christopher Carter, Littleton CO
George Chaflen, Philadelphia PA
Alex Chakos, San Angelo TX
Chris Chiesl, Albuquerque
Donald Cole, Albuquerque
Terrace L. Connors, Albuquerque
Laura A. Cruickshank, Rochester NY
James N. Day, Albuquerque
Michael Del Mastro, Albuquerque
Adrian DeWindt, Santa Fe
Thomas Degnan, New York NY
Mark Denari, Oakland CA
Stephen D. Dent, Albuquerque
Design Collaborative SW, Albuquerque
Sandy Eeds, Albuquerque
Gary Embler, El Prado
Mark M. Feldman, Albuquerque
Allan H. Ferrin, Bainbridge Isl WA
Franklin M. Fine, Albuquerque
John Friedman, Los Lunas
Richard Gagliano, Albuquerque
Marc Giaccardo, Albuquerque
Lloyd W. Goldrick, Albuquerque
Mark Louis Goodman, Alexandria, VA
Arthur Gorrell, Carlsbad
James M. Graf, Albuquerque
Mark Grasso, Albuquerque
Betty Grubb, Albuquerque
Martin F. M. Grummer, Albuquerque
Kenneth E. Guthrie, Albuquerque
John Friedman, Los Lunas
R. Alex Harrison, Albuquerque
Larry Harvey, Lubbock TX
Woodford Heflin, Montgomery AL
Richard Hoffman, Parker CO
Del Paul Jack, Albuquerque
Victoria Jacobson, Denver CO
David Keller, Albuquerque
Steven E. Kells, Albuquerque
George M. Kirkham, Walla Walla WA
Steven Kleinrock, Washington DC
Steven Koffman, Albuquerque
Michael Kollman, Spring Grove IL
Ms. Ethel Kolodner, Albuquerque
Ms. Barb LaValley, Albuquerque
Edwin & Marian Lieuwen, Albuquerque
Mariano Lucero, Espanola
Thomas L. Lucero, Albuquerque
Roger Lujan, Albuquerque
Ted C. Luna, Santa Fe
Keith Martin, St Augustine FL
Carla McConnell, Englewood CO
Wayne McIntosh, Arlington TX
Allen S. Nagle, Santa Fe

Richard Nordhaus, Albuquerque
W. Osofsky, Albuquerque
James Palmer, Alexandria VA
Thomas Parks, Boston MA
Robert Ponto, Albuquerque
Boyd C. Pratt, Santa Fe
Wolfgang F.E. Preiser, Ph.D, Albuquerque
Robert Prommel, Los Alamos
Donna Quasthoff, Santa Fe
Richard Rappuhn, Albuquerque
Anthony Reynolds, Albuquerque
Morris Rippel, Albuquerque
Brady Roark, Huntington Beach CA
Romana Sanchez, Alexandria VA
J. Terry Sewell, Phoenix AZ
Fred D. Shellabarger, Santa Fe
Mr & Mrs W.J. Siembieda, Corrales
Valerie Sivinski, Washington DC
Rick Sneddon, Albuquerque
Diana Stein, Las Vegas
Mr & Mrs Stephen Stoddard, Los Alamos
Andrew C. Stone, Albuquerque
Kent Stout, Albuquerque
Norman T. Suazo, Albuquerque
David Tinker, Jr., Los Lunas
Cheryl & Charles Troxel, Big Pine Keg, FL
John Vander Pol Const., Albuquerque
Charles Volz, Albuquerque
Theodore H. Waddell, Santa Fe
Dick Waggoner, Roswell
Perry Wilkes, Albuquerque
Chris Wilson, Albuquerque
Wade Wilson, Ft. Worth
John Zimmerman, Houston TX

227

1985/86 Report from the School of Architecture and Planning

TABLE OF CONTENTS

	Page
Programs and Courses	4
Facilities	5
Activities	7
Awards	12
Community	14
Faculty	18
Students	28
Friends	32

1985/86 Report from the
School of Architecture and Planning

From Dean Anselevicius

Another year has gone by. Life and activities at the School continue at a good pace. For me personally it has been an extremely busy year. As President of the Association of Collegiate Schools of Architecture (ACSA) I had to travel extensively to both regional and national meetings, but about all this later.

In Spring 1987 we will host the regular five-year visit by a team of the National Architectural Accrediting Board (NAAB). As you all know, our professional degree of Master of Architecture is fully accredited. This degree is even more important because the Master's degree from our School or a professional degree from another school is now required in order to take the licensing examination in New Mexico.

We have been working hard in preparing our report to the NAAB as required. The brunt of putting the report together was borne by Associate Dean Robert Cohlmeyer. I wrote much of the basic material, and many faculty members and students helped. I am looking forward to the NAAB visit so we can show what has been achieved during the last five years.

There is other good news to report. The University has assigned the TAC building to the School, and we will have the use of the entire building by the end of 86/87. The TAC building is situated across Stanford, to the East of the School and faces Central (I believe it was originally built for IBM). It will consolidate and expand our facilities. This is an important step in the life of the School; however, it should not hamper our efforts in getting a new building in the long run. I am discussing this matter with Van Dorn Hooker, the University Architect.

Our Planning Program is not yet accredited as it was only established in 1980/81. To be accredited, 25 students must have graduated from the program and the faculty must be of adequate size. We have now achieved the above and will be asking for accreditation. I feel sure that with the faculty we now have and with an effective curriculum that has been reorganized, the program should be accredited.

Further good news is an allocation from the City Urban Enhancement Fund of $10,000 for our lecture series in 85/86 and 86/87. These lectures are seen by the City as an important community service in educating the public as to a better environment. I must thank Baker Morrow for his help in getting us this grant. This will make it possible for us to continue our lecture series at a high level. With this added support and money from the Friends, we expect to offer 22 public lectures in 86/87 as we have done last year. You will find more information as to the School's activities in the rest of the Newsletter. I am sorry that I do not receive more information from alumni(ae) to increase that part of our Newsletter. Please, please write to us. I am sure that those you studied with would like to hear from you.

Now, back to my personal activities of last year. One of the highlights was a two-week trip in May to the USSR sponsored by Professional Seminar Consultants of New York and Albuquerque, with me as professional tour leader and lecturer. More than 60 architects and their wives signed up. The trip included Moscow and Leningrad as well as Central Asia where we visited Tashkent, Bukhara, and Samarkand, cities which had also been visited by Alexander the Great, Genghis Khan, and Marco Polo among others. One is in interesting company. Lectures and discussions dealt with housing and planning in the USSR and changes in architectural philosophy since the USSR was established. We met with Soviet architects in Moscow, Leningrad, and Tashkent. I took a great number of slides and hope to give some informal lectures based on this trip.

As President of the ACSA, I signed an historic agreement with the AIA which established an Architectural Research Council through which architectural research would be funnelled. A Board of 16 people was established, ten appointed by the AIA and six appointed by me representing the ACSA. All administrative work will be done through the ACSA office under the direction of its Executive Director. I believe this to be a feather in the cap of all the Schools of Architecture and a creative linkage between schools and the profession. I visited regional meetings of the ACSA at St. Louis, Tallahassee, and New Orleans, gave lectures, and participated in discussions.

I am glad to say that the annual meeting of the ACSA in New Orleans was a success as was also reported in Progressive Architecture. I chose the theme of "Spirit of Home" and chose the city of New Orleans as the meeting place. Both seemed to be good decisions as there were more educators attending this meeting than ever before and the response to the program was very good indeed. Next year I will continue my duties at the national ACSA level as its Past President. My travels will be less extensive, and this will permit me to teach a graduate design studio again which I do enjoy.

George Anselevicius, Dean
September 86

Evening Courses in Continuing Education

The School in cooperation with the Division of Continuing Education offered a total of eight courses during 85/86. A total of 145 students and professionals enrolled in these courses.

Fall semester

Introduction to Architectural Photography - K. Gittings.
Advanced Architectural Photography - K. Gittings.
Interior Design - N. Traylor.
Architecture & Culture - R. Swentzell.

Spring semester

Earthen Architecture - P. G. McHenry, Jr.
Writing for Architecture - V. B. Price.
Interior Design Concepts - N. Markovich.
Southwest Architecture - M. Pillet.

New Courses and Seminars 85/86

Architecture

Computer Graphics - R. Nordhaus
Materials and Methods - T. Conrad

Planning

Real Estate Economics - W. Siembieda
The Practice of Policy Development - W. Siembieda
Community Growth and Land Use Planning - J. Richardson.

Joint

Special Seminars on Nob Hill Project and Farmington R/UDAT - S. Borbas

Facilities

2500 Central

The School has been assigned the TAC building for its use. The building at 2500 Central is across the street from the School. It will be made available to us in stages. We have given up the Red Wing Shoe Store along Central, which was used by beginning as well as by thesis students. The first use of the TAC building will be to accommodate a graduate architecture studio and pre-architecture students of the 104 studio. The building will reduce some of our crowded facilities and provide some new ones.

The Resource Center

The School has been developing its Resource Center, which now holds about 1000 books. The Center is essentially a reference facility for students and faculty and is not a substitute for the Architecture library which is part of the Fine Arts Library, although certain books are also held at the main library (Zimmerman).

The Resource Center being in the School's basement, euphemistically called "lower level", is easily accessible to all studios and holds important basic books relating to different aspects of architecture and planning. The Resource Center also holds a small number of video tapes and audio tapes. Last year, 150 books were bought. Books are becoming evermore expensive, and much of the money has come from the "Friends" of the School.

Computer Facility

Remodelling work was completed on the School's Computer Lab in February 1986. Set up as a joint facility with the Computing Center, it serves as a public microcomputer pod as well as the School's teaching and research facility.

The public pod operated by the Computing Center was staffed 40 hours per week during the spring semester. It is equipped with nine standard UNM Zenith workstations.

The School's facility was open an additional 20 hours per week during evenings and weekends. Current equipment includes three IBM ATs with professional graphics, four Macintoshes, and two Zenith's PCs. Available software includes standard word processing, database, and spreadsheet programs as well as a variety of more specialized programs. Professor Dent has been utilizing F-Load and Micropas energy analysis programs in his courses. Professor Nordhaus offered a course in computer graphics which introduced students to 2D and 3D software packages, including Computervision's Personal Architect. The introduction to Microcomputing Course, taught by Bruce Hilditch, familiarized students with wordprocessing, spreadsheet, database, and simple graphics programs.

Future development will include expansion of the graphics and CAD emphasis. The Planning Program will be adding statistical and mapping capabilities. Development efforts will focus on the use of computers in a wider range of courses.

Activities

The First Convocation and Awards Ceremony

The School held its First Convocation and Awards Ceremony on Saturday, May 17, 1986. It was attended by about 200 people: students, their families and friends, faculty, and staff.

V. B. Price, the well-known commentator on Architecture and Urban Affairs in Albuquerque, gave a short and motivating address. Student Awards were then handed out by Dean Anselevicius and Associate Dean Cohlmeyer, after which there was a reception with food, drinks, and general merriment.

We hope to make the Convocation and Awards Ceremony a School tradition and look forward to the one in 1987. This Convocation does not take the place of the overall University Commencement, at which architecture and planning students are awarded their degrees.

Lectures

The following lectures partially supported by the "Friends of the School of Architecture and Planning," were offered in 85/86. Support also came from the Ron Hutchinson Memorial Fund and the Albuquerque Urban Enhancement Fund.

Fall Semester 85

Steven and Cathi House, Architects, San Francisco: "Mediterranean Indigenous Architecture"

William P. Bruder, Architect, Arizona: "Architecture in Harmony with Nature"

Gary Hack, Chairman, Department of Urban Studies & Planning, MIT, Partner, CARR/LYNCH Assoc.: "Recent Urban Design Work"

Don Hisaka, Architect, Cambridge, Mass.: "Recent Work"

Norman Standerfer, AICP, Director, Department of Planning & Growth Management, Austin, Texas: "Growth Management in Megatrend Cities"

Thomas H. Beeby, Dean, School of Architecture, Yale: "Recent Work"

The Ron Hutchinson Memorial Lecture
Bernardo Fort-Brescia, Arquitectonica, Architects, Miami: "Recent Work"

Christopher C. Mead, Architectural Historian, UNM: "Architecture and Ornament"

Stuart Dawson, Principal, Sasaki Associates, Dallas: "Landscape Architecture and Architecture by Sasaki Associates"

Craig W. Hartman and Robert P. Holmes, Partners, Skidmore, Owings & Merrill: "The Work of S.O.M.

Daniel F. Solomon, Architect, San Francisco: "House and Town"

Spring Semester 86

James Richardson, Asst. Prof., Arch & Plng, UNM: "Urban Design in China

William Pedersen, Kohn, Pederson, Fox, Architects, New York: "Recent Work"
(Lecture sponsored by the City of Albuquerque Urban Enhancement Fund)

Robert W. Peters, Architect, Albuquerque: "Projects in the Southwest"

Dean L. Macris, Director of Planning, City & County of San Francisco: "The San Francisco Planning Experience"

Cristian Cirici, Architect, Barcelona, Spain: "Recent Work in Spain"

Fred I. Kent, III, President, Project for Public Space, New York/Seattle: "Politics and Design of Public Spaces" (Lecture sponsored by the City of Albuquerque Urban Enhancement Fund)

Norbert Schonauer, Professor of Architecture, McGill University, Montreal: "Occidental and Oriental Housing"

Robert J. Frasca, Zimmer, Gunsul, Frasca, Arch., Portland: "Thoughts and Works"

Thom Mayne, Principal, "Morphosis" architects, Los Angeles: "Recent Work

Lauri D. Olin, Chairman, Department of Landscape Architecture, G.S.D. Harvard: "Cities and Open Space" (Lecture sponsored by the City of Albuquerque Urban Enhancement Fund.)

Arie Rahamimoff, Architect, Jerusalem, Israel: "Projects in Israel"

Exhibits

Seven exhibits were displayed at the School in 85/86 thanks to the support of the Friends of the School of Architecture and Planning

Fall Semester 85

Mediterranean Indigenous Architecture, Steven and Cathi House, Architects, San Francisco

Shadow and Form, Photographs by Carla Breeze

The Work of Skidmore, Owings, and Merrill

Domus 1928-84, From the Sources of Modern to Neomodern Resources

The Work of Pasanella & Klein; Urban design, architecture, interior design

The Non-Residential Architecture of Frank Lloyd Wright

Images of Desert Architecture, Multimedia by Joseph Bilello

"MASS"

MASS journal continues to be published, and Volume IV on "PATTERNS" should be out at any time. We have had complimentary letters as to this journal. Below a note from Roger C. Kennedy, Director of the National Museum of American History, part of the Smithsonian Institution in Washington, D.C.: "Thank you very much and thanks to Dave Warren as well for MASS which I hadn't seen before. I'm going to take it home to read it with care and for the joy of it. It's very handsomely produced and I am in some ways quite envious of you that you can get this kind of work done."

Beaux Arts Ball

Students organized their first Beaux Arts Ball held on Saturday, April 14th, 1986 at the old airport terminal building. The theme of the costume ball was "Black and White." More than 200 people participated, and much creativity was evident, from elegant black-and-white evening dress to more relaxed attire. Two "live" bands (at least their decibel output classified them as such), TRAGIC SURF and the RIO ARRIBA RHYTHM BAND, were hard at work. Partying, dancing, refreshments, and general merriment continued into early morning. By 10 PM, local professionals, faculty, and students were all seen tripping the light fantastic. One hopes this will become an annual event.

F 239

Professional Seminar

A one-day microcomputer seminar on energy modelling and building design was held at the School under the direction of Assoc. Professor Stephen Dent. This seminar was specifically created to aid the building designer in: 1) developing energy-efficient forms and testing alternative conceptual designs during the schematic design phase, and 2) refining and optimizing energy performance during design development. Much of the time was spent on hands-on instruction using the IBM and Zenith personal computers.

The seminar emphasized the use of two energy-modelling programs (F-LOAD and MICROPAS) and introduced several other programs.

The intent of the seminar was to encourage participants to develop a level of skill that can have real impact on the design process.

The seminar was co-sponsored by the New Mexico Department of Energy and Minerals.

Awards

$10,000 Award

The Urban Enhancement Fund of the City of Albuquerque awarded $10,000 to the lecture series of the School of Architecture and Planning. This award is for the academic years 1985/86 and 1986/87.

TACA Award

The Albuquerque Conservation Association (TACA) gave one of its 1986 awards to the Monday Lecture Series of the School, the series being of significance to the Albuquerque community.

The TACA awards are broad in scope and recognize cultural and environmental values in the Albuquerque area.

Steel Award

The American Institute of Steel Construction has approved the School's application for a "Hands On Steel" design program to be conducted in 86/87, with a grant of $1,500. Terry Conrad has been responsible for this project and will be teaching a "hands on" structures course as an elective in Fall 1986 and a materials and methods course in Spring 1987. Structures which were the result of Terry Conrad's classes now decorate and enliven the School. Anyone visiting the School should note the Tensegrity structures over the entrance and in the atrium.

Nordhaus Receives National Award

Professor Nordhaus was the principal investigator and co-author with Min Kantrowitz and William Siembieda on a project for the New Mexico Natural Resources Department to develop design guidelines for fishing and water-based outdoor recreation for people with disabilities. Accessible Fishing: A Planning Handbook received one of four prestigious Progressive Architecture Awards

for Applied Research. The awards jury cited the creative approach to handicapped accessibility which pioneered the concept of levels of accessibility, a flexible way of planning outdoor recreation facilities which is sensitive both to the wide range of user preference and variations in site conditions. The state has constructed two facilities to date, one at Fenton Lake and another on the San Juan River below Navajo Lake.

Anne Taylor Receives Grant

It was announced by the Fellows of the National AIA that Professor Anne Taylor, Co-Director of the School's Institute for Environmental Education through the School Zone Institute has been awarded $5,000 to help develop a travelling Architecture for Children exhibit. This exhibit will be co-sponsored by the Institute for Environmental Education of the School of Architecture and Planning, University of New Mexico; the Seattle AIA Chapter and Foundation; the Pacific Science Center; the Albuquerque Art Museum; and others. The exhibit, its accompanying curriculum, and teacher-training components will commence in Seattle and will travel to Albuquerque and other cities in the U.S. It is anticipated that this exhibit and its travelling schedule to host cities will be a five-year project from design conception, through development to implementation. The exhibit idea is based on a successful prototype exhibit curated and designed by Dr. Taylor and George Vlastos, Architect of School Zone Institute, for the Museum of History and Art in Anchorage, Alaska which was visited by over 200,000 people. The AIA Anchorage Chapter and other volunteers helped to make this initial exhibit a grand success.

Community

The Design and Planning Assistance Center

The Design and Planning Assistance Center (DPAC) of the School of Architecture and Planning was established in 1969 as a community service organization that provides research, planning, and design assistance to low-income families, minorities, community groups, and nonprofit organizations throughout the state of New Mexico.

During the past year, 1985-1986, students at the DPAC have undertaken a variety of projects under the direction of faculty member Edward Norris, Director of DPAC. Among the 35 projects developed were:

Playground design for Zia Elementary School, exhibit design for the UNM Health Education Project, landscape design for Santa Fe County Extension Service, dormitory and recreation facility design for Delancey Street Treatment Center, master plan for Queen of Heaven Parish, Atrisco Plaza design in the South Valley, rural clinic prototypes for Tabasco, Mexico, feasibility study for the Valencia County Courthouse in Los Lunas, interior design for the New Mexico School for the Deaf, development plan for the YWCA Camp in Tijeras, recommendations for commercial development at Picuris Pueblo, housing rehabilitation at San Felipe Pueblo, site development for the McCurdy School in Espanola, exhibit design for "Acequias y Sangrias," housing improvement in Albuquerque, interior design for the periodicals area of Zimmerman Library - UNM, community center and nature study center for Cimarron, design of artist studio and gallery at Embudo-Dixon, recommendations for historic preservation for San Isidro Church in Corrales and the Armijo School in the South Valley, streetscape for the "Main Street" project in Raton, and playground design for Edgewood Elementary School.

Two projects were undertaken together with the Planning faculty and students: development plan for Ribera Ranch with Prof. Paul Lusk and a development plan for San Ildefonso Pueblo with Prof. Ric Richardson. Students at the DPAC are continuing work on several recommendations of the San Ildefonso Plan.

In June, the Rehabilitation Center of Albuquerque held a ribbon-cutting ceremony initiating the playground designed by DPAC for handicapped children.

DPAC looks forward to another busy year in 1986/1987.

The Farmington R/UDAT

The School was approached by the architectural community in Farmington to support a R/UDAT charette dealing with Farmington's three rivers as part of a more comprehensive master plan. Students were needed to help in this effort. The School promised assistance and asked Steve Borbas, the urban designer, to organize an elective class in the Spring semester which would prepare material for the Farmington R/UDAT. To start with, the 200-mile distance limited face-to-face communications. However, the small class of four students (Dave Dallas, Ruth Lambert, Norma Miller-Rivas, and Robert Paulsen) got to work in the corner of a studio in the School and proceeded to innundate the R/UDAT people with maps and models. The maps consisted of information a R/UDAT team would need, and dealt with land use, water networks, neighborhoods, area features, zoning, transportation, subdivisions, and nodes. The model prepared by students was, according to Borbas, "a masterpiece." It showed the topography at 1:600 and measured 5X8 feet. The long weekend after examination week was scheduled for the R/UDAT visit in Farmington. Borbas and students aided the R/UDAT team in their designs and drawings, added details to the model, helped to edit the report, and watched high-quality professionals think and act.

The Nob Hill Main Street Demonstration Project

Albuquerque's Nob Hill became one of the few National Trust's Main Street Urban Demonstration Projects. This is an experiment in which an area helps itself, slowly, with care and patience, with everyone's involvement and much volunteer work. With Steve Borbas teaching and directing, the School decided to offer an elective seminar course in the Spring semester as part of its continuing responsibility to the project. The School had been helpful in bringing it to Albuquerque. The seminar dealt with "real world" design and was open to both architecture, environmental design, and planning students. Mary Rose Szoka, director of the project, was also appointed consultant to the seminar and gave it a special impetus with her lectures and professional input. The class first analyzed and observed Nob Hill, its traditions, styles, images, spatial quality, and participants. Teams were then organized which conducted surveys. These led to the preparation of plans and designs for the entire streetscape and for groups of buildings. Much of the classtime revolved around discussions about the Nob Hill area, its image, and its potentials. This made for cooperation between students who came both from architecture and planning programs. It even led to some students volunteering to assist in the continuation of the project after the Spring semester ended.

Advanced Planning Studio

In the Spring semester, this studio team-taught by Paul Lusk and Ric Richardson, worked on three separate real-world projects; sector planning in the South Valley, economic use of a ranch on the upper Pecos River, and development options and siting for residential and industrial uses proposed by the San Ildefonso Pueblo.

In the South Valley project, 13 students (11 graduate students from the MCRP program, one from the M.Arch program, and one undergraduate in the BAED program) worked with a citizens' group

recently formed in the Pajarito area of the South Valley. During the course of the project, the Pajarito citizens' group was joined by individuals and groups from other areas of the South Valley and was restructured into a coalition responding to broader, areawide concerns.

Because part of the process in an advanced graduate planning studio is the determination of content as well as educational objectives, the written product of this portion of the studio changed from a sector plan for the Pajarito village to a "Citizen's Guide to Sector Planning, Developed to Assist Communities in the Southwest Area of Albuquerque, New Mexico." Publication of a limited number of copies of the guidebook was made possible by assistance from the Graduate Students Association and by Friends of the School of Architecture and Planning.

Two graduate students, one each from the M.Arch program and the MCRP program, teamed together to survey existing conditions, past activities, and potential future options for the Ribera Ranch, a 1,000-acre property along the upper Pecos River north of Villanueva, New Mexico. The survey and options assessment was prepared at the request of the owner, Siete del Norte, a non-profit corporation providing community service programs in northern New Mexico.

Three short-term actions (small-plot seed production, experimental fish-farming using the ranch's warm-water artesian well, and water rights declaration) were recommended. Additional long-term actions to provide for management and capital improvements and to meet Sieta del Norte's educational, demonstration project, and community service objectives also were presented.

Additional project guidance and supervision, including a related community survey by a graduate student in the Design and Planning Assistance Center (DPAC), was provided by Ed Norris, DPAC Director, and Jose Rivera, Director of the Southwest Hispanic Research Institute and Assistant Professor in Public Administration.

Faculty

Faculty Development Seminars

The School has offered faculty development seminars for the past three years, with Professor Preiser, co-ordinator.

Their purpose is to share faculty experiences and ideas, to report about ongoing research and projects, and to broaden our perspectives and understandings of the fields of architecture and planning in general.

The seminars are held in faculty homes. An informal atmosphere prevails and refreshments are served. A presentation is given by the invited speaker, and discussion ensues.

The speakers, both from within and without the School's faculty, usually address emerging issues in their respective fields of specialization. In attendance are anywhere from 10 to 30 persons which may include a few graduate assistants, spouses, or visitors to the School.

In 85/86 we started out with Ric and Kate Richardson who spent a summer teaching urban design in Beijing. This event, hosted by Associate Dean Bob Cohlmeyer, had the highest attendance of any seminar, i.e., around 35 persons.

The next 1985 speaker was Professor Ualfrido del Carlo from the Faculty of Architecture at the University of Sao Paulo, Brazil. He addressed issues of urbanization in Brazil, with an emphasis on large metropolitan areas as they moved toward the year 2000. The host was Bill Siembieda.

In November the seminar was held at Edie Cherry's home where Min Kantrowitz reported on her research on evaluations of buildings for energy concerns and on aesthetics in Postal Service facilities around the country.

Three seminars in the Spring dealt with work in foreign countries. It started with Cristian Cirici, noted architect from Barcelona, who reported on his work in Spain at Don Schlegel's home.

Wolf Preiser hosted the seminar presentation by Nick Markovich on Canadian architecture in March.

In April, Ed Norris, Director of the Design and Planning Assistance Center, spoke on Mayan architecture in Mexico and traced the traditions of that land to modern times. DPAC's work in Chiapas closed that presentation, which was hosted by Dean Anselevicius.

Visiting Foreign Architects

We continue the program of having distinguished foreign architects teach graduate studios. They are asked to deal with projects in their own countries, so students gain experience in responding to different cultures. In 1985/86 the following architects visited us for eight weeks each:

Cristian Cirici from Barcelona, Spain dealt with a complex urban design project in Barcelona. Cirici is involved in both the design of buildings and the design of furniture and other building elements through his firm STUDIO PER. One of his latest projects was the reconstruction of the Mies Barcelona Pavilion.

Lorenz Moser dealt with a home for the elderly in Zurich and with a museum. Moser has his own firm in Zurich, Switzerland, where he has been the architect for a great variety of buildings, among them many projects for the aging. He has taught previously at V.P.I. and Arizona.

Arie Rahamimoff dealt with a housing development in Jerusalem. Rahamimoff has his own firm in Jerusalem. He has been the architect of a number of housing projects, as well as institutional buildings. Architecture in arid climates with concern for solar energy is one of his special interests.

Faculty Statistics

Full Time Faculty	16*
Permanent Part-Time	3
Temporary Part-Time	18

*Robert Walters and Anne Taylor were on sabbatical in 85/86, Lecturer David Kal resigned 85/86.

Full-Time Faculty

Professor Richard Anderson continued as director of the Community and Regional Planning Program. He has been teaching lecture and problem courses in the planning program and has directed independent projects and theses. He has served on several all-university committees such as the Senate Graduate Committee and was Chair of the Department of Sociology Oversight Committee. He has served as planning consultant to the Lassetter family on the development of the Lovelace Heights Addition and has completed the Cochiti Dam to Belen New Mexico land use study for the Oak Ridge National Laboratory and the Corps of Engineers.

Professor Robert C. Cohlmeyer continued his administrative duties as Associate Dean of the School. He was coordinator in preparing the School's report for the visit in Spring 1987 of the National Architectural Accrediting Team.

Associate Professor Stephen Dent was a member of the National Society of Building Science Educators, served on the American Institute of Architects (AIA) Albuquerque Chapter Urban Design Committee. He and the School were recipients of a grant by the New Mexico Department of Energy and Minerals of $13,850 which funded energy-conscious retrofit designs of four public buildings, the offering of a professional seminar in microcomputer energy analysis, and the further development of coursework in energy conscious design.

He represents the School in the Faculty Senate, was chairman of the University Parking Subcommittee, and member of the University Campus Planning Committee. At the School he is coordinator of the Graduate Energy Emphasis in Architecture and Planning and coordinated the first School Convocation and Awards Ceremony.

Paul Lusk, continues to teach a series of courses, linking architecture, urban design, and planning. He directed students in the publication of a development plan for San Ildefonso. He serves on the University Campus Planning Committee, on the Mayor's Comprehensive Environmental Improvement Program, Committee on the City's Open Space Task Force, and has worked with and been an advisor to the South Valley Improvement Coalition, the New Mexico escarpment project, and the Tonantzin Institute. He is senior editor revising the book on "Rural Environmental Planning" with Frederic O. Sargent of the University of Vermont, and Jose Rivera and Maria Varela of UNM. He received a grant from the UNM Research Allocation Committee for this project and was appointed Research Fellow at the Southwest Hispanic Research Institute at UNM. He has done professional consulting with the village of San Ysidro, the village of Pajarito, the Ribera Ranch, and Moon Mountain. Lusk has also been involved in a number of special projects including research in solar retrofit and intensive small-scale urban farming. He has received an award from the International Nubian Breeders Association for a Reserve Grand Champion Buck and Recorded Grade Doe.

Visiting Associate Professor Nick Markovich was appointed to this post after an extensive national search. He delivered a paper at the Associate of Collegiate Schools of Architecture (ACSA) in New Orleans in March 86 on "The Tewa Conception of House." He has been appointed as a member of the American Institute of Architects (AIA) Interiors Committee. Through continuing education, he is developing a series of four courses dealing with interior design. Mr. Markovich is coordinating and teaching the 201 Design Studio as well as a seminar in contemporary design theory. He has taught and been active in recent years in the design communities of Denver and the University of Colorado, Atlanta and the University of Georgia, and upstate New York at Cornell University. His research and writing have centered primarily on American architecture and culture.

Professor Richard Nordhaus initiated a new course in computer graphics and computer-aided design in the Spring semester. The course introduced students to a variety of 2D and 3D graphics

applications using the School's Macintosh and IBM AT computers. Preparation for the course included training on the School's "Personal Architect" CAD package by Computervision. He and Bruce Hilditch negotiated with the Computer Center a joint "computer pod" at the School, and was responsible for design and construction coordination of the facility. Nordhaus remains responsible for the first year of the NAG program (graduate architecture). As a professional, he consulted with Mazria Associates on a large mixed-use project in California, and jointly with Stephen Dent completed two single-family residences. He was the recipient of an Award for Applied Research in the National Progressive Architecture Annual Awards Program (see above). He attended the Association for Computer Aided Design in Architecture (ACADIA) conference at Arizona State as representative of the School. He was promoted to full professor.

Edward B. Norris, Director of the Design and Planning Assistance Center, through his involvement with the New Mexico Partner of the Americas program has been working on several projects in Mexico. Projects this year included the following: sheltered workshop for the mentally retarded in Villahermosa, Tabasco, for which funding has recently been received; agricultural center for Txurumutaro, Michoacan; rural development in Michoacan; and, during the summer he will initiate a passive-solar project in the highlands of Chiapas. He is also a member of the Faculty Concilium of the Latin American Institute and of the Advisory Board of the Spanish Colonial Research Center.

Professor Wolfgang F.E. Preiser was appointed Chairman of the Committees on Improving Programming and Post-Occupancy Evaluation Practices in the Building Process with the Building Research Board, National Academy of Sciences, Washington, D.C. for the years 1985 and 1986. A report on the committee's work on programming was published by the Academy of Sciences Press in April 1986. He presented a session on Designing for the Visually Impaired and another session on Post-Occupancy Evaluations of Senior Centers. at the 17th Annual Conference of the Environmental Design Research Association in Atlanta in 1986 In May 1986 he was invited to conduct a workshop for professionals on

post-occupancy evaluation at the University of Melbourne in Australia. In November 1985 Professor Preiser's book Programming the Built Environment was published by Van Nostrand Reinhold. In addition he has two chapters in press. One deals with architectural and aesthetic control mechanisms and is to be published by Cambridge University Press, the other deals with the process of evaluating and programming senior centers and will be published by the Gower Press, also in England. A paper on senior center design was published in the EDRA 17 Proceedings in June 1986. Professor Preiser received a UNM Research Allocations Committee grant to study the evolution of pueblo revival style on the UNM campus. During this past academic year, Professor Preiser coordinated the Faculty Development Seminars (see seminar notes below). He also chaired the School's Personnel and Library Committees.

Assistant Professor James Richardson completed a project to mediate electrical utility rates in southern New Mexico for the Harvard program on negotiation. He recently mediated a dispute on the Albuquerque West Mesa petroglyphs involving eight environmental organizations and Bellamah Community Development. He is a member of a research team planning a conference on ground water problems in the Southwest, and will participate in the seminar course by the American Indian Resource Institute on tribal water management. In June he presented a paper at the Third National Conference on Peacemaking and Conflict Resolution in Denver. He chaired an Albuquerque citizens' task force to revise the Huning Highland Sector Plan, and was asked by the Lovelace Medical Foundation to organize a conference on social, political, and economic effects of carrying out malaria vaccine field trials in developing nations. He was a member of the President's Faculty Advisory Council and a member of the University review courses for awards to graduate students for excellence; lectured at the UNM Law School, and was part of the School's public lecture series with a lecture on urban design in China. He will be organizing the Second Beijing (China) Urban Design Studio to be held in the summer of 87.

Associate Professor William J. Siembieda was appointed School Faculty Liaison to the American Planning Association. He was invited to present a paper on Economic and Job Aspects of Large-Scale Development Projects at the Fall meetings of the International New Towns Association. His panel will be chaired by the Deputy Minister for New Towns, France. His paper "Structure of Large-Scale Land Companies" was accepted to be included in the Proceedings of the World Congress on Land Policy, 1986, to be held July 7-10 in London, England. He has been invited to present a paper on "The Part Time Graduate Student and Planning Education" in October at the meetings of the Association of Collegiate Schools of Planning (ACSA) in Milwaukee. He has been accepted to participate in the UNM-University of Sao Paulo faculty exchange program. He will be engaged in teaching and research with the faculty of the School of Architecture, University of Sao Paulo in the Fall of 1986.

Professor Don Schlegel was president for the second year of the New Mexico Society of Architects (NMSA) and in this capacity participated in the National American Institute of Architects (AIA) convention, and in the AIA grassroots meeting in Washington, DC. He was appointed a Master Juror for the Site Planning Examination given by the National Council of Architectural Registration Boards (NCARB). He continues to chair the graduate committee of the School.

Associate Professor Robert Walters was on sabbatical leave during the 85/86 academic year. He spent the year travelling in Europe - much of it in Spain - and communicated with the School by 50-page letters with many sketches (see centerfold). He is preparing a new elective course dealing with theory of architecture in the 20th Century.

Professor Anne Taylor was on leave of absence during 85/86 in Anchorage, Alaska where she was guest curator for an exhibit "Architecture for Children, which was viewed by 200,000 visitors. She trained 300 teachers to instruct children about architecture, by means of a curriculum developed by Professor Taylor

which is being tested in 1500 elementary and some secondary classrooms. She was artist in residence at the Museum of History and Art in Anchorage and for the Fairbanks Arts Association and did research and an evaluation study for the Anchorage school district in their junior and senior high school art programs.

Part-time Faculty

Joe Bilello has been coordinating and teaching the pre-architecture design studio 104. He has been doing research in video-computer interface and has been involved in documentary and promotional videowork for architects, artists, and developers. His watercolors have been exhibited in Albuquerque, San Francisco, and Saudi Arabia. His architectural practice includes residential work as well as commercial interiors.

Steve Borbas taught a course on graphic communications to planning students, and ran special seminar courses. He is doing architectural and development consulting in Albuquerque. He is Vice President of the Board of Directors of the Central Avenue Corridor Corporation, Chairman of the Awards Committee of the Albuquerque Conservation Association (TACA), and member of the Albuquerque Chapter of the American Institute of Architects Urban Design Committee. He is in the early stages of writing a book entitled "Graphic Communications for Planners."

Terry Conrad, who teaches a "hands on" course in structures and a course on materials and methods, was artist in residence in Point Hope, Arkansas in Oct. 1985, and designer in residence at the Anchorage Museum in Alaska, in Feb. 86. He was also a special projects panel member for the National Endowment of the Arts (NEA) in Washington, D.C.

Angela Delli Sante, Ph.D. in Latin American Studies and Visiting Scholar, taught a course on Latin American development planning. This course was offered specifically for the dual degree

program in Community and Regional Planning and Latin American Studies.

Don Felts, who teaches lighting and mechanical systems, is a member of the Board of Directors of the Daylighting Network of North America and is a member of the Energy Task Group, Practice Committee of the American Institute of Architects. In 1985 he won honor awards from the New Mexico Society of Architects and the Western Mountain region of the American Institute of Architects, as well as an award of excellence for use of daylight by the International Association of Lighting Designers. His paper, "Emerging Architecture: Daylighting With Skylights and Reflectors," was published as part of the proceedings of the daylighting division of the 10th National Passive Solar Conference, and his case study, "Daylighting at the Ganado, Arizona High School," was accepted for presentation at the Second International Daylighting Conference in 1986.

Min Kantrowitz, who teaches in the graduate architecture NAG program, was appointed technical paper reviewer and chair of the session on psychological aspects of daylighting for the 2nd International Daylighting Conference in Long Beach, California in Nov. 85. She presented two papers at the International Association for People and Their Physical Surroundings in Haifa, Israel in July 86. With Richard Nordhaus, she received the Progressive Architecture 33rd Annual Award for Applied Research for the Study of Handicapped Assessible Fishing. She is co-editing a book on "Commercial Building Design, Integrating Climate, Comfort, and Cost" to be published in Fall 86 by Van Nostrand. Co-editor is Burt Hill Koser Rittelman. She has published articles in scholarly journals on the image of post office buildings and on solar energy, as well as well as an article in Progressive Architecture magazine dealing with post-occupancy evaluation of 16 passive solar buildings.

Baker H. Morrow, who teaches our landscape courses, was elected chairman of the New Mexico Board of Landscape Architects, a Trustee of the New Mexico Chapter of the ASLA, and was

reappointed to the Urban Enhancement Trust Fund Committee of the City of Albuquerque. Mr. Morrow continues his research into the historic manmade landscape of New Mexico, and has written about this in articles in "New Mexico Magazine" and in "New Mexico Architecture." His dictionary of landscape architecture is scheduled to be published by the UNM Press in late 86, and he has signed a contract for a new book, "Best Plants for New Mexico Gardens and Landscapes, Keyed to Cities and Regions." His firm has been a recipient of many design awards (a total of 18 since 1981), among the latest being the design work for the St. Joseph Square in Albuquerque.

Michel Pillet, has left the School to return to his native France. The School is sorry to lose a fine colleague.

Richard R. "Toby" Pugh, who teaches construction courses at the School, has been elected President of the Albuquerque Chapter of the American Institute of Architects for 1987. Mr. Pugh has his own architecture firm in Albuquerque.

Students

Student Statistics

	Number of Students Fall '85	Spring 86	Credit Hours (total year)
Undergraduates	116	129	4365
Graduate Architecture	101	100	1096
Graduate Planning	41	43	689

Number of Minorities

	Am. Indian	Black	Oriental	Hispanic	Women
Fall '85	6	2	3	45	101
Spring 86	8	4	5	48	98

The School graduated a total of 82 students in 85/86.

Bachelor of Arts in Architecture

Linda Aki
Mario Atencio
Luis Campos
Kathyrn Foglia-Canham
Chew Chang
Stuart Cohen
Eldred Folse
Eleanor Forte
Glenn Frey
Thomas Gentry
Michael Hamberg
Peter Holloway
Theodore Kostranchuk
Jeanine Lagana
Sarah Langwell
Billy Lorance
Bradley McDonald
Robert Mariani
Catherine Marshall
David Meiboom
Jean Miller
Jay Mills
Vivian Reynolds
Morgan Rieder
Diego Ruiz
Neil Robinson
Marie Shaver
Catherine Silva
Martin Tarafder
Keith Waite
Thomas Wilber
Wayne Wilburn
Dianne Villanueva

Bachelor of Arts in Environmental Design

Vincent Banagas
Neil Burt
Colleen Franz
Maryellen Hennessy
Barbara Krazanich
Neal Weinberg

Master of Architecture

Ahmed Alrowaished
Christopher Carian
Catherine Closet
Paula Dal Santo
Jim Davies (Energy Emphasis)
Mark Eshelman
D. Scott Kilgus
Alvaro Neuenschwander (with distinction)
Lu-Chung (John) Ma (Energy Emphasis)
Ricardo Ferreyos (Energy Emphasis)
Susan Freed
Craig Gosling
James Green
Audrey Harrison-Ross
Michael Hill (Energy Emphasis)
John Hooker (with distinction)
Steven Kahn (Energy Emphasis)
Terry Leach
Phillip Lust (Energy Emphasis)
Cara McCulloch-Lieuwen
Anne McLaughlin
Nelly Marion
Kim Miller
Corrine Moyal
James Noble
Marvin Sachs
Ross Small
Cheryl Troxel
Sandra Ulibarri
Will Williams
Peter Wolfe (with distinction)
Chyi Wu

Master of Community and Regional Planning

James Brantly
John Cabral
Janet Cunningham-Stephens
T. J. Ferguson (with distinction)
Mary Follingstad
Drew Parkin
Daniel Pava
Darrel Roberts
Christine Small
Jonathon Teague (with distinction)
Anne Whitcome

The School is pleased to announce a total of 21 awards that have been given to students of the School. Support by the Friends of the School of Architecture and Planning made nine awards totalling $3,250 possible.

NATIONAL AIA AWARDS

Henry Adams Medal to the first ranked graduating Architecture graduate student: Catherine Closet

Certificate of Merit to the second ranked graduating Architecture graduate student: James Williams

Alpha Rho Chi Medal to the graduating Architecture student who has shown leadership, service and merit: John Hooker

FRIENDS, SCHOOL OF ARCHITECTURE AND PLANNING MERIT AWARDS

To first-year undergraduates in Architecture (Book): David Kress, Pat Mahan-Larson

To a second-year undergraduate in Architecture ($400): Scott Redabaugh, Pat Mahan-Larson

To a third-year undergraduate in Architecture ($400): David Day

To a fourth-year undergraduate entering the architecture graduate program from UNM ($400): Wayne Wilburn

To a first-year graduate N.A.G. student ($400): Susan Lechner

To a fifth-year graduate in Architecture ($400): Marc Bruzan

To a sixth-year graduate in Architecture ($400): James Noble

To a first-year graduate in Planning ($400): Ruth Lambert

To a second-year graduate in Planning ($400): Carlos Romero

La Cienega Prize ($250) to an outstanding student in design: Cindy Terry

Albuquerque AIA Chapter John Heimrich Scholarship ($350) to a fifth-year Architecture student: Thomas Barr

Albuquerque AIA Chapter Scholarship ($100) to a third-year Architecture student: Michael Howell

Santa Fe AIA Chapter John Gaw Meem Scholarship ($400) for Outstanding work in Design: Peter Marquez

Women in Construction to third-year women Architecture students with outstanding scholastic achievement ($750 ea.): Elizabeth Calhoon, Jessica Dixon, Jennifer Jones

Lath and Plaster Industry Scholarship ($600) to an undergraduate or graduate student with financial need and academic ability: Elsa Taylor (graduate student)

New Mexico Masonry Association Scholarship ($100) to an undergraduate or graduate student with financial need and academic ability: Luella Noles (third-year undergraduate student)

NATIONAL AIA/AIA FOUNDATION SCHOLARSHIPS

Two students from our school were selected as 1986 AIA/AIA Foundation Scholarship winners. They are David Reddy ($500) and Thomas Barr ($500). A total of 250 was selected nationally out of 350 applicants. The decisions were based on academic record, financial need, student statement of purpose, and three recommendations.

Lawrence Thal, graduate architecture student, won first prize ($1000) in a competition for the remodelling of the first floor of Scholes Hall, the University's main Administration Building.

Albert Benevidez and Scott Taylor were runner-ups in the Scholes Hall competition and were awarded tuition scholarships.

Annual luncheon

The annual "Friends" luncheon was held at the School on November 13, 1985. About 60 Friends participated. Dean Anselevicius gave a short speech thanking one and all for their support and discussing the School's progress and future plans. The Friends luncheon is now almost a tradition.

217 members

The Friends of the School of Architecture and Planning is now supported by 217 members.

There are four categories of members:

165 regular members (support $25.00 and above).
24 sustaining members (support $100 and above).
14 patrons (support $250 and above).
14 corporate members: firms, organizations (support varies).

We hope that all our Friends can also become recruiters as we would like to increase the number of Friends. This year we again have sent a letter to all alumni(ae) who are not yet members asking for support and deeply thanking those who have responded.

THE REPORT OF THE COLLEGE OF ARTS AND SCIENCES

July 1, 1985 - June 30, 1986

F. Chris Garcia, Dean

COLLEGE OF ARTS AND SCIENCES

Annual Report, July 1, 1985 - June 30, 1986

TABLE OF CONTENTS

I. Administration..... 1

II. Academic Standards and Programs..... 3

III. Research and Scholarly Activity..... 4

IV. Highlights from Statistical Tables..... 6

V. Advisement Center..... 7

VI. Graduate Committee..... 9

VII. Summer Session..... 10

VIII. Special Projects..... 11

IX. Travel..... 15

X. Continuing Problems and Prospects..... 16

XI. Departmental Reports..... 22

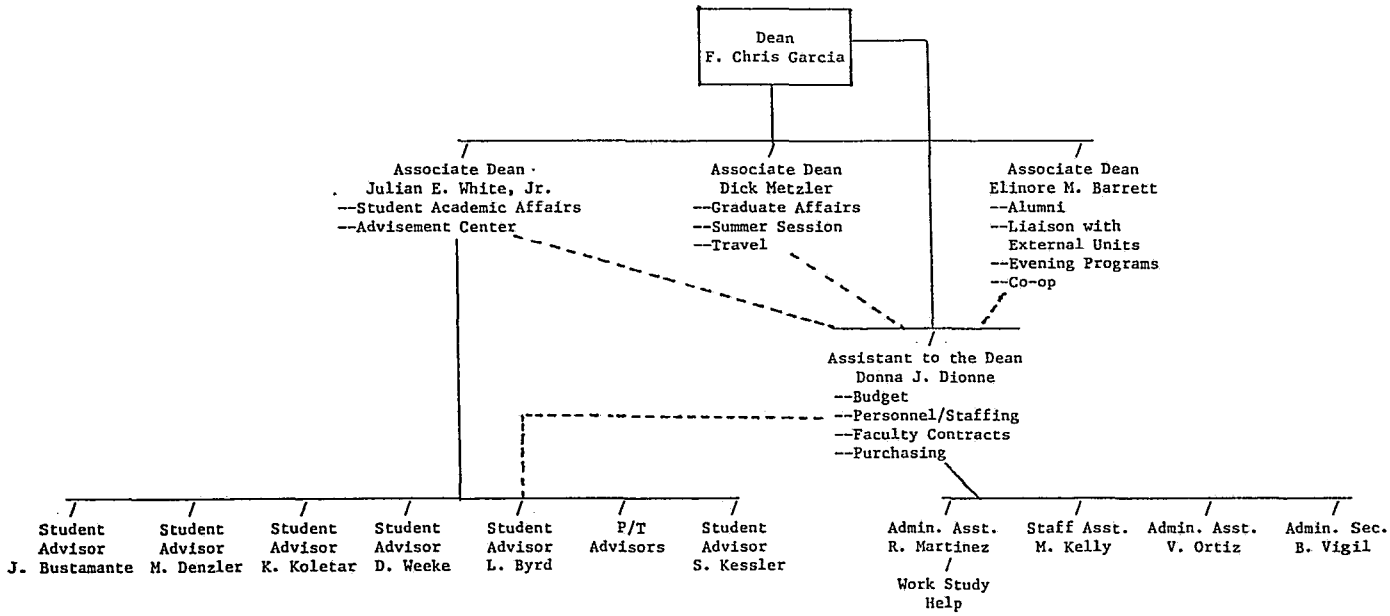
Statistical Tables..... 23

F. Chris Garcia completed his sixth year as Dean of the College. The three half-time associate deans continued in their positions. The associate deans are Elinore Barrett (Department of Geography), Richard Metzler (Department of Mathematics and Statistics), and Julian "Bob" White (Department of Modern and Classical Languages). Donna Dionne continued as Assistant to the Dean II. Raquel Martinez and Virginia Ortiz continued in their positions as Administrative Assistants. (See college organizational chart, page 2.)

In our Department of Anthropology, chairperson Linda Cordell became interim vice president for research during the second semester. Hamlin Hill, chairman of the Department of English, left the university at the end of the year, and David McPherson was selected to be chairperson. In Geology, Barry Kues replaced Cornelis "Kase" Klein on an interim basis; Klaus Keil would become chairperson beginning in July. After six years as chairperson, Janet Roebuck left the chairmanship of the Department of History, and Jonathan Porter was selected to be the next chair. David Sanchez, chairman of the Department of Mathematics and Statistics, left the university and will be succeeded by Richard Griego. James D. Finley was given a regular term as chairperson of the Department of Physics and Astronomy after having served one year in an interim capacity. In Sociology, Richard Coughlin's term as chairperson was extended for another two years.

The Arts and Sciences Graduate Committee continued to develop and guide the procedures and responsibilities of the graduate program of the college. The committee was chaired by Associate Dean Richard

A&S DEAN'S OFFICE
ORGANIZATION CHART



Metzler. The annual report of the A&S Graduate Committee is appended below. The following A&S committees also functioned during the academic year (Table 2):

Curriculum and Academic Programs Committee
Graduate Committee
Human Subjects Committee
Presidential Lectureship Selection Committee
Presidential Professorship Selection Committee
Promotion Committees (3) for the Humanities, Social Sciences, and Natural Sciences and Mathematics
Southwest Studies Committee
Tenure Committee
Teaching Resources Committee
A&S Interdisciplinary Committee on Latin American Studies

II. ACADEMIC STANDARDS AND PROGRAMS

A&S Faculty Action During the Year 1985-86

The Arts and Sciences faculty took the following actions:

(1) Approved the establishment of an Institute for Astrophysics. The institute will be housed within the Department of Physics and Astronomy in the College of Arts and Sciences. Its purposes are to become the focal point of UNM astrophysics research for the laboratories at Sandia, Kirtland, and Los Alamos, and to provide a management structure for the observatories at Capilla Peak in the Manzano Mountains.

(2) Approved a dual major in Communicative Disorders and Linguistics.

(3) Accepted American Sign Language as an option for fulfillment of the college's foreign language requirement.

The proposal for general education curriculum reform in the college continued to be debated. After examination by the general

faculty and its Council of Chairpersons, the proposal was sent back once again to the A&S Committee on Curriculum and Academic Programs.

Representatives of all departments in Arts and Sciences were interviewed by the Subcommittee on Arts and Sciences of the Strategic Planning Committee. The subcommittee was chaired by Robert Kelley of the medical school.

III. RESEARCH AND SCHOLARLY ACTIVITY

The faculty of the College of Arts and Sciences has continued its high levels of research and scholarly investigations. The research and publication record of the faculty for 1985-86 is provided in detail in the appended departmental reports. New research and training grants for 1985-86 plus funded renewals number a total of 161 grants. (Please see Table 14.) Faculty members involved as principal investigators of these grants numbered 76. These grants totaled $4,920,291 and brought in to the university approximately $998,446 and to Arts and Sciences approximately $599,067 in overhead. The college's leading units, in descending order of new research monies, were:

Departments/Units	X $1,000
Biology	$805
Geology	801
Physics & Astronomy	786
Chemistry	697
Institute of Meteoritics	490
Center for Advanced Studies	386
Psychology	221

Thirteen of our 20 academic departments plus most of our other operating institutes, centers, museums, and offices secured outside research monies.

One of the most important benefits of outside funding is the support given to graduate students. Table 15 shows the distributions of GAs and TAs among departments as well as graduate trainees, research assistants, and project assistants supported by outside funds.

The list of continuing or new A&S-related scholarly periodicals includes American Poetry, Peter White and Lee Bartlett, editors; American Literary Realism, James Barbour and Robert Fleming, editors; Blake/An Illustrated Quarterly, Morris Eaves, editor; Comparative Social Research, Dick Tomasson, editor; The Journal of Anthropological Research, Philip Bock, editor; Journal of Chinese Studies, Fred G. Sturm, editor; Latin American Research Review, Gilbert Merkx, editor; New America: A Journal of American and Southwestern Cultures, Mary Dougherty-Bartlett, editor; The New Mexico Historical Review, Richard Etulain and Paul Hutton, editors; News Computing, Clark Edwards, editor; Shakespeare Studies, Barry Gaines, co-editor; The Southwestern Review of Management and Economics, Roger Norton and William Peters, editors.

One new research organization, the Institute of Astrophysics, was created in the Department of Physics and Astronomy, and another, the Center for Advanced Studies was initiated by Physics professor Marlan Scully. Other research organizations in the college included the Institute of Meteoritics, the Institute of Modern Optics, the Institute of Public Policy, and the Office of Contract Archeology. In addition, A&S college faculty were closely involved with the operation of two research institutes under the direction of the Office of the Academic Vice President. The Latin American Institute (LAI) involved a great many Arts and Sciences faculty. The Executive Director of LAI is

Professor Gilbert Merkx of the Department of Sociology. The associate director and academic coordinator was Jon Tolman of the Department of Modern and Classical Languages; he was assisted by Susan Tiano of the Sociology Department. The academic coordinator also serves as chairperson of the combined A&S Dean's Advisory Committee on Latin American Studies and the Interdisciplinary Committee on Latin American Studies. Arts and Sciences' faculty, staff, and students were also closely involved in the activities of the Southwest Hispanic Research Institute (SHRI).

IV. HIGHLIGHTS FROM STATISTICAL TABLES

Table 5 reveals that, contrary to popular impression and the experience of many other colleges of arts and sciences, the number of students enrolling as liberal arts majors continues to increase in our college. The number of A&S majors increased by 12.1% in Semester I and by 2.9% in Semester II.

Total student credit hours (Table 6) generated by the College of Arts and Sciences faculty increased by 4.48% this past year. The college continues to generate well over half (53.3%) of the total student credit hours produced by all academic units of the University of New Mexico.

There is also some indication that the pattern of student preferences for various disciplines was changing, as the humanities and social sciences, e.g., English, History, Modern and Classical Languages, Political Science, Sociology, gained enrollment over the

previous year following a period of stability or decline for several years (Table 7).

The large number of students on probation in 1983-84 (Table 11) led to a revision in 1985 of the admission and probation policies of the College of Arts and Sciences. This resulted in a 50% decrease in the number of students on probation the first semester of the 1984-85 academic year and another halving of this number in 1985-86.

V. ADVISEMENT CENTER

Under the supervision of the associate dean for student academic affairs, this section of the A&S administration is responsible for student advisement, admission, graduation, probation, suspension, and all aspects of student record keeping on the college level. Annually, about 15,000 students receive personal advisement, with an additional 20,000 advised by telephone. During peak periods of registration, especially in November, we see as many as 1,200 students a week. Advisors are available daily throughout the year, between 8:00 a.m. and 5:00 p.m., including the noon hour, and from 5:00 p.m. until 6:00 p.m. on Wednesdays. In addition to the items mentioned above, the office also handles all student petitions and is often the initial step in student grievance procedures. Advisors are also responsible for all pre-professional advisement, primarily for admission into such professional schools as law, medicine, dentistry, veterinary medicine, etc. Addition of computer terminals, connected with the central university records, has facilitated record accessing responsibility so

that we have managed to do the same tasks with one less advisor this year.

One or more advisors, as usual, participated in such extramural activities as the Career Fair, Advisement Centers Update Conferences, Pre-Med Day, advisement sessions at the Gallup, Valencia, and Los Alamos branch campuses, Adult Re-Entry Committee, monthly meeting of advisement centers, College Enrichment Program Orientation, ACT Conference, etc.

One of our most important responsibilities is service on the Health Sciences Advisory Committee which studies the dossiers and applications for admission to medical and dental schools, interviews applicants, and writes evaluations for medical and dental schools throughout the country. This committee is chaired by the associate dean and consists of two professional advisors for each applicant, serving on a rotational basis, and a member each from the faculty of the departments of biology and chemistry.

The associate dean and one advisor, Don Weeke, served throughout the year on the Computer Assisted Advisement Steering Committee. This committee was constituted in order to determine the direction of computer assisted advisement at UNM, to set forth the basic concepts and general requirements of a computer assisted advisement system, to determine the definition and scope of the computer assisted advisement project, and to represent the needs and requirements of the academic units during the analysis of this system. The committee met frequently during the year and was able to produce a "Preliminary Requirements Document for Computer Assisted Advisement" in May 1986.

The associate dean was assigned the responsibility, by the UNM Council of Deans and the vice president for academic affairs, to produce an advisement/informational manual for the university. Work is proceeding apace on this project and a grant was awarded by the University of New Mexico Foundation, Inc., for the printing of the manual.

The A&S Undergraduate Academic Affairs Office is composed of the following personnel: Julie Bustamante, Linda Byrd, P. Monique Denzler, Shari Kessler, Karen Koletar, Don Weeke, and Associate Dean J.E. White, Jr.

VI. GRADUATE COMMITTEE

The A&SGC met three times during the fall semester. At the request of the Senate Graduate Committee, the A&SGC did not meet during the spring semester while the SGC debated the amount of authority which would be delegated to the college graduate committees. The representatives from the A&SGC to the SGC were Professor David Ligon from Biology, Professor Helen Damico of English (first semester only) and Professor Dick Metzler of Mathematics and Statistics (second semester only).

Following are summarized minutes of the A&SGC meetings for 1985-86.

September 12, 1985

Dick Metzler was re-elected chair and David Ligon and Helen Damico were selected as A&S representatives to the Senate Graduate Committee.

Professor Marc Price, Acting Dean of the Graduate Office, reported on the progress towards decentralization.

October 9, 1985

The committee opposed a college-wide GRE requirement and voted that departments could impose the requirement for graduate applicants if they wish. The sentiment of the committee on the questions of decentralization was that the present oversight procedures of the Graduate Office should be continued, subject to review by the A&SGC if there was a conflict between the OGS and an A&S department.

October 30, 1985

By a vote of seven to four the committee supported the use of fractionated grading (without the D grades used only for undergraduates) for graduate students and sent the recommendation on to the Senate Graduate Committee.

SUBCOMMITTEE ACTIVITIES

The subcommittee on faculty served as the dean's advisory committee on sabbatical leave requests and met several times in September and January.

VII. SUMMER SESSION

In November 1985, the departments submitted their summer budget requests to the College of Arts and Sciences. After some reductions, the total came to $594,559. This amount, which was calculated in terms of 1985 salary levels for comparison purposes, represented an increase of one per cent over the amount allocated in 1985.

In March 1986, the long-standing problem of inadequate compensation for chair duties in the summer was almost completely solved; our summer session allocation went up to $645,746 which allowed for a substantial increase in compensation for chairs. In addition, we received $35,000 for the Southwest Institute and $2,254 for the Conexiones exchange program.

The A&S enrollment for 1986 was 6,327, a two per cent increase over the previous summer. This generated a student credit hour total of 18,958, up 2.7% over 1985.

The German Summer School in Taos enrolled 76 students in the regular summer session and 23 students attended a German Studies workshop which followed the regular session. In Montezuma, the French Summer School had a total of 37 attending. The International Programs in Mexico and Spain enrolled 22 and 25 students respectively.

Enrollment in the second year of the Southwest Institute increased dramatically; lecture registration went from 76 to 144 while the field courses handled 102 students as opposed to 44 in 1985.

In light of the fiscal problems of the state and of the University, it will be necessary to restrict the number of low-enrollment courses offered in future summers.

VIII. SPECIAL PROJECTS

APS-UNM Alliance for Academic Excellence

An agreement between the dean of the College of Arts and Sciences and superintendent of the Albuquerque Public Schools System brought about the establishment of the Alliance for Academic Excellence, a

program that brings together APS high school teachers and A&S professors to explore topics that will provide the basis for developing innovative curriculum materials for high school students. The program is modeled after the Yale-New Haven Teachers Institute, and as such stresses the role of teachers as collaborators rather than students in the summer institute format of the program. English has been the discipline involved in the two institutes held so far (one in the summer of 1985 and another in the summer of 1986). If the program can be expanded, other disciplines will be included.

Expansion of the program has been stymied by lack of funds in APS and A&S. To remedy this situation a proposal was submitted to the National Endowment for the Humanities. The NEH funding program required 40% matching funds, and when APS and A&S budgets had to be cut by two per cent, funds for the Alliance were eliminated and the proposal had to be withdrawn. Survival of this important program (winner of the 1985 Quality Education Award sponsored by the New Mexico Research Study Council) now depends on successful fund-raising in the local community to cover the cost of at least one summer institute for 1987.

Arts and Sciences Faculty Awards

For some time a program of dean's awards to A&S faculty members has been under consideration. The institution of presidential awards further served to point up the need for additional awards to the many deserving A&S faculty members. A proposal was made to the UNM Foundation to help fund a program of nine annual awards that would consist of a small stipend of $500 each. Three awards were earmarked for teaching, three for research, and three for service. Failure of

the UNM Foundation's Allocations Committee to approve our request for matching funds has forced postponement of this program until after the 1986-87 academic year.

London Semester

This study abroad program, offered through A&S each semester since Fall 1984, has during those two years benefited 36 students and four faculty members. Although not restricted to A&S students, the great majority have been in this college. Faculty members have been Mary Power, Joseph Zavadil, Mary Bess Whidden, and Hugh Witemeyer, all of the Department of English. Seventeen students will be studying in London this fall with Professor Fred Harris of the Department of Political Science. Professor Tamara Holzapfel, Department of Modern and Classical Languages, has been selected to teach in London during spring semester 1987.

The College of Arts and Sciences is able to offer this program through its agreement with the American Institute for Foreign Studies, an organization that arranges a wide variety of study-abroad programs. AIFS provides housing, classrooms, and access to library and student union facilities at the University of London, as well as an excellent program of extracurricular activities. AIFS also arranges the program's core course, British Life and Culture. It consists of lectures given by authorities on the various topics related to this theme. Discussion sections and field trips are coordinated with the lectures. UNM students also have available courses taught by professors from the American universities that are part of the consortium to which UNM belongs. These universities include New Mexico State University, Universities of Nevada at Reno and Las Vegas,

University of Wyoming, University of Nebraska-Omaha, Western Illinois University, University of Iowa, Iowa State University, and University of Wisconsin-Milwaukee. Courses offered are usually in the humanities and social sciences and are oriented to take advantage of being offered in London. AIFS usually offers one or two courses to round out the program.

Cooperative Education

Coop Education provides students an opportunity to experience work in entry-level professional positions in fields related to their major while they are still completing their degrees. Students, thus, are able to judge whether or not they are pursuing the right major and, also, obtain valuable work experience that will help them find suitable employment after graduation.

At UNM Coop Education is well established in the College of Engineering, but it could also be appropriate for Arts and Sciences students. The latter tend to be more interested in their education from a liberal arts point of view, but they must also deal with employment. Most work while attending the university, and participation in Coop Education provides a way to learn about the kinds of employment that are related to their academic fields. Such experience is particularly valuable to students in the humanities and social sciences where career opportunities related to academic preparation are not always clear.

It has been argued that participation in Coop Education makes students too preoccupied with employment to the detriment of the broader aspects of university education. Experience at universities that have a broadly based Coop Education program has shown that such is

not the case; rather, Coop students tend to be interested in a well-rounded education. The high degree of motivation that participation in Coop Education seems to engender is not confined to the narrow pursuit of career-related courses. Coop Education participants alternate semesters of study with semesters of work or pursue study and work concurrently, each on a part-time basis.

A non-engineering Coop Education program was initiated at UNM about four years ago, but the lack of personnel and financial resources has prevented substantial development of the program. The university appears to be taking steps to establish a campus-wide Coop Education office with well-defined leadership. If that is accomplished during 1986-87 and a Coop Education satellite branch within the A&S office is set up beginning Fall 1987, there will be great potential for a flourishing Coop Education program in the college.

With the cooperation of A&S departments interested in having their students participate in Coop Education, greater efforts will be made to inform both students and faculty members about the program. It is especially important to involve faculty members because learning is the basic objective of the Coop work experience, and faculty oversight is needed.

IX. TRAVEL

We started the year with a travel budget of $20,805, which represents less than $50 per faculty member. In October, we were able to transfer an additional $14,000 from the summer budget. The total was still under our 1984-85 budget of $36,750.

At the request of the regents, the college surveyed surrounding schools in order to determine the level of support which they maintained for faculty travel. We ranked next to the bottom of the nine schools responding. The regents are investigating the possibility of augmenting the travel money available to University faculty from regents' funds; we hope that this will allow more faculty to represent the University at professional gatherings.

The 1986-87 travel budget is again set at the grossly inadequate figure of $20,805. It is not clear at this time if there will be any opportunity to increase the budget from regents' funds or from a summer surplus.

X. CONTINUING PROBLEMS AND PROSPECTS

Virtually all of the problems reported in the past few annual reports continue to hinder the quality of our performance and productivity in teaching, research, and service.

(1) Salaries

The salaries of faculty and staff continue to sink relative to cohorts in comparable positions outside this university. Beginning faculty salaries remain roughly competitive, but the gap between salaries we can offer continuing faculty and those available from outside institutions, both in the private and academic sectors, is critically large. The past year the college lost several faculty, including a Presidential Professor and other outstanding senior faculty in several departments, because we were unable to meet the offers of competitive institutions. The salary problem is particularly acute

among senior professors, especially in such high demand areas as applied mathematics and statistics, chemistry, physics, and economics. The "market compression" of salaries is reaching a very critical point, as some senior faculty find their salaries close to those offered to new junior faculty members. Graduate assistant stipends also remain below those of comparable institutions, causing considerable difficulty in attracting the best graduate students to our college. The salaries of our non-faculty staff are also generally below levels for comparable work off this campus, resulting in low morale and a significant turnover rate due to loss to these other public and private organizations.

The lack of adequate pay for chairpersons who perform administrative duties during the summer continues to be a problem, although the severity of it was substantially reduced in 1986. Most other institutions, including our sister institutions in this state, pay administrative stipends of an additional 1/9 or 2/9 annual salary to chairpersons who administer their departments during the summer. A substantial amount of administrative work, especially in our large departments, necessarily must be carried out by chairpersons at the end of the academic year as well as prior to the new academic year. Prior to 1981 virtually no A&S chairs were paid at all for their administrative duties performed during the summer. In the 1980-81 year a start was made towards remedying this inequity. This practice continued into the past year with chairs being paid amounts, ranging from 10 per cent to 18 per cent of their base salary. As our enrollments continue to grow and our increased funded research requires

more management, we must make every effort to provide fair and just compensation to our chairpersons.

(2) Faculty and Staff Shortages

Based on data provided by our departments, our college continues to be extremely short of faculty and support staff. In 1983-84 we requested an additional 22.67 faculty FTEs, 24.25 graduate assistants, and 15.05 staff/clerical positions. Because the 1985-86 academic year brought only the addition of a couple of additional staff and faculty, the college still needs the requested number of additional positions. Several of our departments continue to be critically short of secretarial/clerical/technical assistants. This shortage imposes serious difficulties on the production and management of instructional and research materials. Even though we have secured some additional automated and computerized research and office equipment, such as microcomputers and word processors, this paradoxically has compounded the need for additional staff support.

Many more graduate and research teaching assistantships are needed in the college. Virtually no monies specifically designated for increasing the number of GAs/TAs have been allocated to the College of Arts and Sciences for well over a decade.

(3) Equipment Maintenance Funds

Equipment maintenance funds continue to be virtually nonexistent. Several expensive and necessary pieces of instructional and research equipment have been obtained over the past few years, largely through the efforts of our faculty researchers, the assistance and consideration of the vice president for research, and state funding agencies. Yet very little money has been available for the maintenance

and upkeep of this equipment. Because of the inevitable deterioration of mechanical and electronic equipment, some of it either has been rendered useless due to lack of maintenance, or wherever possible, faculty have been taken away from their instructional and research duties to function as maintenance service personnel. Funds are needed to hire technicians to maintain expensive equipment, to purchase replacement parts, and to secure service contracts and warranties. Very little of our equipment is covered by service contracts because of their expense, and yet not having these is a false economy since it results in lost time in instruction and research when equipment breaks down.

(4) Supplies and Equipment

The financial resources available for purchasing supplies and equipment are critically and increasingly inadequate. Our departments typically run out of money for long distance telephone usage, photocopying, office supplies, and materials before the academic year is over. This past year only four per cent of our state appropriated budget was available for operating expenses. This situation has continued to grow progressively worse every year. At least a 50 per cent increase in these operating expenses is needed to support our operations.

(5) Computer Usage

Both the faculty and staff of the college increasingly are employing computers as aids in instruction, research, office management, and word processing. Although several units have purchased "stand alone" microcomputers as funds have become available, there is still a great need for more of these. Funds for the maintenance of

these PCs, plus the acquisition of related software, are virtually nonexistent.

The allocation of microcomputers to faculty through the office of the Academic Vice President was greatly appreciated, and we urge the continuation and expansion of this policy.

There remains a great deal of dependence upon university mainframe computing facilities. Although in the 1985-86 year $556,700 worth of computer usage was allocated to the college, this amount will have to be increased substantially due to increased computer use. The situation will continue to become more critical as additional faculty and staff use computers in their work.

(6) Travel Monies

Money for travel to professional conferences and seminars continues to be embarrassingly inadequate. Our faculty members are expected to be aware of the latest developments in their profession and to present their own latest research findings to their colleagues. This is particularly important at an emerging but somewhat geographically isolated university such as UNM. Yet travel support for professional conferences is minimal. During the 1985-86 academic year money available for professional travel was less than $85 per full-time faculty equivalent.

(7) Affirmative Action

The college continues to be committed to the principles of affirmative action. Although in general we remain substantially below our goals in hiring women and ethnic minority faculty, some progress is being made. We were very pleased that of our 24 full-time, tenure-track faculty hired during the 1985-86 academic year, ten were

females and four (three females and one male) were ethnic minorities (Hispanic and Black). Continued efforts in this direction will be made.

(8) Physical Plant Space

We continue to be short of building space. Additional office spaces for instructional staff as well as for our teaching and research laboratories are badly needed. Our science departments, especially Biology, Chemistry, Physics/Astronomy, and Psychology, must be provided with additional laboratory and office space to meet the increased demands upon them and to accommodate the increased research activity by faculty in those areas. Some of our social science facilities, such as those in Anthropology, Communicative Disorders, Economics, Political Science, and Speech Communication, are also inadequate. Lack of space for the Department of Mathematics and Statistics also continues to be critical.

(9) Centers of Technical Excellence

Several departments in our college have been significantly affected by the supplemental appropriations being made available for the development of centers of technical excellence. Most involved in the activities of the Center for High Tech Materials have been our departments of Geology, Physics, Chemistry, and Mathematics and Statistics. Dean Garcia serves as a member of the Center's steering committee, which has the prime responsibility for supervising our centers of technical excellence at this university. This year the Institute of Modern Optics moved from Physics and Astronomy to the CHTM. A Center for Advanced Studies was organized by Physics professor Marlan Scully reporting directly to the college dean.

(10) Cooperation with National Laboratories.

During the year, several meetings and conferences were held with representatives from Sandia National Laboratories and, to a lesser extent, Los Alamos National Laboratories. Dean Garcia serves as a member of a joint working group which is exploring, among other things, joint research projects, the appointment of jointly funded research professors, provision of televised courses to the laboratories, initiation of a distinguished professorship program, shared research equipment and other related activities.

XI. DEPARTMENTAL REPORTS

The appended reports of our 20 departments, plus the several divisions, institutes, and offices of our college, are an integral part of this report. They deal with matters of faculty and staff morale, curriculum review and change, space problems, the scholarly activities of members of their faculty, service in professional societies, scholarly meetings held or to be held at UNM, special instructional programs, special research activities, visiting scholars and lecturers, activities designed for the general public, and the successes and frustrations uppermost in departmental consciousness. Although these reports are an integral part of the A&S annual report, they are not reproduced in every copy of this report because of their bulk. Readers who want a complete view of this decentralized college are invited to request copies of any or all departmental reports from the Arts and Sciences college office, the secretary of the university, or the departments themselves.

TABLE 1

CHAIRPERSONS AND PROGRAM DIRECTORS, 1985-86

Departments

AMERICAN STUDIES
Marta Weigle

ANTHROPOLOGY
Linda Cordell
Jeremy Sabloff (Acting)

BIOLOGY
Donald W. Duszynski

CHEMISTRY
Riley O. Schaeffer

COMMUNICATIVE DISORDERS
Richard Hood

ECONOMICS
Alfred L. Parker

ENGLISH
Hamlin Hill

GEOGRAPHY
Stanley Morain

GEOLOGY
Cornelis Klein
Barry Kues (Acting)

HISTORY
Janet Roebuck

JOURNALISM
Robert H. Lawrence

LINGUISTICS
Alan J. Hudson-Edwards

MATHEMATICS AND STATISTICS
David Sanchez

MODERN AND CLASSICAL LANGUAGES
Tamara Holzapfel

PHILOSOPHY
Fred G. Sturm

PHYSICS AND ASTRONOMY
Daniel Finley

POLITICAL SCIENCE
Paul L. Hain

PSYCHOLOGY
Douglas P. Ferraro

SOCIOLOGY
Richard Coughlin

SPEECH COMMUNICATION
Kenneth D. Frandsen

Programs

ASIAN STUDIES
Jonathan Porter

CENTER FOR ADVANCED STUDIES
Marian O. Scully

COMPARATIVE LITERATURE
Joseph Zavadil

CRIMINAL JUSTICE PROGRAM
Paul Steele

EUROPEAN STUDIES
Claude Senninger

FRESHMAN ENGLISH
Michael Hogan

GERMAN STUDIES
George Peters

IBERO-AMERICAN STUDIES
Michael Conniff

INSTITUTE OF ASTROPHYSICS
Jack Burns

INSTITUTE OF METEORITICS
Klaus Keil

INSTITUTE OF PUBLIC POLICY
Paul Hain

LATIN AMERICAN STUDIES
Jon M. Tolman

MAXWELL MUSEUM
Garth Bawden

MEDIEVAL STUDIES
Helen Damico

OFFICE OF CONTRACT ARCHEOLOGY
Joseph C. Winter

PALEOECOLOGY
Roger Y. Anderson

RELIGIOUS STUDIES
Andrew Burgess

RUSSIAN STUDIES
Natasha Kolchevska

TABLE 2

F 287

STANDING AND SPECIAL COMMITTEES,
COLLEGE OF ARTS AND SCIENCES, 1985-86

A&S Committee on Curriculum and Academic Programs

Phil Bock, Anthropology, Chairman
Roy Caton, Chemistry
Michael Fischer, English
Stephen Kramer, History
Vera Norwood, American Studies
Clifford Qualls, Mathematics and Statistics
Randy Thornhill, Biology

A&S Graduate Committee

Richard C. Metzler, Arts and Sciences, Chairman
Marta Weigle, American Studies
James Chisholm, Anthropology
David Ligon, Biology
Cary Morrow, Chemistry
Linda Riensche, Communicative Disorders
Shaul Ben-David, Economics
Helen Damico, English
Bradley Cullen, Geography
Steve Huestis, Geology
Jane Slaughter, History
Garland Bills, Linguistics
Kees Onneweer, Mathematics and Statistics
Dick Gerdes, Modern and Classical Languages
Fred Schueler, Philosophy
David King, Physics and Astronomy
Hank Jenkins-Smith, Political Science
William Gordon, Psychology
Richard Coughlin, Sociology
John C. Condon, Speech Communication
Ruth Luckasson, Special Education, College of Education
D. Archibald McCallum, Graduate Student Association

A&S Human Subjects Committee

Samuel Roll, Psychology, Chairman
Oswald Baca, Biology
Dodd Bogart, Sociology
Jay Sorenson, Political Science

A&S Interdisciplinary Committee on Latin American Studies

Jon Tolman, Modern and Classical Languages, Chairman
Erlinda Gonzales-Berry, Modern and Classical Languages
Peter Gregory, Economics
Tey Diana Rebolledo, Modern and Classical Languages

Karen Remmer, Political Science
Jeremy Sabloff, Anthropology
Susan Tiano, Sociology

A&S Presidential Lectureship Selection Committee

Elinore M. Barrett, Arts and Sciences, Chairperson
Lee Bartlett, English
Rafael Diaz, Psychology
Richard C. Metzler, Arts and Sciences
Thomas M. Niemczyk, Chemistry
Susan Tiano, Sociology
Julian E. White, Jr., Arts and Sciences

A&S Presidential Professorship Selection Committee

Clinton Adams, Art
Ferrel Heady, Public Administration
Gerald May, College of Engineering
John Perovich, President Emeritus
Morgan Sparks, Former dean of Anderson Schools of Management
Chester C. Travelstead, Provost Emeritus
Dudley Wynn, Dean Emeritus

A&S Promotion Committee for the Humanities

George Peters, Modern and Classical Languages, Chairman
Richard Ellis, History
Robert Fleming, English
David Remley, American Studies
Howard Tuttle, Philosophy

A&S Promotion Committee for the Natural Sciences and Mathematics

Robert Paine, Chemistry, Chairman
Richard Allen, Mathematics
Douglas Brookins, Geology
Howard Bryant, Physics and Astronomy
Peder Johnson, Psychology
Lloyd Lamb, Communicative Disorders
David Ligon, Biology

A&S Promotion Committee for the Social Sciences

Jeremy Sabloff, Anthropology, Chairperson
Iven Bennett, Geography
Albert M. Church, Economics
John C. Condon, Speech Communication
George Huaco, Sociology
Peter Lupsha, Political Science
John Oller, Linguistics

A&S Southwest Studies Committee

Tey Diana Rebolledo, Modern & Classical Languages, Co-Chairperson
Jerry Williams, Geography, Co-Chairperson
Charles Biebel, American Studies
Richard Ellis, History
Douglas George, Art
Erlinda Gonzales-Berry, Modern and Classical Languages
Ted Jojola, Native American Studies
Marta Weigle, American Studies
Jim Wright, Fine Arts Library

A&S Tenure Committee

Richard Harris, Psychology, Chairman
Stuart Burness, Economics
Dolores Butt, Communicative Disorders
Morris Eaves, English
Richard Holder, Chemistry
Robert Paine, Chemistry
George Peters, Modern and Classical Languages
Karen Remmer, Political Science
Jeremy Sabloff, Anthropology
Claude-Marie Senninger, Modern and Classical Languages

A&S Teaching Resources Committee

Patrick McNamara, Sociology, Chairperson
Scott Altenbach, Biology
Jean M. Civikly, Speech Communication
Jeffrey Davis, Mathematics and Statistics
Fred Schueler, Philosophy
Frank Logan, Psychology

TABLE 3

FACULTY PROMOTIONS, TENURE, THIRD-YEAR TERM DECISIONS, RETIREMENTS, SEPARATIONS AND APPOINTMENTS, 1985-86

Promotions

To Full Professor:

Jane Lancaster	Anthropology
Oswald G. Baca	Biology
Tokio Kogoma	Biology
A. Randolph Thornhill	Biology
Michael L. Conniff	History
John P. Gluck	Psychology

To Associate Professor:

James S. Chisholm	Anthropology
Carlos Bustamante	Chemistry
Lee A. Bartlett	English
Helen Damico	English
Bradley T. Cullen	Geography
Richard M. Berthold	History
Paul Hutton	History
Melvin M. Yazawa	History
Frederick V. Bales	Journalism
Michael A. Buchner	Mathematics and Statistics
Edward Benson	Modern and Classical Languages
Natasha Kolchevska	Modern and Classical Languages
Donald Clark Lee	Philosophy
Philip C. Roeder	Political Science
Michael J. Dougher	Psychology

Tenure

James S. Chisholm	Anthropology
Jane Lancaster	Anthropology
Carlos Bustamante	Chemistry
Lee A. Bartlett	English
Helen Damico	English
Bradley T. Cullen	Geography
Crayton J. Yapp	Geology
John L. Kessell	History
Michael A. Buchner	Mathematics and Statistics
Edward Benson	Modern and Classical Languages
Natasha Kolchevska	Modern and Classical Languages
Lawrence Lynch	Modern and Classical Languages
Jack A. Burns	Physics and Astronomy
V.M. Kenkre	Physics and Astronomy
Michael J. Dougher	Psychology
Paul D. Steele	Sociology

Third-Year Decisions

Robert Chiovetti, Jr.	Biology
Donald Natvig	Biology
Peter R. Ogilby	Chemistry
Joseph Vincent Ortiz	Chemistry
Edward A. Shirkey	Communicative Disorders
Susan E. Place	Geography
Shaw Gynan	Modern and Classical Languages
Timothy Goldsmith	Psychology

Retirements

William Degenhardt	Biology
Frank Ikle	History
Donald Dubois	Mathematics and Statistics
Abraham Hillman	Mathematics and Statistics

Separations

Jeremy Sabloff	Anthropology
John Wiens	Biology
Jon Maple	Chemistry
Thomas Goodwin	Economics
William Dowling	English
Morris Eaves	English
Hamlin Hill	English
Burton Wittrup	Journalism
Steven Pruess	Mathematics and Statistics
David Sanchez	Mathematics and Statistics
Edward Benson	Modern and Classical Languages
Truett Book	Modern and Classical Languages
Shaw Gynan	Modern and Classical Languages
Charlene McDermott	Philosophy
Brian O'Neil	Philosophy
Weng Chow	Physics and Astronomy
Ellen Murray	Speech Communication

New Appointments

Anthropology:

Hillard Kaplan	Assistant Professor
Louise Lamphere	Professor
Wirt Wills	Assistant Professor

Biology:

Bruce Milne	Assistant Professor
Howard Snell	Assistant Professor
Charles Wisdom	Assistant Professor

Chemistry:

Thomas Bein	Assistant Professor

English:

Hector Torres	Assistant Professor

Geology:

Laura Crossey	Assistant Professor

History:

Daniel Feller	Assistant Professor
Linda Hall	Associate Professor
Patricia Risso	Assistant Professor

Journalism:

Ruth Ragland	Assistant Professor

Mathematics and Statistics:

Lane Clark	Assistant Professor
Nancy Gonzales	Assistant Professor

Modern and Classical Languages:

Walter Putnam	Assistant Professor

Philosophy:

John Bressanich	Assistant Professor

Physics and Astronomy:

Belva Campbell	Assistant Professor
Jean-Claude Diels	Professor
Nebojsa Duric	Assistant Professor

Political Science:

Neil Mitchell	Assistant Professor
Christine Sierra	Assistant Professor

Psychology:

Karen N. Hayes	Assistant Professor

Sociology:

Beverly Burris	Assistant Professor

TABLE 4

FTE BUDGETED FACULTY, 1985-86

Department	Returning Faculty	New Faculty	Part-Time Instruction	GAs/TAs
American Studies	5.39	—	0.50	0.50
Anthropology	20.90	1.00	0.75	3.00
Biology	28.67	2.00	—	19.50
Chemistry	19.91	—	2.83	15.00
Communicative Disorders	8.37	—	0.25	1.00
Economics	15.97	3.00	0.72	4.00
English	35.52	1.00	16.00	22.00
Geography	7.25	1.00	—	1.50
Geology	15.50	1.00	0.95	6.50
History	25.25	—	1.00	7.00
Journalism	7.00	—	0.75	—
Linguistics	2.50	1.00	—	0.50
Mathematics & Statistics	37.85	3.00	10.00	12.50
Modern & Classical Languages	28.94	2.00	2.10	16.50
Philosophy	8.56	1.00	1.00	2.25
Physics & Astronomy	20.17	2.00	1.08	10.00
Political Science	13.25	2.00	1.52	2.00
Psychology	21.77	2.00	—	7.00
Sociology	12.78	2.00	—	2.50
Speech Communication	10.00	1.00	0.13	2.50
A&S Contingency	—	—	1.00	—
TOTAL	345.55	25.00	40.58	135.75

TABLE 5

NUMBER OF STUDENTS ENROLLED
COLLEGE OF ARTS AND SCIENCES

Year	Sem. I	% Inc. Over Prev. Year	Sem. II	% Inc. Over Prev. Year
1975-76	2,684	- 1.5	2,756	0.4
1976-77	2,663	- 0.8	2,737	- 0.7
1977-78	2,582	- 3.0	2,602	- 4.9
1978-79	2,397	- 7.2	2,322	-10.8
1979-80	2,267	- 5.4	2,205	- 5.0
1980-81	2,099	- 7.4	2,350	6.6
1981-82	2,492	18.7	2,580	9.8
1982-83	2,725	9.3	2,896	12.2
1983-84	3,044	11.7	3,192	10.2
1984-85	3,139	3.1	3,238	1.4
1985-86	3,520	12.1	3,333	2.9

TABLE 6

STUDENT CREDIT HOURS TAUGHT, UNM AND A&S

Year	Student Credit Hours UNM	Student Credit Hours A&S	A&S Percent of Total
1975-76	461,641	285,551	61.9
1976-77	487,208	279,810	57.4
1977-78	476,229	267,786	56.2
1978-79	473,266	272,829	57.6
1979-80	495,039	279,666	56.5
1980-81	508,267	282,239	55.5
1981-82	516,956	280,455	54.3
1982-83	532,196	288,710	54.2
1983-84	520,439	272,416	52.3
1984-85	521,803	271,883	52.1
1985-86	533,136	284,072	53.3
Change 1985-86 Over 1984-85	+11,333	+12,189	
	+ 2.17%	+ 4.48%	
Increase 1985-86 Over 1975-76	+71,495	- 1,479	
	+ 15.49%	- 0.52%	

TABLE 7

TOTAL ANNUAL STUDENT CREDIT HOURS BY DEPARTMENT

Department	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	% Diff. 1984-85 to 1985-86
American Studies	2,077	1,923	2,063	2,196	1,875	1,685	1,990	1,759	-11.61
Anthropology	9,758	9,611	8,674	8,304	8,129	7,685	7,203	6,886	-4.40
Biology	20,458	20,690	20,783	19,841	19,355	20,326	16,542	16,000	-3.28
Chemistry	18,203	18,414	17,988	17,781	18,311	18,509	15,102	15,144	0.28
Comm. Disorders	3,096	2,949	2,876	3,009	2,649	2,759	2,445	2,142	-12.39
Economics	15,369	17,346	18,136	16,784	15,744	16,220	14,245	15,013	5.39
English	30,109	32,813	33,117	34,175	33,980	30,918	28,808	31,209	8.33
Geography	6,001	6,296	5,664	5,390	4,972	5,627	5,079	4,713	-7.21
Geology	9,023	10,211	10,212	9,555	8,637	8,838	6,037	6,612	9.52
History	21,192	19,598	17,924	17,344	15,674	15,795	15,340	16,490	7.50
Journalism	3,045	2,846	2,840	3,108	3,123	2,897	2,885	2,742	-4.96
Linguistics	1,319	1,042	3,176*	1,269	1,235	1,653	1,560	1,465	-6.09
Math & Statistics	38,414	43,405	46,252	50,344	50,789	53,140	43,876	43,028	-1.93
Mod. & Class. Lang.	19,178	18,901	19,063	17,593	15,583	16,568	16,003	18,065	12.89
Philosophy	4,825	5,933	5,648	5,685	5,498	5,623	5,702	5,795	1.63
Physics & Astronomy	12,278	12,998	14,009	14,812	14,742	14,676	13,345	14,105	5.70
Political Science	9,675	9,606	9,450	9,582	9,451	9,748	9,796	11,074	13.05
Psychology	25,358	22,080	20,607	22,447	21,601	22,564	21,431	25,864	20.68
Sociology	14,327	14,483	15,052	14,112	12,995	13,928	13,981	15,051	7.65
Speech Comm.	9,124	8,521	8,705	8,222	8,215	7,840	7,471	8,186	9.57
TOTAL	272,829	279,666	282,239	281,553	272,558	276,999	248,841	261,343	5.03

*Unusual figure due to Linguistics Institute

TABLE 8

DEGREES AWARDED
COLLEGE OF ARTS AND SCIENCES

Year	Bachelor's Degrees No. of Degrees	% Inc. Over Previous Yr.	Advanced Degrees Master's (a) No.	% Inc.	Doctor's No.	% Inc.	Total No.	% Inc.
1976	707	-13.3	128	0.0	74	15.6	202	4.2
1977	611	-13.6	159	24.2	69	- 6.8	228	12.9
1978	662	8.3	167	5.0	68	- 1.4	235	3.1
1979	577	-12.8	143	-14.4	55	-19.1	198	-15.7
1980	627	8.7	123	-14.0	58	5.5	181	- 8.6
1981	500	-20.3	121	- 1.6	73	25.9	194	- 7.1
1982	453	- 9.4	165	36.4	51	30.1	216	11.3
1983	523	15.5	153	- 7.3	55	7.8	208	- 3.7
1984	460	-12.0	171	11.8	54	- 1.8	225	8.2
1985	519	12.9	199	16.4	65	20.4	264	17.3
1986	587	13.1	127	-22.1	76	16.9	231	-12.5
10-Year Change	-120	-17.0	- 1	0.8	2	2.7	29	14.4

(a) These figures do not include Master of Arts in Teaching and Master of Education in Science degrees.

TABLE 9

DEGREES AWARDED, A&S AND UNM, 1976 AND 1986

College	Bachelor's Degrees 1976	1986	% Inc.	Advanced Degrees 1976	1986	% Inc.
Arts and Sciences	656	604	- 7.9	246	231	- 6.1
B.U.S.	416	168	-59.6	--	--	--
Other Colleges*	993	1,087	9.5	605	889	46.9
UNM TOTAL	2,065	1,859	-10.0	851	1,120	31.6

*Excludes Law and Medicine.

TABLE 10

DEGREES AWARDED, BY DEPARTMENT[1]

Department	Bachelor's				Master's				Doctoral			
	1983	1984	1985	1986	1983	1984	1985	1986	1983	1984	1985	1986
Astrophysics	--	--	1	1	--	--	--	--	--	--	--	--
Biochemistry	--	--	1	--	--	--	--	--	--	--	--	--
American St.	1	3	5	4	1	5	--	4	8	6	5	3
Anthropology	24	17	15	24	18	19	15	14	5	5	4	5
Art[2]	2	2	--	40	15	14	22	20	--	--	3	7
Biology	82	39	64	50	8	10	12	9	5	6	8	10
Chemistry	19	9	15	17	6	3	10	9	8	8	7	4
Comm. Disorders	12	13	16	--	25	20	16	--	--	--	--	--
Comp. Lit.	1	--	--	--	--	--	1	--	--	--	--	--
Creative Wrtg.	4	7	7	4	--	--	--	--	--	--	--	--
Criminal Just.	--	--	2	--	--	--	--	--	--	--	--	--
Economics	59	32	44	59	4	5	1	3	3	1	5	7
English	30	29	27	41	8	14	17	14	7	1	--	4
English-Phil.	2	2	2	2	--	--	--	--	--	--	--	--
Geography	16	12	9	15	7	2	4	2	--	--	--	--
Geology	22	22	18	20	8	12	13	3	2	--	1	1
History	27	21	29	28	6	9	7	4	7	4	5	6
Home Econ.[2]	--	3	1	--	2	3	10	6	--	--	--	--
Ibero-Amer.St.[3]	--	--	--	--	--	--	--	--	1	--	2	2
Journalism	27	26	26	26	--	--	--	--	--	--	--	--
Linguistics	3	2	2	1	--	3	2	4	--	--	--	--
Lat. Amer. St.	11	5	5	2	6	5	10	7	--	--	--	--
Math & Stat.	17	12	12	30	8	10	9	12	1	3	5	1
M&CL	32	25	22	18	10	8	15	--	3	7	3	--
Philosophy	4	3	5	2	3	3	2	7	--	2	3	1
Physics & Astr.	7	5	7	9	4	6	4	9	3	6	4	4
Pol. Science	46	55	59	73	1	2	8	8	1	1	1	1
Psychology	66	64	62	84	7	5	12	9	1	4	7	7
Religious St.	4	--	3	1	--	--	--	--	--	--	--	--
Russian St.	--	3	1	4	--	--	--	--	--	--	--	--
Sociology	29	29	31	27	1	1	3	1	--	--	2	3
Speech Comm.	22	28	34	36	5	12	6	3	--	--	--	--
TOTAL	569[4]	468[4]	525[4]	618[4]	153	171	199	148	55	54	65	66

[1]Includes summer, fall and spring graduates.
[2]Not a department of the College of Arts and Sciences, but major or minor is allowed.
[3]Interdisciplinary program at the doctoral level.
[4]Degrees granted with double majors are counted once in each department, so this total will not agree with Table 9.

TABLE 11

ACADEMIC PROBATIONS, SUSPENSIONS AND RELEASES
COLLEGE OF ARTS AND SCIENCES

	1981-82		1982-83		1983-84		1984-85		1985-86	
	No.	%	No.	%	No.	%	No.	%	No.	%
Semester I										
On Probation	249	10.0*	465	17.1	628	20.6	318	10.1	171	4.9
Suspended	126	5.1	107	3.9	180	5.9	107	3.4	89	2.5
Released	47	1.9	74	2.7	72	2.4	86	2.7	59	1.7
Semester II										
On Probation	244	9.5*	505	17.4	502	15.7	344	10.6	215	6.5
Suspended	91	3.5	119	4.1	128	4.0	153	4.7	110	3.3
Released	85	3.3	76	2.6	76	2.4	109	3.4	73	2.2

Number of Students Enrolled in Arts and Sciences:

Semester I, 1985-86	3,520
Semester II, 1985-86	3,333

*These figures do not include students admitted on probation.

TABLE 12

DEAN'S LIST, COLLEGE OF ARTS AND SCIENCES
NUMBER OF STUDENTS WITH GPA OF 3.00 AND ABOVE
FOR WORK OF 15 HOURS OR MORE TAKEN IN THE SEMESTER WITH GRADE

Grade Point Average	1982-83				1983-84			
	Sem. I		Sem. II		Sem. I		Sem. II	
	No.	%	No.	%	No.	%	No.	%
4.00	51	1.9	47	1.6	43	1.4	47	1.5
3.50-3.99	134	4.9	137	5.0	110	3.6	137	4.3
3.00-3.49	190	7.0	224	7.7	194	6.4	224	7.0
TOTAL	375	13.8	408	14.1	347	11.4	408	12.8
	1984-85				1985-86			
4.00	39	1.2	57	1.8	55	1.6	73	2.2
3.50-3.99	181	5.8	111	3.4	136	3.9	157	4.7
3.00-3.49	187	6.0	207	6.4	234	6.7	231	7.0
TOTAL	407	13.0	375	11.6	425	12.1	461	13.8

NOTE: % represents the percentage of the total Arts and Sciences enrollment for the semester indicated.

TABLE 13

DEGREES GRANTED WITH HONORS*

Honors in General Studies	
Summa Cum Laude	8
Magna Cum Laude	6
Cum Laude	9
Departmental Honors	
Anthropology	1
Biology	1
Economics	1
English	2
Geology	1
History	2
Mathematics and Statistics	1
Modern and Classical Languages	2
Philosophy	1
Physics and Astronomy	1
Political Science	3
Psychology	11
Initiated into Phi Beta Kappa	55
Initiated into Phi Kappa Phi	19

*Requirements completed Semester II, 1985-86, Summer 1985; Semester I, 1985-86.

TABLE 14

NEW RESEARCH AND TRAINING GRANTS, 1985-86

Department	Dollars	Number of Faculty	Number of Grants
Anthropology	$ 120,702	11	12
Contract Archeology	122,302	2	40
Maxwell Museum	9,010	2	3
Biology	805,434	12	15
Chemistry	697,178	7	15
Communicative Disorders	1,250	1	1
Economics	156,595	3	3
English	61,493	1	1
Geology	801,479	11	28
Meteoritics	490,284	1	7
History	25,500	1	1
Mathematics and Statistics	99,854	3	3
Philosophy	4,906	1	1
Physics and Astronomy	786,008	12	18
Center for Advanced Studies	386,605	3	5
Psychology	221,996	3	4
Sociology	129,695	2	4
TOTAL	$4,920,291	76	161

TABLE 15

BUDGETED GAs/TAs, RESEARCH AND PROJECT ASSISTANTS

Department	GAs & TAs	RAs & PAs
American Studies	0.50	0.50
Anthropology	3.00	1.50
Biology	19.50	2.81
Chemistry	15.00	8.66
Communicative Disorders	1.00	--
Economics	4.00	--
English	22.00	--
Geography	1.50	--
Geology	6.50	6.75
History	7.00	0.50
Journalism	--	--
Linguistics	0.50	--
Mathematics and Statistics	12.50	0.17
Modern and Classical Languages	16.50	--
Philosophy	2.25	--
Physics and Astronomy	10.00	10.00
Political Science	2.00	--
Psychology	7.00	2.50
Sociology	2.50	--
Speech Communication	2.50	--
TOTAL	135.75	33.39

302

TABLE 16

SUMMER SESSION DATA, 1985 AND 1986

Department	Final 1985 Figures Allocation	%	Final 1986 Figures Allocation	%
American Studies	$ 6,988	1.2	$ 9,214	1.4
Anthropology	26,190	4.4	21,975	3.4
Biology	37,872	6.3	34,985	5.4
Chemistry	37,012	6.2	38,463	6.0
Communicative Disorders	6,956	1.2	5,980	0.9
Economics	25,236	4.2	28,747	4.5
English	73,170	12.2	80,393	12.5
Geography	9,566	1.6	11,528	1.8
Geology	12,117	2.0	18,888	2.9
History	33,676	5.6	35,114	5.5
Journalism	12,718	2.1	11,587	1.8
Linguistics	9,361	1.6	9,821	1.5
Mathematics and Statistics	71,275	11.9	76,069	11.8
Modern & Classical Languages	99,249	16.6	95,807	14.9
Philosophy	9,504	1.6	13,850	2.2
Physics and Astronomy	24,417	4.1	25,995	4.0
Political Science	15,162	2.5	22,345	3.5
Psychology	27,458	4.6	31,468	4.9
Sociology	22,789	3.8	27,474	4.3
Speech Communication	17,966	3.0	21,806	3.4
Foreign Programs	20,723	3.5	22,304	3.5
TOTAL	$599,405	100.0	$643,813	100.0

TABLE 17

A&S TRAVEL DISBURSEMENTS

Department	Paper Presentation No. of Trips	Paper Presentation Amount	Officer Participation No. of Trips	Officer Participation Amount	Miscellaneous Attendance No. of Trips	Miscellaneous Attendance Amount
American St.	3	$ 212.80	--	$ --	1	$ 162.00
Anthropology	3	433.80	--	--	3	701.94
Biology	11	2,599.34	1	175.20	4	859.20
Chemistry	2	342.00	--	--	4	918.00
Comm. Disorders	2	318.00	--	--	--	--
Economics	1	204.00	--	--	--	--
English	10	1,734.40	--	--	4	1,236.00
Geography	4	519.88	--	--	--	--
Geology	4	1,321.00	--	--	--	--
History	1	58.80	2	475.80	6	1,285.80
Journalism	--	--	--	--	2	348.00
Linguistics	3	499.00	--	--	--	--
Math & Stat.	7	1,690.00	--	--	--	--
M&CL	10	2,220.00	1	132.00	6	1,395.00
Philosophy	5	1,015.50	--	--	2	117.60
Physics	5	1,351.80	--	--	1	450.00
Political Sci.	7	1,341.30	--	--	5	708.80
Psychology	18	2,270.46	--	--	4	437.40
Sociology	9	1,493.40	1	178.00	7	1,306.80
Speech Comm.	7	558.00	--	--	1	120.00
TOTAL	112	$20,183.48	5	$961.00	50	$10,046.54

The Report of the Department of American Studies

July 1, 1985, to June 30, 1986

Marta Weigle, Chair

The American Studies Department has completed a difficult year because four of nine faculty members were on leave for one or two semesters and one faculty member terminated his affiliation with the department after the fall semester. However, those on leave continued to participate actively in major policy decisions, most importantly, the national search for a new associate professor. Although budgetary considerations finally precluded hiring, the process was an important one for clarifying the department's mission, potential, and attractiveness to academics outside the university.

A. Significant Achievements

The robust graduate program continues to command major departmental attention. Professor Marta Weigle

had to serve as both chair and graduate adviser because Professor Peter White, originally scheduled to do the latter, unexpectedly took leave without pay for 1985-86. The required pro-seminar was team-taught in the fall by Professors J. J. Brody and Vera Norwood. Professor Weigle revised the graduate student handbook and finalized a reading list for both master's and doctoral comprehensive examinations. Policy on these examinations was clarified.

Professor Vera Norwood served as undergraduate adviser throughout the year. In the fall, she was given time and a Zenith micro-computer to develop a new course concentration in Nature, Technology, and Culture. In the spring, she and Professor William Gross of the College of Engineering taught the first such course, Technology and Culture. Because of faculty leaves, the required sophomore course, American Studies 285, was taught by recent department graduates, Dr. Alan Pope in the fall and Dr. Susan Kilgore in the spring. As in the past, courses were cross-listed with professors from the departments of English, Philosophy, and Speech Communication and the Chicano, Native American, and Women studies programs. Part-time instructors offering courses at the graduate and undergraduate levels were

Gail Baker, Margaret Randall, Hal Rothman, and David Stuart.

Southwest Studies continues to play an important role in the department. In the spring, the coordination of the fall 1986 list of campus-wide Southwest courses was undertaken by the American Studies Department. Both Professors Charles Biebel and Marta Weigle were active in the Southwest Institute in June 1986.

Colloquia were presented by the two candidates for adjunct status, David Stuart and Margaret Randall, and by the two finalists for the advertised associate professor position, Simon Bronner of Pennsylvania State University, Capitol Campus, and Jeffrey Meikle of the University of Texas-Austin. The latter two were chosen from a field of sixty applicants responding to an announced position for an associate professor with a social science orientation to American Studies and preferably with material and/or popular culture research interests.

The faculty was very active on campus and in professional societies like the American Folklore Society, the American History of Education Society, the American Studies Association, and the Western Literature Association. Professors Biebel, Caputi, Girgus, Norwood,

Remley, Weigle, and White completed either all or a major part of book manuscripts, while Professor Weigle's edited New Mexicans in Cameo and Camera: New Deal Documentation of Twentieth-Century Life and Professor White's edited Puritan Poets and Poetics: Seventeenth Century Poetry in Theory and Practice were published in 1985. During his fall 1985 sabbatical, Professor Sam B. Girgus lectured in Rome, Heidelberg, and Milano and was for two weeks a visiting lecturer at Sofia University and Veliko Turnovo University in Bulgaria. Although on leave, Professor Peter White continued as co-editor of American Poetry.

B. Significant Plans and Recommendations for the Future

The Department will continue to monitor closely the progress of its very large graduate program as its top priority. The undergraduate program must be expanded. The Southwest Studies program is crucial to both levels, and the Chair and other members of the department will also continue to explore mutually satisfactory, fruitful associations with Afro-American Studies, Chicano Studies, Native American Studies, and Women Studies.

At least one more full-time faculty member is needed, and another national search should be initiated in the next two years. In the meantime, the association of other on-campus faculty members, particularly those from the ethnic and women studies programs, must be reviewed.

New America is being re-evaluated by members of the American Studies and English Departments.

C. Appointments to Staff

Faculty percentage appointments in American Studies for 1985-86 are as follows: Biebel (1.00), Caputi (1.00), Girgus (.60), Hill (.13), Jones (.33), Norwood (1.00), Remley (1.00), Weigle (.50), White (.33), a total of 5.89. Professor J. J. Brody served one-third of his time as Visiting Professor of American Studies during the fall of 1985 on a provisional basis. Professor Biebel directs the Honors Program but continues as a member of the American Studies faculty with an annual two-course teaching load. Professor Luci Tapahanso was a visiting assistant professor in American Studies, Native American Studies, and Women Studies

during the year.

In 1985-86, Professor Peter White was on leave without pay while serving as Visiting Associate Professor of English at Pennsylvania State University, and Professor Jane Caputi was in Boston finishing two books under advance contract while on leave without pay. Professor Girgus was on sabbatical in the fall and Professor Remley in the spring.

Margaret Randall served as Adjunct Assistant Professor and David Stuart as Adjunct Associate Professor for the year.

Margaret Gilmore began work as department secretary on July 19, 1985.

D. Separations from Staff

In January 1986, Professor J. J. Brody resigned his provisional one-third appointment in American Studies to return full-time to the Department of Art History in the College of Fine Arts. Professor Hamlin Hill resigned from the university effective at the end of the spring semester 1986.

E. Sponsored Research

(a) One American Studies faculty member, or 11% of all those associated wholly or partially with the Department, submitted proposals to outside agencies during this period.

(b) No faculty member received an award from an outside agency during this period.

F. Student Matters

During this period, two students (Susan Kilgore, Wayne Shrubsall) received doctorates, and three students (Teresa M. Ainsworth, Robert D. Johnstone, Trisha Stanton) received master's degrees. Two students earned a bachelor's degree from the College of Arts and Sciences with an American Studies major, and three graduated with an American Studies minor.

The introductory undergraduate course, American Studies 185, was taught by doctoral students Mark Altschuler and Charles Poling in the fall and by

doctoral students Stephen Fox and Robert Johnstone in the spring. Mark Altschuler was chosen to receive an honorable mention award as one of the University of New Mexico's Outstanding Teaching Assistants.

THE REPORT OF THE DEPARTMENT OF ANTHROPOLOGY

1 JULY 1985 - 30 JUNE 1986

General Departmental Information	1 - 8
Attachment I: Office of Conract Archæology	9 - 22
Attachment II: Maxwell Museum	23 - 34
Attachment II: Funded Research, Faculty/Adjuncts	35 - 37
Attachment IV: Funded Research, Graduate Students	38 - 41
Attachment V: Lectures	42 - 43
Attachment VI: Graduates	44 - 46
Attachment VII: Courses by Discipline	47
Attachment VIII: Graduate Program	48
Attachment IX: Appointments and Separations	49

THE REPORT OF THE DEPARTMENT OF ANTHROPOLOGY

1 July 1985 - 30 June 1986

Jeremy A. Sabloff, Acting Chair

Linda S. Cordell, Chair

I. General Departmental Information

A. Significant Achievements During 1985-1986

For years, the Department of Anthropology has been one of the strongest, if not the strongest, academic unit at the University of New Mexico. The department is nationally ranked and has an international reputation. Many consider its archæology program to be one of the three best in the United States. However, the department's historic strength is currently under great threat, and the department clearly has reached a critical crossroads. Last year, as discussed in the 1984-1985 annual report, the department lost three important tenured members of its faculty: Professors Caroline Bledsoe, Particia Draper, and Henry Harpending. This year it is losing Professors Jeremy Sabloff (as of 8/1/86) and Linda Cordell (as of 12/31/86), the past and present chairs of the department and two of the crucial components of the archæology program.

Fortunately, the department was able to attract three outstanding scholars (the first choice in all three searches) this year to replace Bledsoe, Draper, and Harpending. Dr. Louise Lamphere (Ph.D. Harvard University), a widely respected ethnologist with

special interest in the Southwest and urban studies, returns to the faculty from Brown University as a full professor; Dr. Hillard Kaplan (Ph.D. University of Utah), a rising star in the biosocial study of hunter-gatherer groups, joins the department from the University of Utah as an assistant professor; and Dr. Wirt "Chip" Wills (Ph.D. University of Michigan and B.A. University of New Mexico), one of the most promising young archæologists in the nation with a concentration in Southwest prehistory, comes to the department as an assistant professor from the Smithsonian Institution where he has been a post-doctoral fellow.

However, the department now faces the challenge of replacing Cordell and Sabloff. It cannot go on replacing *senior* faculty without severe disruption to undergraduate, graduate, and research programs. Moreover, the department is very vulnerable to further losses. Other members of the faculty are considering leaving. In addition, graduate students are looking into the possibilities of transferring to other universities, and the department's national image is beginning to suffer. These recent trends must be stemmed (see **Section B** for recommendations). Without significant efforts by the administration, the Department of Anthropology is certain to lose its preeminent position. The University can ill afford such an erosion of excellence in a leading department. The strength of the Department of Anthropology must be high on the administration's list of priorities. In this regard, it should be noted that the preliminary (draft) report of the Strategic Planning Committee recommends that the university continue to support and increase its support for the Anthropology program.

There were two important advancements, as Dr. Jane Lancaster was promoted to full professor and Dr. James Chisholm was promoted to associate professor and granted tenure. Also of great significance was the election of Professor Karl Schwerin as the new chair of the department, beginning 1 January 1987. Dr. Schwerin, who currently

holds a Fulbright Fellowship in Paris, France, is a highly regarded ethnologist who has been at the university since 1963. Lastly, Professor Linda Cordell served as Acting Vice President for Research for most of the spring and half of the summer terms. Professor Jeremy Sabloff kindly agreed to serve as Acting Chairman during this interval.

Grants obtained by faculty members are noted in **Attachment III**. It also should be stressed how very successful the department's graduate students have been in obtaining outside funding. The list of graduate students and their sources of funds are given in **Attachment IV**. The Department is very proud of the professional accomplishments of our graduate students. Three of our graduate students (Mark Lycett, Kathleen Morrison, and Rani Alexander) now hold NSF pre-doctoral fellowships. There are only four such awards held by graduate students at UNM. In addition, Dr. Lawrence Todd, who received his Ph.D. in Anthropology in the fall of 1984, was the recipient of the Thomas L. Popejoy Dissertation Prize for his dissertation, "The Horner Site: Taphonomy of an Early Holocene Bison Bonebed." Finally, our graduate students continue to publish the research journal Haliksa'i and the monthly newsletter UNM Anthropology.

In other activities, the department had another strong year. The **Office of Contract Archæology**, under the able direction of Dr. Joseph Winter and Dr. Richard Chapman, had an extremely productive year (see **Attachment I**). As noted before, the Office continues to set high standards for public archæology in New Mexico, to provide valuable research experience for the department's graduate students, and to serve the business community, state, and federal agencies. Nevertheless, despite the achievements of the Office and the continued pleas for additional support, current University support is barely adequate.

The Journal of Anthropological Research, in its 51st year, has a strong national reputation as one of the few high quality, general anthropological journals. Its editor, Presidential Professor Philip Bock writes:

> "The Journal of Anthropological Research continues to publish on schedule for approximately 1,700 subscribers. In the past year, several changes were made in format to improve the attractiveness and readability of the Journal. Staff has remained constant, though Dr. Patricia Nietfeld (a U.N.M. Ph.D.) has taken over as Copy Editor. The new typesetting procedure is now working smoothly, but the Editorial Board hopes to purchase a high quality laser printer in the near future that will greatly cut costs."

The **Maxwell Museum**, under the new leadership of Dr. Garth Bawden had a needed year of stability and growth (see **Attachment II**). The museum continues to support excellent public programs, to work closely with school groups, and to mount superb exhibitions. Its grant record is very strong, and its reputation is growing.

A number of outstanding scholars presented talks to the department this past year (see **Attachment V** for a listing). The department was especially pleased that Dr. Robert McC. Adams, Secretary (Director) of the Smithsonian Institution was brought to U.N.M. to give one of the Office of Graduate Studies Distinguished University Lectures. Dr. Adams was able to spend time with members of the department. He met informally with the Department of Anthropology at a department reception in Hodgin Hall, and provided an informal lecture and discussion for anthropology graduate students.

The department was also pleased that Adjunct Professor, and internationally known primatologist, Birute Galdikas was able to visit U.N.M. during Spring semester and participate in presenting a special seminar with Professor Jeffrey Froehlich. The seminar, "Topics in Ape-Human Behavioral Continuities," was supported with assistance from the National Geographic Society and the Department of Anthropology.

Significantly too, the department was very happy to be able to bring Dr. Jaime Litvak-King to U.N.M. to teach during the entire Spring semester. Dr. Litvak-King currently holds top administrative and professional positions at U.N.A.M., Districto Federal, Mexico. The department, with additional assistance from the Latin American Institute at U.N.M. was able to have Dr. Litvak-King spend his sabbatical semester with us, teaching regular courses for our students.

In May of this year, Adjunct Asst. Professor Karen Cantrell (with Denise Wallen) culminated an intensive research effort with the publication of Funding for Anthropological Research (Oryx Press, Phoenix, Arizona), a major reference tool for professional anthropologists and anthropology graduate students. This directory, the first of its kind for anthropologists, identifies over 700 funding sources that support anthropological research and activities.

Of great interest were the many physical anthropologists who visited in the spring when the department hosted the **Fifty-fifth Annual Meeting of the American Association of Physical Anthropologists** at the Albuquerque Hilton Hotel on 9-12 April 1986. Local arrangements were organized and directed by Assoc. Prof. J.W. Froehlich. With a registration of 645 and many attending from New Mexico *gratis*, the meeting was one the largest in recent years. Among the highlights of the meeting was a reception in honor of the retirement of Prof. Emeritus James N. Sphuler, held at the Maxwell Museum of Anthropology. With the playing of The Desert Winds, directed by graduate student Robert Lah, and more than 400 attending, the Maxwell will remember this event as an all-time record.

Just prior to these national meetings, the department celebrated the opening of its new osteology laboratories. Renovations were made possible by funding from the University Provost's Office, and computer equipment was obtained through a systematic collections grant from the National Science Foundation to Profs. McDaniel, Rhine, and Harpending. Attendees of the reception for Professor Spuhler also had the opportunity to visit the new laboratory facilities. These facilities, in general, will greatly enhance teaching and research functions of the department's biological anthropology faculty and students.

Another meeting event of major significance was the Annual Luncheon keynote address by Prof. Lewis R. Binford. Speaking to a sell-out audience of 300 (the largest in recent years), Binford's provocative talk on myths and realities of human cultural evolution will long be remembered. Many long-standing members were heard to remark that the meeting as a whole was the best organized and most successful in at least a decade. They were particularly impressed with the number, vitality, inquisitiveness and gregariousness of our graduate students. In times of bad national press for U.N.M., this meeting gave many a lasting favorable impression of our graduate program. More importantly, our students benefited greatly in experience, knowledge, and contacts made through their participation in the meetings. As an added benefit, book publishers exhibiting at the meetings, donated new books to the department's archive at the conclusion of the meetings.

Finally, after lengthy negotiations among the department, university administration, and National Park Service, the latter moved its **Division of Cultural Research** to Santa Fe and left the full collection of Chaco Canyon (and related area) artifacts and documents to be curated by the Maxwell Museum. The outcome of this process should be of great benefit not only to the University but for scholars around the

world who may wish to study these collections in one place in future years. The successful negotiations took an inordinate amount of the chair's time but clearly were worthwhile in the long run. The cooperation and support of President Tom Farer, University Counsel Joe Goldberg, V.P. Robert Desiderio, and Comptroller Carroll Lee were important factors in the success of this process. The administration also made it possible to add a full-time curator of archæology to the Maxwell Museum staff. This individual will have the major responsibility of organizing and curating the important Chaco collections. Although several important decisions must still be taken into consideration,, particularly the permanent location within the Maxwell Museum of the Chaco archives, the transition from National Park Service to Maxwell Museum management of the collections has moved along quite successfully to date under the immediate supervision of Dr. Kim Trinkaus.

In addition, the termination of the Park Service tenancy in the Anthropology building has freed much needed space for the department. For the first time, the department office, under the skillful direction of Merilyn Williams who succeeded Emma Mickel as administrative assistant of the department, will have the long-awaited headquarters necessary for efficient operation; highly over-crowded conditions that teaching assistants have had to work under will be alleviated; visiting scholars will have office space; and research projects will have sufficient room to carry out their activities. This major rearrangement of departmental space began at the end of June 1986.

B. Significant Plans and Recommendations

As discussed above, the department has reached a critical stage in its development. It has suffered crucial losses and is highly vulnerable to further ones. In order to stem these losses, several very harmful trends must be reversed. First, the growing gap between U.N.M. salaries in anthropology and salaries in comparable departments throughout the United States must be narrowed. Second, the very poor level of graduate support must be changed. U.N.M. must do more to attract top graduate students and provide them with adequate support so that they can complete their graduate studies in a timely fashion. Third, the increasing burden which department members have had to shoulder for travel and supplies has to be ended. The department simply cannot continue to operate on its unbelievably meager supplies budget. As stressed in annual reports for years, the department's budget is in desperate straits. Additional support for research activities also is needed. Top scholars should not have to struggle to undertake basic teaching and research activities. Unless such support is forthcoming, the department will continue to lose its best people to institutions which are willing to provide such basic support.

Finally, quality research and teaching must be rewarded by reasonable workloads. The department's national reputation is based on its graduate program. Graduate education is both expensive and time-consuming. Excellent graduate education is especially time-consuming. It is unreasonable to continue to expect professors to pursue active research and publication programs while teaching three regular courses each semester, innumerable problem and special reading courses in addition, and also to participate in supervising the department's 120 graduate students. Workload adjustments must be made and not only in exceptional cases. The entire department appears to be an "exceptional case" by any standards, and faculty burnout is very real.

REPORT OF THE OFFICE OF CONTRACT ARCHEOLOGY

July 1, 1985 - June 4, 1986

by

Joseph C. Winter

Director

1. Overall Review of Activities

The Office of Contract Archeology had a year of mixed accomplishments. On the one hand, a number of very important projects were completed, and others were initiated, thereby contributing significantly to archeological studies in New Mexico. On the other hand, the overall number of new contracts and monies they represent were down, reflecting the general decline in the New Mexican state economy, especially as it relates to energy-associated projects. Both areas are discussed below.

2. Description of Projects

Several major reports representing large, long-term projects were produced during the year, and were met with very positive reviews by the professional community. Two final reports in particular were very successful: Economy and Interaction along the Lower Chaco, and Stone Circles, Ancient Forts, and Other Antiquities of the Dry Cimarron Valley -- A Study of the Cimarron Seco Indians. The former was published with

the help of the Maxwell Museum, and it represents the culmination of a 12-year long project in the CGP/UII Mine area on the lower Chaco, which began with Reher's Settlement and Subsistence along the Lower Chaco book, published by UNM Press.

The second book was generated by a 50-50 matching grant provided by the State Historic Preservation Office and UNM. The book has aroused considerable interest among New Mexico, Colorado, and Oklahoma archeologists, and it is now being considered for publication by UNM and U. of Oklahoma presses.

Other major reports that have been completed or will be by July 1 include the final Bravo Pipeline Project report, the first draft of the Border Star 85 project report, and the Cortez CO_2 project reports. Among the latter is a detailed report concerning early Athabascan sites in New Mexico which demonstrates that Navajos were in the San Juan Basin as early as the 1500s, and possibly as early as the 1400s.

Selected projects are discussed below.

In 1985 the Office of Contract Archeology completed a survey, test excavation program, and overview of the Dry Cimarron Valley, for the State of New Mexico Office of Cultural Affairs. 101 new sites were recorded, raising the total known sites in the valley to 539. Documented occupations include Folsom (including the Folsom Type Site), Clovis, and Plano PaleoIndian, Late Archaic, heavy Plains Woodland and Apishapa Focus Panhandle Aspect, Plains Apache (beginning as early as AD

1350), Comanche, Ute, Kiowa, and other historic Indians, as well as Hispanic and Anglo American ranches. Significant historic sites include the Cimarron and Fort Union branches of the Santa Fe Trail, the Goodnight-Loving Cattle Trail, the Cross L Massacre Site, the town of Madison and other locations that reflect the replacement of Plains Indian cultures by a ranching economy.

In September 1985 the Office of Contract Archeology began developing a research design and data recovery plan for 58 Archaic, Anasazi, and Navajo sites in the Farmington Bluffs area of northwestern New Mexico. As part of this program, limited test excavations were conducted at 12 sites. These excavations suggest that the study area was most intensively occupied during the late Archaic (Armijo and En Medio phases), probably on a seasonal basis. During the Pueblo II-III period, the Anasazi occupation was focused on the San Juan River floodplain, with limited use of the bluff uplands for farming and wild resource procurement. Evidence was also found for limited Navajo use of the study area during the Dinetah and Gobernador phases, in addition to the more intensive twentieth century occupation.

The Office of Contract Archeology has recently completed a series of archeological excavations at the Piro Pueblo of Qualacu (LA 757). This pueblo, which is located within the Bosque Del Apache Wildlife Refuge in the central Rio Grande Valley, was investigated in conjunction with the U.S. Fish and Wildlife Department in an effort to stabilize a section of the pueblo complex which had been exposed by an old conveyance canal. The pueblo is a large adobe-walled apartment complex estimated to have

contained approximately 200 rooms and to have been of terraced multistoried construction. It appears to have been occupied from about AD 1250 to 1680. A previous review of the Spanish Colonial Archives identified the pueblo as the village of Qualacu, which first appears in the records of the Oñate Colonization in 1598. The village was either abandoned in the 1670s due to Apache depredations or during the Pueblo Indian revolt of 1680. Excavations in a 50 meter profile face revealed an extremely complex stratigraphic section in which three major building sequences and a series of remodeling events were defined. Analysis is now in progress and a report concerning the excavations is projected for Spring of 1986.

The second field phase of the Border Star 85 survey was completed in July, 1985. The first phase of survey, completed in January 1985, resulted in identification of 1809 site locations within a 225 sq km project area in the southern Tularosa Basin of New Mexico. The second phase targeted 40 sites representing a spectrum of PaleoIndian, Archaic, Mesilla Phase, and Dona Ana Phase occupations for intensive documentation. Eleven C14 dates were retrieved from hearths at late Archaic and Mesilla Phase sites, reflecting a range of occupation from 540 BC to 640 AD. Species identification of the samples indicated that seven were oak, one was willow, one was juniper, and only two were mesquite. The presence of oak in the majority of samples suggests a substantially different vegetative community structure on the basin floor, now dominated by mesquite. The final report for the project is now in review.

A model or "generic" local government ordinance covering identification, evaluation, and treatment of archeological and historical sites was developed by the Office of Contract Archeology with a matching funds grant from the New Mexico Historic Preservation Division. The model ordinance provides alternative strategies which can be implemented by municipalities or county governments to protect or treat cultural resources not afforded protection by existing state or federal legislation, and includes a review of other local ordinances and a "how-to" document to aid in local planning.

Intensive surface documentation and test excavations were conducted at the Alma bridge site, a late Archaic site located on Gila National Forest lands along the San Francisco River in southwestern New Mexico. Test excavations at the site revealed surprising depth of subsurface deposits in areas which had been assumed to represent strictly surface distributions of artifacts on stable geomorphological contexts. The results of obsidian hydration analysis of a stratigraphic sequence of artifacts further indicated substantial subsurface turbation at the site. This suggests that commonly employed criteria for assessing the integrity and preservation of sites for that region may need re-evaluation.

New projects that were begun in late Spring of 1986 include additional surveys at White Sands Missile Range, a major ethnographic study of PRLA and competitive coal leases in the San Juan Basin, excavations at the Fence Lake Pilot Mine near Quemado, and a long term survey-excavation project along the Pac-Tex pipeline across southern New Mexico.

A summary list of all projects carried out in 1985/86 is attached.

3. Financial Statement

1985/86 showed a decline in the amount of money promised through new contracts. Although we broke even (see attached financial summary), the year was not as successful as 1984/85, due to several factors: 1) the decline in gas and oil prices and other mineral-related revenues, upon which much of our work is based; 2) the increase in competition as a result of the above, and the fact that our costs are higher than most private companies, thereby meaning that we were awarded fewer contracts; and 3) the inability of the university to provide additional budgetary increases that would have allowed us to expand. As discussed in both my 1985/86 and 1986/87 budget requests, we were in a position in 1985 to expand into new markets throughout the Southwest and adjacent areas, thereby increasing our revenues over the 1984/85 peak year. To do so we required a major capital expansion, but because of UNM budgetary problems, we were not given this opportunity, and thus our revenues dropped back to the 1984 level.

As far as the future goes, we now have a number of major proposals out that will start us out very well in 1986/87, assuming that some or all are awarded. However, until the energy prices rise again, and until the state/UNM budget crunch and administrative problems are straightened out, I do not forsee a $600,000.00+ year again, unless we are allowed to expand into new markets.

4. Other Activities

In addition to the aforementioned reports and projects, I taught a series of directed reading and independent studies students, presented papers at the Navajo Studies Conference and Albuquerque Archeological Society Meeting, and began a book on the oral history of the Dry Cimarron Valley. I also contributed a chapter (co-authored with Patrick Hogan, OCA senior staff archeologist) to a festschrift in honor or Jesse Jennings, which was finally published this spring. Dr. Chapman also taught a directed readings course and presented a paper at the Jornada Mogollon Conference. The final report on the Upper Gila archeological survey, for which Dr. Chapman was Principal Investigator and senior author, was published this year by the firm he worked for prior to coming to OCA.

Summary of OCA Activities

7/1/85 - 6/2/86

Project	Sponsor	Brief Description	Status
185-123	U.S. Army, Fort Bliss	Monitoring Fort Bliss' Historic Preservation program	In progress
185-161a /c	Woodward-Clyde Consultants	Excavation of 12 sites	Completed
185-161d	Woodward-Clyde Consultants	Monitoring of 36 locations in pipeline	Completed
185-161i /j	Woodward-Clyde Consultants	Monitoring of pipeline	Completed
185-161k	Woodward-Clyde Consultants	Data recovery in Las Huertas Valley	Completed
185-161m	Woodward-Clyde Consultants	Excavation of 1 site	Completed
185-168	U.S. Army Corps of Engineers	Completion of mitigation program at Site 48	Second draft report ready for review
185-191	Standard Oil Co.	Survey of 101 miles	In press
185-191a	Standard Oil Co.	Survey of 4 miles	In press
185-191d	Bravo Pipeline Co.	Survey of 40 miles	In press
185-191e	Bravo Pipeline Co.	Relocation survey	In press
185-208	Historic Preservation Bureau	Reconnaissance of Dry Cimarron Valley	Completed
185-209	State of New Mexico	Preparation of Ordinance	Completed
185-219	Carbon Coal	Survey of haul road	In press
185-219a	Carbon Coal	Site fencing program	Completed
185-185a /b	Transwestern Corp.	Lithic analysis	Report in preparation
185-227	Corps of Engineers	Survey of 50,000 acres	Second draft in review

Summary of OCA Activities (continued)

7/1/85 - 6/2/86

Project	Sponsor	Brief Description	Status
185-247	BLM	Open-ended contract	Waiting for work order
185-249	Corps of Engineers	Survey and monitoring	In the field
185-258	Mountain Bell	Monitoring site	Completed
185-261	Mountain Bell	Monitoring site	Completed
185-262	AT&T	Survey of phone line	Completed
185-259	Business Strategy	Survey of road	Completed
185-247 a/d/e	BLM	Test excavation of 10 sites at Bolack Exchange	Second draft in preparation
185-247c	BLM	Editing of Part I of Roswell Overview	Second draft in review
185-260	Montano Assoc.	Subsurface testing in Bernalillo	Completed
185-264	U.S. Fish and Wildlife	Salvage excavation at Qualacu	Report in preparation
185-185k	Transwestern	Survey in Lea County	Completed
185-265	Tex-NM Power Co.	Powerline corridor survey	Completed
185-266	Columbus Electric Coop.	Powerline corridor survey	Completed
185-267	J.W. Jones Co.	Bernardo gravel pit survey	Completed
185-268	Mt. Bell	Buried cable survey	Completed
185-269	Continental Phone	Survey on Zia land	Completed
185-273	Gas Co. of NM	Survey on Laguna land	Completed
185-274	Riverside Construction	Survey near Tres Piedras	Completed
185-275	Mt. Bell	Buried cable survey	Completed

Summary of OCA Activities (continued)

7/1/85 - 6/2/86

Project	Sponsor	Brief Description	Status
185-276	Wylie Corp.	Survey in Santa Barbara Cemetery	Completed
185-277	URS Co.	Survey in Bernalillo	Completed
185-279	Riverside Construction	Survey near Ojo Caliente	Completed
185-280	Gas Co. of NM	Survey in Corrales	Completed
185-276b	Wylie Corp.	Test excavations in Santa Barbara Cemetery	Completed
185-281	Gila Exploration	Survey near Willard	Completed
185-268b /c	Mt. Bell	Testing in Corrales	Completed
185-284	Rinconada Enterprise	Survey near Grants	Completed
185-285a	Mt. Bell	Survey at Bosque del Apache	Completed
185-286	Earth Metrics	Testing in Bernalillo	Completed
185-263a	Gila Nat'l Forest	Site evaluation in the Mimbres Valley	Completed
185-288a	Gila Nat'l Forest	Site excavation near Alma	Completed
185-285b	Mt. Bell	Site evaluation	Completed
185-290	J.W. Jones	Borrow pit survey	Completed
185-292	Mt. Bell	Survey near San Antonio	Completed
185-296	Mt. Bell	Excavation at San Antonio	Report in preparation
185-302	Pac Tex Co.	Pipeline survey	Project about to begin

Summary of OCA Activities (continued)

7/1/85 - 6/2/86

Project	Sponsor	Brief Description	Status
185-271	SRP	Mitigation of mine sites	Project about to begin
185-303	Utility Block Co.	Testing of 1 site	Project about to begin
185-305	Leedshill-Herkenhoff Inc.	Survey of Airport	Report in preparation
185-2471	BLM	Part II Roswell overview	Report in preparation
185-306	Prewitt and Assoc.	White Sands survey	Project ready to begin
185-247m	BLM	Ethnographic study	Project ready to begin

Contracts Generated

7/1/85 - 6/2/86

Proposal Date	Proposal No.	Award Amount	Overhead Amount
7/1/85	185-264	19,996.00	3870.00
7/12/85	185-185k	1223.00	362.00
7/18/85	185-265	1226.00	392.00
7/23/85	185-262a	544.00	174.00
7/26/85	185-266	1264.00	404.00
7/26/85	185-267	776.00	248.00
7/26/85	185-268	675.00	216.00
7/30/85	185-269	1083.00	346.00
8/5/85	185-271	69,763.00	22,305.00
8/9/85	185-267a	409.00	131.00
8/28/85	185-273	579.00	185.00
9/4/85	185-274	913.00	292.00
9/4/85	185-275	794.00	254.00
9/9/85	185-276	1038.00	332.00
9/10/85	185-277	1033.00	330.00
9/14/85	185-279	579.00	185.00
9/18/85	185-280	629.00	201.00
9/23/85	185-276b	1987.00	635.00
9/26/85	185-281	795.00	254.00
9/27/85	185-247c	16,641.00	4222.00
10/10/85	185-247e	19,970.00	5067.00
10/16/85	185-268b	4682.00	1497.00
10/16/85	185-268c	1316.00	421.00

Contracts Generated (continued)

7/1/85 - 6/2/86

Proposal Date	Proposal No.	Award Amount	Overhead Amount
11/12/85	185-284	662.00	212.00
11/13/85	185-285	2009.00	642.00
11/26/85	185-285a	1489.00	476.00
12/18/85	185-286	4794.00	1533.00
1/13/86	185-263a	358.92	114.76
1/16/86	185-288a	7704.00	1955.00
1/31/86	185-285b	238.00	76.00
2/10/86	185-290	635.00	263.00
2/18/86	185-292	720.00	230.00
3/13/86	185-296	9943.00	3179.00
4/8/86	185-302	75,890.00	24,264.00
4/9/86	185-303	4498.00	1438.00
4/11/86	185-123k	36,439.00	3313.00
4/22/86	185-305	5845.00	1483.00
5/5/86	185-2471	21,092.00	5352.00
5/9/86	185-306	60,887.00	19,467.00
5/20/86	185-247m	54,941.00	13,941.00
Totals		436,059.92	120,261.76

F 334

Salary Credits for July 1985 - May 1986

Date	Amount
11/5/85	$2395.00
12/23/85	1938.00
3/5/85	2337.50
3/25/85	1312.50
4/21/85	1552.00
5/13/85	890.00
	$10,425.00

Overall Financial Summary

Total 033-036-0 Budget:	- 101,400.00
Total Salary Credits:	+ 10,425.00
Total Overhead Generated:	+ 120,261.76
Total Difference Between Expenses and Credit:	+ 29,286.76

REPORT of THE MAXWELL MUSEUM of ANTHROPOLOGY

July 1, 1985 - June 31, 1986

Garth Bawden, Director

In my last report I presented my priorities for the immediate future. These largely involved collections management and use in the broadest sense. Of greatest urgency was completion of the inventory and collections recording upgrade commenced in 1984 in order to alleviate future ownership confusion and additional related legal problems and facilitate good mangement procedures. Of equal importance was development of the research potential of the extensive study collections of the museum, especially the well-documented archæological and osteological collections. A third vital need was documented; that of establishing for the first time a financial operating base independent of economic fluctuations within the State through the development of alternative financial sources. Only thus can long-range planning be truly possible and crisis-management alleviated.

The past year has seen come advance along all of these fronts with the continuation of the collections inventory program, the establishment of a staff position solely responsible for upgrading the organization and level of accessibility of the archæological collections, implementation of the osteological collection computerized catalogue program and the beginning of an alternative funding structure. I will elaborate on all of these below. Elsewhere, the public image of the museum has been maintained with active, though less expensive, exhibition, lecture, and workshop

programs and continuation of the Maxwell's important School Docent Program. Additional developments, not mentioned in previous reports, include the financing by NSF of a photographic archive and the conclusion of an agreement with the National Park Service whereby all of its Chaco Canyon area collections with their documentation become the permanent curatorial responsibility of the Maxwell, thus greatly expanding its archæological collections size with concommitant increase in research value.

Program Summaries

1. FINANCIAL

A stable financial base is vital to the efficiency of any institution. The Maxwell has until now depended almost entirely on direct U.N.M. subvention for its operational support. It is clear that this university cannot in the foreseeable future give its museums the financial support that they need in order to maintain existing programs let alone develop new ones. This it was evident to me from the time of my appointment last year that alternative fund sources must be developed. The last year has seen the beginnings of such development. First, with the close collaboration of the Accounting and University Counsel offices, a procedure has been established whereby items specifically designated for sale by their donors can be sold in the museum shop, their resulting revenues to be made available for development. Second, the Museum Association at my request has established a committee to work with me to mobilize its memebrship in order to aid funding at a level never before attempted. Third, I have approached several committed individuals regarding the possibilities of aiding in long-term broader endowment development with some initial success.

While these moves are at present no more than embryonic they do begin to build a structure whereby alternative support can be developed, a task almost impossible without such university and private collaboration. I have also explored the means whereby the U.N.M. Foundation can be the principle managing agent for alternative funds thus attracted. Again the stucture is in place and I have high hopes that the next year will see the start of an improved financial base and the beginnings of an endowment from these actions.

2. COLLECTIONS

a) Inventory

The collections inventory program has now completed two years of its projected three year course. The physical inventory, completed last year is now being correlated with the documentation, something never previously accomplished in the 50 year history of the museum. There are of course major discrepancies among the several paper records and between them and the physical inventory itself. Major inroads have been made during the past year on these problems and the coming year should see this process essentially complete, enabling accurate recording of the status of the collections.

An unfortunate but predictable and expected consequence of previous record confusion has been the recent demand by the Bowen family of California for the return of a major Mimbres collection, ostensibly donated in 1938. While the University Counsel feels, as I do, that this collection belongs rightfully to this university, the foreseeable problems underline the absolute necessity for the Maxwell to not only complete upgrading of its records but also to ensure that collections procedures are such that similar problems cannot arise in the future. With the imput of the Maxwell's Board of Management I intend to review these procedures during the coming year.

b) Archæology

The archæological collections of the Maxwell are numerically the largest and, in terms of research, probably the most valuable of all the museum holdings. These have been neglected in previous years, placed in essentially dead warehouse storage, and made much less accessible for scholarly study than their value warrants. As noted in last year's annual report, one of my highest priorities is the organization of these collections as a major national research resource.

The general needs outlined above have been compounded by the transfer of permanent curatorial responsibilities for the Chaco Canyon Collection to the Maxwell by the National Park Service. The huge collections, the fruits of some four decades of N.P.S. excavation in the Chaco Canyon region, come with their full documentary and photographic records and constitute a major research resource.

In order to organize and manage the enlarged archæological collections the Museum has established a curatorial position, filled by a post-PhD archæologist with collections experience. In addition a large work area, previously filled by the N.P.S. staff has been acquired for collections study together with work offices for visiting and resident scholars. We have thus been able to institute a staffing and spatial structure previously non-existent, that will enable us over the next few years to re-organize the coleictions and make them far more accessible as research resources. This major endeavor will involve expansion of storage space and the establishment of a computerized collections catalogue. During the next year preliminary planning for this multi-year process will be undertaken.

A final positive development was the beginning of a $3100 award by the U.N.M.

Foundation for purchase of a specialized storage container which can be used to eliminate insect infestation of the organic archæological collections and thus control a problem that has been chronic in the storage warehouse.

c) **Osteology**

The osteological collections are the most frequently used component of the Maxwell's holdings, utilized for archæological, medical and physical anthropological research and teaching. While this has long been the case, in large part due to the presence of a well-qualified and committed curator and staff and consequent high quality of organization and management, the division has experiencced major positive developments during the past year.

An entirely new storage facility and research laboratory was opened this Spring while the existing teaching laboratory was totally renovated and re-equipped. In addition, the major N.S.F. grant obtained by the curator, Dr. Rhine, and his colleague, Dr. McDaniel, allowed commencement of an inventory and taxonomic computer catalogue program, a project which when complete will make this collection unrivalled in the country for research and teaching purposes.

The highest national exposure of this program and its staff was underlined this year by the presence of the American Association of Physical Anthropology annual meetings in Albuquerque. Dr. Rhine was one of the principal organizers of this event and the Maxwell Museum hosted participants. Significantly the new osteological facilities attracted much attention and furthered the hightening profile of this important division. During the coming year the computer catalogue program (N.S.F.) will continue.

d) Photographic Collection

The photographic archives of the Maxwell constitute a major anthropological resource, strongest in historical and ethnographic materials of the Southwest but also worldwide in scope. These collections have been badly stored, without their own facility, and are thus progressively deteriorating. Establishment of a separate storage-study area for a photographic archive was identified last year as a high priority of development and a grant proposal submitted to the National Science Foundation to help its implementation. A grant of $21,000 has just been awarded by the N.S.F. and will be used in the coming year to consolidate the photo collections and store them in a designated space acquired by the museum from previous N.P.S. space. Additional funds from follow-up grants will be required to fully serve the needs of this archive.

3. PUBLIC PROGRAMS

a. Museum Activities

A wide variety of lectures, workshops and demonstrations was held at the Maxwell during the year. Of major importance was a highly-commended program, funded by the National Endowment for the Arts whereby a series of monthly lecture-workshop events were presented by representatives of Southwestern ethnic communities. Events included Indian weavers and basketmakers and Hispanic metal workers and musicians.

Additional lectures, more academically oriented, were presented by scholars visiting the Maxwell or U.N.M. These lecturers included Peter McNair, Curator of Ethnology at the British Columbia Provincial Museum; Alison Brook, George Washington University; and Christopher Chippendale, Cambridge University.

b) Research oriented programs

The Maxwell Museum was co-sponsor of an internationally-attended Navajo Studies Conference, held on the U.N.M. campus in February 1986. Marian Rodee, registrar, was the principal organizer of this 3-day conference, open to the public and partially-funded by the New Mexico Humanities Council. It is hoped that this conference will become an annual event, held in different New Mexican scholarly communities following the model demonstrated by the February conference.

Additionally, two public professional societies visited the Maxwell for lecture-tours of the collections - the members of the Intermountain Weavers Conference and those of the Albuquerque Archæological Society.

c) Education Program

Working throughout the Greater Albuquerque area in public and private schools and adult and child organizations, 24 volunteer docents presented educational programs with the help of exhibition trunks. This program, unique in the Albuquerque area, constitutes a valuable public service as well as representing a high profile museum acitivity. Given the cut-back in Albuquerque Public School funds we must expect reduction in educationsl support from this source for the coming year. It is clearly necessary to develop alternatives to docent education, although this will remain the core of the program. I expect to undertake review of this program in the coming year in order to ensure that it remains a viable public resource during a period of adverse economic developments.

4. EXHIBITIONS

During the past year a variety of exhibitions was presented, both in the museum galleries and elsewhere, through the medium of travelling exhibitions. The range of subject matter bears testimony to the broad anthropological scope of the museum's exhibitive and educational interests and the diversity of research among the scholars associated with anthropology at the university.

a) Traveling Exhibitions

◊ The Chaco Phenomenon: Museum of Texas Tech., Lubbock, Texas and Fort Worth Museum of Science and History.

◊ Japanese-American Family Album: Gallup.

◊ Anasazi World: Farmington Museum.

b) Museum Exhibitions

◊ Anasazi World. Photography of Anasazi archæology and modern Pueblo life.

◊ From the Weaver's View. Indian Baskets of the American West.

◊ The Greek-American Family. Greek culture in modern American society, emphasizing the Albuquerque community.

◊ Maxwell Museum, You'll Love It! Childrens' art from the museum educational program.

◊ Sacred Symbols. Navajo Ye'ii, Ye'ii Bicheii and drypainting rugs.

5. SHOP

Development over the past year relating to the shop has focused on integrating its activity and marketing practices with the wider planning of the museum, more

especially the exhibition program. Thus product development has included production of a four color poster to accompany the upcoming Navajo rug exhibit and items for the Maya show planned for this fall. The museum shop is also deeply involved in efforts to reorganize and expand the museum's publication program, being its agency for marketing and distribution. This project, already planned, will be developed and implemented during the coming year. In the area of alternative fund-raising the shop has been an integral component in the development of a university policy to cover consignment sale of items given to the Museum Association for support of the institution. We will continue to seek further alternative means to use the shop as an avenue for increased financial income in the future.

6. CONSERVATION

The absence of a museum conservator has been a major obstacle to grant funding from the National Endowment for the Arts and Humanities in the past as well as negatively impacting our ability to preserve our own collections. Clearly the financial state of the University precludes the increase of a staff position at this juncture. I have thus negotiated with the help of the University Counsel an agreement whereby we offer the use of the Maxwell's conservation laboratory for a given amount of private work (measured in time use) in return for a like amount of time donated on museum work. The Maxwell thus gains a part-time conservator without incurring any monetary responsibilities, improving our image as well as our practical ability to care for the collections.

7. GRANTS RECEIVED

◇ National Endowment for the Humanities. Implementation Grant for human origins permanent exhibit ..... $115,000.

◇ National Science Foundation. Grant to commence establishment of a photographic archive..... $ 21,000.

◇ UNM Foundation. Grant to obtain fumigation chamber for organic archæological material ..... $3,100.

◇ Albuquerque Public Schools. Aid for educational program ..... $2,500.

◇ New Mexico Humanities COuncil. Navajo Conference..... $3,400.

◇ Maxwell Museum Association ..... $3,500.

8. STAFF CHANGES

Terminations:	Joseph Traugott	Exhibits Director
	Bruce Bernstein	Preparator
New Employees:	Katherine Trinkaus.....	Research Associate
	Guy Herrington	Preparator
Promotions:	George Wagoner	Exhibits Director
	Krisztina Kosse	Assistant Registrar

9. GOALS FOR COMING YEAR

Goals for the year commencing in July 1986 are in the large part continuations of those formulated for this year. In the long term we must continue to upgrade our

collections research potential and improve our financial base. Specifically we will initiate planning for a comprehensive computerized catalogue of the entire archæological collections together with storage re-organization and hopefully make a good start towards implementation. The structure is now in place to do this with the hiring of a curator (Trinkaus) whose sole responsibility is to oversee archæological collections development.

Also in terms of collections, we will undertake the first year of photographic archival construction with the help of our new N.S.F. grant. This will take at least 3 years to complete but, again, we are now in a position to start work on this necessary project.

Osteological collection computerization will continue and near completion while the inventory will end in June 1987, providing better collections management control than the Maxwell has had at any time since its founding. Of related import, I intend to work with the collections staff towards a more efficient ordering of our collections management procedures and staff structure. The Maxwell has now grown beyond the stage where a single individual can keep control of the entire collections. Indeed there has been a *de facto* development towards separate administration of osteological and archæological holdings. This process will be formalized with the position of registrar and collections manager separated so that their wide responsibilities can be better handled than by a single Collections curator.

On the financial level, the structure that has been developed with the aid of the Accounting and University Counsel will be used to create the beginnings of an endowment administrered by the U.N.M. Foundation. The income expectable from such invested monies will, of course, be minimal at first. However, the first major move will have been made and can henceforth be used to attract and invest additional financial support. The projected fund drive by the Museum Association will be carried out and I shall continue to develop individual support, hopefully on a national level.

In the realm of public programming we hope to have an individual solely responsible for Public Relations and Program Development, thus easing a heavy burden presently shared by my Administrative Assistant and other staff. I hope to review the educational program in order to help maintain its viability in the face of financial cut-backs. Finally, the major exhibition effort will concentrate on constructing a new permanent Human Evolution gallery with money already granted by the N.E.H.

In conclusion, several initial structural developments have been achieved during my first year. It now remains to expand these while utilizing them as the framework around which the Maxwell can begin to fulfill its true potential as a nationally important university research and teaching facility.

Respectfully submitted,

DEPARMENT OF ANTHROPOLOGY ... 1985-86
Funded Research ... Faculty/Adjuncts

FULBRIGHT SCHOLAR

Karl SHWERIN, Prof. Enthnology
"The anthropology of Alcide D'Orbigny, 1826-1857; French naturalist, anthropologist and linguist"
Award period: 1/86 - 12/86 ..... Travel/Stipend, FRANCE

LEAKEY FOUNDATION

Erik TRINKAUS, Assoc. Prof. Archæology
"Paleontological description and analysis of the Neandertal axial and appendicular remains from the Husnjakovo rockshelter, Krapina"
Award Period: 2/18/86 - 5/1/86 ..... $1537

NSF

Chad McDANIEL, Asst. Prof. Linguistics and Stanley RHINE, Prof. Biological Anth.
"Cataloging and conservation of a systematic Southwestern skeletal collection"
Award period: 7/15/86 - 12/31/87 ..... $40,706

NEH

John FRITZ, Adjunct Asst. Professor, Archæology
"Embodiments of kingsip and urban form, myth and literature"
Award period: 3/86 - 6/87 ..... $46,568 +
an additional $10,000 if matched

RUSSELL SAGE FOUNDATION

Louise LAMPHERE, Adjunct Prof. Ethnology
"Working families and sunbelt industrialization: Changes in the home and work place"
Award period: 6/86 - 7/86 ..... $100,809

Funded Research ... Faculty/Adjuncts
Continuing

NEH

Linda CORDELL; 1/01/85 - 7/31/86; Prof. Archæology	$153,632
John FRITZ; 3/01/85 - 6/30/86 (year 3); Adj. Asst. Prof. Archæology	53,000

NSF

Lewis BINFORD; 2/01/84 - 7/31/85 ; Prof. Archæology	$33,579
Lewis BINFORD; 3/01/85 - 8/31/86; Prof. Archæology	21,102
Linda CORDELL; 6/01/84 - 11/30/86; Prof. Archæology	57,224
John FRITZ; 7/1/84 - 12/31/86; Adj. Asst. Professor Archæology	92,000
Peter HARRISON; 7/01/84 - 12/31/85; Adj. Asst. Prof. Archæology	14,388
William MURPHY; 3/01/84 - 2/28/87; Adj. Asst. Prof. Linguistics	23,380
Jeremy SABLOFF; 5/1/83 - 10/31/86; Prof. Archæology	277,614
Robert SANTLEY; 6/15/84 - 7/31/86; Assoc. Prof. Archæology	90,065
Lawrence STRAUS; 4/01/81 - 3/31/88; Assoc. Prof. Archæology	158,914

ROCKEFELLER

Caroline BLEDSOE; 5/14/84 - 5/13/86; resigned Prof. Ethnology	$35,000

TPC

Caroline BLEDSOE; 9/01/84 - 8/31/86; resigned Prof. Ethnology	$36,070

FULBRIGHT

James CHISHOLM, Asst. Prof. Biological Anthropology
"Measuring health and development in Australian Aboriginal children"
6/09/86

GUGGENHEIM FOUNDATION

Charlotte BENSON, Adj. Asst. Professor, Archæology
"Prehispanic pueblo social interrelations: Pottery Mound, New Mexico"
7/30/85; $22,132

NATIONAL GEOGRAPHIC SOCIETY

Charlotte BENSON, Adj. Asst. Prof., Archæology
"Prehispanic regional interaction: Pottery Mound, New Mexico"
8/07/85; $45,240

NSF

Lewis BINFORD, Prof. Archæology
"Hominid evolution: The problem of behavior and niche"
12/30/85; $13,782

John FRITZ, Adj. Asst. Professor, Archæology
"Form, style and meaning of the Imperial City; Vijayanagara: A south Indian case study"
Continuation; 1/09/86; $77,908

Jerem SABLOFF, Prof. Archæology
"A study of ancient Maya settlement and community patterns at the site of Sayil, Puuc Region, Yucatan, Meico; Phase II: Excavations"
6/24/86; $99,315

Robert SANTLEY, Assoc. Prof., Archæology
"Variability in ceramic workshop organization in Matacapan, Veracruz, Mexico"
7/30/85; $99,977

UNM FOUNDATION

Lewis BINFORD, Prof. Archæology
"Current paleolithic research videotape project"
1/27/86; $6465

ATTACHMENT IV

DEPARTMENT OF ANTHROPOLOGY ... 1985 -1986
Funded Research ... Graduate Students

CHALLENGE ASSISTANTSHIP, GRADUATE OFFICE, UNM

Barbara MILLS, Archæology
"In support of dissertation proposal"
Award period: Academic year 1985-86 ..... $6000

LEAKEY FOUNDATION

David NASH, Archæology
"Haystack Cave: A case study"
Award period: 7/14/85 - 6/14/86 ..... $2761

Galen BURGETT, Archæology
"Neotaphonomic investigation of the formation processes of archæological faunal assemblages"
Awarded: 8/25/85 ..... $1848

Steve KUHN, Archæology
"Technological organization in the Pontinian, a middle Paleolithic industry from central Italy"
Award period: 10/1/85 - 1/22/86 ..... $2850

Mary STINER, Archæology
"Foraging ecology of premodern hominids as evidenced by taphomomic analysis of faunal assemblages"
Award period: 10/1/85 - 1/22/86 ..... $3000

James ENLOE, Archæology
"Subsistence organization in the upper Paleolithic of western Europe"
Awarded: 1/21/86 ..... $3000

Michael PETRAGLIA, Archæology
"Site formation processes at ABri Dufaure: An upper Paleolithic rockshelter in southwest France"
Awarded: 3/21/86 ..... $1500

NEWBERRY LIBRARY SHORT-TERM PRESIDENT FELLOWSHIP

Tom KILLION
Awarded: 4/86 ..... $1200

NSF DISSERTATION IMPROVEMENT GRANT

Philip ARNOLD, Archæology
"An ethnoarchæological investigation of ceramic population at the household level"
Award period: 5/15/86 - 10/31/86 ..... $7694

David NASH, Archæology
"Haystack Cave: A methodological case study for evaluating late Pleistocene cave deposits"
Award period: 5/1/86 - 10/31/87 ..... $9269

NSF GRADUATE FELLOWSHIP

Kathy MORRISON, Archæology
Awarded: 3/22/85
Distribution: over 3-5 year period

SIGNMA XI, THE SCIENTIFIC RESEARCH SOCIETY

Mary STINER, archæology
"Foraging ecology of premodern hominids as evidenced by taphonomic analysis of faunal assemblages"
Awarded: 7/31/85 ..... $250

Martha GRAHAM, Archæology
"An ethnoarchæological study of Tarahumara mobility and residence"
Awarded: 12/18/85 ..... $400

Signa LARRALDE, Archæology
"Lithic assemblages in context: Raw material distribution versus artifact distribution in the central Green River Basin, Wyoming"
Awarded: 12/18/85 ..... $400

Jackie ROSSIGNOL, Archæology
"The Opovo Paleobotanical program"
Awarded: 12/18/85 ..... $350

TINKER FIELD RESEARCH GRANT

Mary HOUGHTELING, Archæology
"For field research in Peru"
Awarded: 4/11/86 ..... $1100

Funded Research ... Graduate Students
Continuing

LEAKEY FOUNDATION

James ENLOE; 1/21/85 - 4/15/86; Archæology	$3000
Michael PETRAGLIA; 3/22/85 - 8/15/88; Archæology	2425
Michael PETRAGLIA; 3/22/85 - 8/15/86; Archæology	3143

NSF DISSERTATION IMPROVEMENT

Philip ARNOLD; 5/15/85 - 10/31/86; Archæology	$7694

NFS GRADUATE FELLOWSHIP

Mark LYCETT, Archæology
(last year of funding)

AAUW EDUCATIONAL FOUNDATION FELLOWSHIP

Mary STINER, Archæology
"Changing ecological relationships between archaic Homo and sympatric carnivore species during the Pleistocene Eopch: Phase II of dissertation research"
10/20/85; $10,000

FULBRIGHT SCHOLARSHIP

Mary STINER, Archæology
"...for study in Italy"

Steven KUHN, Archæology
"...for study in Italy"

NSF DISSERTATION IMPROVEMENT

Barbara J. MILLS, Archæology
"Ceramics and settlement in the Cedar Mesa Area, southeastern Utah: A methodological approach"
1/13/86; $4970

Michael SMYTH, Archæology
"Household storage behavior at the Puuc region of Yucatan, Mexico: An ethnoarchological investigation"
4/14/86; $9775

Mary STINER, Archæology
"Dissertation research: Foraging ecology of archaic Homo as evidenced by taphonomic analysis of faunal assemblages"
8/10/85; $3360

OAS FELLOWSHIP

Michael SMYTH, Archæology
"Storage behavior at the Puuc region of Yucatan, Mexico: An ethnoarchæological investigation "
4/28/86; Stipend and traveling expenses

ANTHROPOLOGY DEPARTMENT LECTURES ... 1985 - 86

18 Oct 85 ... DR. ROBERT SCHACHT
Adjunct Asst. Prof. Anthropology, U.N.M.
"The Middle East: A laboratory for the study of cultural change"

4 Nov ..... DR. ALEJANDRO CAMINO
Head, Research Dept., Inter-American Indian Institute, Mexico, D.F.
"An ethnobotonical approach to the human ecology of the high Andes"

11 Nov ..... DR. PAUL MELLARS
Dept. Anthropology, University of Cambridge
"Recent thoughts on the middle to upper Paleolithic transition"

21 Nov ..... MARK LYCETT
U.N.M. anthropology graduate student
Frieda D. Butler Memorial Lecture
"Archæological implications of European colonial contact: Disease, depopulation, and land use patterns in the North American Southwest"

22 Nov ..... DR. LYNN HATHAWAY
Adjunct Asst. Prof. Anthropology, U.N.M.
"Skin conductance and social behavior in pre-school boys"

17 Feb 86 .. DR. JANE LANCASTER
Assoc. Prof. Anthropology, U.N.M.
"School age pregnancy and parenthood: A biosocial perspective"

21 Feb ..... DR. ROBERT TROTTER II
Northern Arizona University
"Curanderismo: Magic and medicinal herbs"

6 Mar ..... Dr. Robert McCormick Adams
Director of the Smithsonian Institution
"Mesopotamian civilization: Text and context"

12 Mar .... DR. HILLARD KAPLAN
Asst. Research Prof. Anthropology, University of Utah
"Food sharing, the sexual division of labor, and child rearing among foragers"

14 Mar ..... DR. ANTHONY CARTER
Chair and Assoc. Prof. Anthropology, University of Rochester
"Mobility and household dynamics"

22 Mar ..... DR. LARRY GORBET
Prof. Anthropology, U.N.M.
(The Duke City Linguistics Circle)
"Roundtable of deafness, deaf culture and sign language"

24 Mar 86 .. DR. KATHERINE SPIELMANN
Asst. Prof. Anthropology, University of Iowa
"Mutualism in the prehistoric Southwest"

26 Mar ..... DR. WIRT WILLS
Post-Doc Fellow, Smithsonian Institution
"Introduction of agriculture to the American Southwest: Evidenced from west-central New Mexico"

27 Mar ..... DR. LOUISE LAMPHERE
Prof. Anthropology, Brown University
"Women's work, family roles, and kin networks in two urban settings"

1,8,15 Apr.. CLARK FIELD ARCHIVE ANTHROPOLOGY FILM & SLIDE SERIES

1 Apr ..... PROF. VISHWAS GOGTE
"Indian archæology: Applications of physical and chemical methods"

4 Apr ..... DR. DAVID S. WEAVER
Wake Forest Univ. & The Bowman Gray Medical Center
"Osteoporosis: Human applications of non-human primate models"

16 Apr ..... CHRISTOPHER CHIPPENDALE
Editor, Antiquity, Cambridge, England
"A lecture on the complex sequence of monuments documented at Stonehenge"

22 Apr ..... IKE EASTVOLD
President, Friends of the Albuquerque Petroglyphs
"Albuquerque's West Mesa petroglyphs"

28 Apr ..... DR. ESMEE WEBB
University of London, Institute of Archæology
"The peopling America: A view from the Old World"

2 May ..... PATRICIA McANANY
U.N.M. anthropology graduate student
Ruth E. Kennedy Memorial Lecture Award
"Of mud and stone: Lithic technology and exchange among wetland farmers of the Maya lowlands"

ATTACHMENT VI

DEPARTMENT OF ANTHROPOLOGY GRADUATES ... 1985 - 86

BACHELOR OF ARTS

Anthropology Major	Minor
Ernest ATENCIO	Gary BEDNORZ
Warren BAREISS	Karen HAGGREN
Michelle BENNETT	Nancy HILSON
Kenneth CLARK	John PICKERING
Victor GONZALES	Richard WISECARVER
Gwen GREGORY	
David GRIGGS	
Mary HOCKETT	
Lewis KIMMELMAN	
Nancy LERMAN	
Jeffrey MULAC	
Sarah OVERHOLT	
Jessica PANTER	
Marc TORRES	
Anthony WATKINS	
Adisa WILLMER	

BACHELOR OF SCIENCE

Anthropology Major	Minor
Sidney ARCHULETA	Susan HILLEY
Arthur CLINGENPEEL	Carl SHUSTER
Michelle GIBBS	
Scott HILLEY	
Joyce MURDOCH	
Elaine NICHOLSON	
Michael SPACE	

MASTER OF ARTS, Program I

Michael Lee ELLIOTT, Archæology
"Atl Atl Cave and late Archaic period in Chaco Canyon, New Mexico"

Maslin Susanne HASHIM, Ethnology
"The Batek: Report on the status of a foraging peoples of west Malaysia"

Bradley Joseph VIERRA, Archæology
"Hunter-gatherer settlement systems: To reoccupy or not to reoccupy"

MASTER OF ARTS, Program II

Bryan Keith CURRAN,
Biological Anthropology

Toni K. DREW,
Multi-disciplinary Anthropology

Eric Kristen JOHNSTON,
Biological Anthropology

Barbara Ann LANE,
Biological Anthropology

Elizabeth MILES-NEELEY,
Archæology

Nelson Griffiths MKANDAWIRE,
Ethnology

Willow ROBERTS,
Ethnology

Michael Owen ROBERTSON,
Ethnology

James P. STANSBURY,
Ethnology

Atsushi SUMI,
Ethnology

Robert Lewis TOMPKINS,
Biological Anthropology

DOCTOR OF PHILOSOPHY

359

Thomas Mark BECKER,
Medical Anthropology
"The ecology of herpesvirus infections in Navajo children"

Elizabeth T. DRESSEL,
Ethnology
"To be 'old' or not to be 'old': Exploring lifestyle variations and their implications for age identity"

Amy Claire EARLS,
Archæology
"The organization of Piro Pueblo subsistence, A.D. 1300 to 1680"

James Ian EBERT,
Archæology
"Distributional archæology: Nonsite discovery recording and analytical methods for application to the surface archæological record"

Thomas Whitney KAVANAGH,
Ethnology
"Political power and political organization: Comanche politics, 1786 - 1875"

Beth Laura O'LEARY,
Archæology
"Salmon and storage: Southern Tutchone use of an 'Abundant' resource"

Julie Evelyn W. SPROTT,
Ethnology
"Precursors of neonatal irritability in firstborns: Prenatal maternal stress and timing of marriage"

Carol Page WOODALL,
Linguistics
"Pitch structures in English discourse"

Courses Offered by Discipline
1985 - 1986

DISCIPLINE	SUMMER 1985	FALL 1985	SPRING 1985
Archæology	1 (Field School)	11	14
Archæology Lab		1	2
Biological Anthro		8	7
Biological Lab		3	1
Biosocial		2	3
Ethnology	3	14	10
(Cross-listed)		(2)	(1)
UNM Abroad (Spain)	2		
Linguistics		5	3
(Cross-listed)		(1)	(1)
General Anthro	1 (SW Institute)	4	3
TOTALS	7	48	43
(Cross-listed)		(3)	(2)

ENROLLMENT FIGURES

Summer 1985	111
Fall 1985	1196
Spring 1986	1131

Graduate Program Information
1985 - 1986

FALL 1985	ACCEPTED	DECLINE	POSTPONE	NO SHOW	ENROLLED
Archæology	29	8	4	5	12
Linguistics	0				
Biological Anthro	18	2	4	3	9
Biosocial Anthro	2				2
Ethnology	7	1	0	2	4
Ethnomuseology	2				2
Linguistics/Ethn	1	1			
Biological/Ethn	1		1		
TOTALS	60	12	9	10	29

Applicants	105
Rejected	44
Withdrew	1
Accepted for Admission	60
Enrolled Fall 1986	29

SPRING 1986	ACCEPTED	DECLINED	POSTPONED	NO SHOW	ENROLLED
Biological Anthro	1				1
Ethnology	3				3
Linguistics	1				1
TOTALS	5				5

Applications	11
Rejected	2
Held for Fall consideration	4
Accepted for Admission	5

Appointments and Separations
1985 - 1986

APPOINTMENTS

Faculty

Dr. Jaime Litvak-King (Visiting Spring 1986)
Dr. Stephen Nachman (Visiting)
Dr. James Turner (Visiting)
Dr. David R. Risser (Visiting)
Dr. Robert Schacht (Visiting Spring 1986)
Dr. Jane B. Lancaster

Staff

Ms. Elaine Hollins, CS-VI

SEPARATIONS

Faculty

Dr. Jaime-Litvak King
Dr. Stephen Nachman
Dr. James Turner
Dr. David R. Risser
Dr. Robert Schacht

Staff

Ms. Emma Mickel, Office Manager

PROMOTIONS

Staff

Ms. Merilyn Williams

ANNUAL REPORT

OF THE

DEPARTMENT OF BIOLOGY

July 1, 1985 - June 30, 1986

Donald W. Duszynski

Professor and Chairman

TABLE OF CONTENTS

		Page
I.	General Information	1
	A. Significant Achievements	1
	1. Building renovations	1
	2. Computer additions	2
	3. Biological Society of New Mexico	2
	4. Undergraduate curriculum	3
	5. Graduate curriculum	4
	a. Graduate student recruitment	4
	b. Degrees awarded	4
	c. Graduate student teaching awards	5
	d. Graduate student committee service	6
	e. Graduate student grants, publications, etc	6
	6. Adjunct professors, joint appointments, etc	7
	7. Professional and technical support staff	7
	8. Biology faculty	8
	a. Teaching excellence	8
	b. Committee service	8
	c. Professional activities, 1985	9
	(1) Books and textbooks	9
	(2) Edited volumes	9
	(3) Chapters/major review articles	9
	(4) Scholarly articles	10
	(5) Abstracts, notes, book reviews, etc	14
	(6) Grant proposals submitted	18
	(7) Grant proposals funded	21
	(8) Papers/posters presented	25
	(a) non-invited	25
	(b) invited papers/symposia	29
	(9) Journal editor	30
	(10) Member of editorial board	31
	(11) Officer/board membership	31
	(12) Service	32
	(13) Special category	46
	9. Museum of Southwestern Biology (MSB)	48

Page

10. Castetter Laboratory for Ethnobotanical Studies (CLES) 49

11. Electron Microscope Facility 49

12. Biology Land Holdings 50

13. L.D. Potter Endowed Chair 50

14. Departmental Seminar Series 50

B. Plans and Recommendations 51

C. Appointments to Staff 52

D. Separations from Staff 52

D.[1] Promotions 52

E. Sponsored Research (Table I) 53-54

II. Biologists in the News 55-56

III. Appendix 67

A. Vol 2, No. 1, Newsletter, BSNM 68-78

B. UNM Strategic Planning Committee, Review of Biology 79-83

C. Annual Report, Mammal Division, MSB 84-92

D. Annual Report, Castetter Laboratory of Ethnobotany 93-95

E. Annual Report, EM Facility 96-98

Annual Report of the Department of Biology

July 1, 1985 - June 30, 1986

Donald W. Duszynski, Professor and Chairman

I. General Information

A. Significant Achievements

On 30 June 1986 I completed my fourth year as chair. I was strongly supported and ably assisted by my assistant chair, Clifford S. Crawford, by our Department's administrative coordinator, Mary Alice Root, and by a very dedicated and over-worked group of technical and professional staff employees. During the FY significant progress was made by the Department in a number of areas, as summarized below.

1. Building renovations. Renovation of room 233 was completed. This converted our old storeroom into 2 new laboratories, one a common equipment room for the cell-molecular faculty and the other a new research lab for Dr. Eric Loker. We also converted an office that housed four graduate teaching assistants into a departmental computer pod with four PCs and two printers. In addition, a significant amount of dialogue and documentation took place with various members of the administration (President Farer, Vice Presidents Desiderio and Cordell, Associate Vice Presidents Price and Lee, University Counsel Goldberg) concerning the renovation of the Biology Annex. On 18 June 1986 Drs. Cordell and Desiderio, with concurrence by President Farer, sent a memo to Associate VP Carroll Lee recommending "the

remodelling of the biology annex should commence immediately." We anticipate the renovation should begin sometime during early Fall Semester 1986.

2. Computer additions. The department continued to struggle with computer acquisitions. The following is a list of computer-related hardware paid for by the Department in FY 1984-85 from either bond, overhead or teaching funds or by various faculty from their research contracts/grants. As a general trend the Department is clearly moving in the directions of microcomputing and away from dependency upon the University mainframe. During the year we added 6 Zenith PCs, 5 printers, several modems and a variety of software to our growing microcomputer inventory.

3. The Biological Society of New Mexico (BSNM). The BSNM was established in 1984 as a tax-exempt organization under the New Mexico Nonprofit Corporation Act and the United States Internal Revenue Code. During April 1986 the BSNM sent its second newsletter (Appendix, item A) to 1471 former students who had completed BA, BS, MA, MS or PhD degrees in Biology. The newsletter summarized the activities of the faculty members of the Department and offered BSNM t-shirts for sale and membership in the Society. To date 23 respondents have contributed an additional $645 toward the activities of the Society. During the FY, funds in the Society's account were used to sponsor recruitment of prospective graduate students in Biology, teaching awards for graduate students, and departmental seminar speakers.

4. Undergraduate Curriculum. The emphasis of our Department at the undergraduate level remains teaching Biology as a liberal art and our faculty and teaching assistants are dedicated to providing students with a broad selection of high-quality courses that are current and meaningful. Biology is one of the most popular majors in the College of Arts and Sciences and beginning Fall Semester 1985, 351 A & S students were registered as Biology majors.

During the FY we added four new courses to our curriculum: Biology 200L, Principles of Ecology (Findley, Marshall), is a 4 sh course that covers the structure and functioning of ecological communities and the role of humans in the earth's ecosystems; Biology 300, Evolution (Taylor, Thornhill), is a 3 sh overview of the basic principles, history and contemporary issues of evolution; these two courses replaced Biology 222L which was deleted last FY from our undergraduate core; Biology 415L, Animal Development (Bourne, Trujillo) combines our old developmental biology (312) and comparative vertebrate embryology (412L) courses into a comprehensive 5 sh course to cover the molecular biology of animal development emphasizing regulatory mechanisms; and Biology 496L, Limnology Laboratory (Dahm) a 1 sh lab course for students who want to master modern techniques for studying the biology, chemistry and physics of aquatic ecosystems.

During Fall 1985 and Spring 1986 semesters we generated 16,858 student credit hours and awarded 60 B.S. degrees during Summer 1985 (6), Fall 1985 (14) and Spring 1986 (40). This figure was 39.7% of the 151 B.S. degrees awarded by A & S for the FY. In addition, 27

students with other majors got minors in Biology during the FY. Our undergraduate advisors for the FY (G. Johnson, W. Johnson, W. Martin, E. Toolson) served over 100 majors and minors during the past FY. Finally, a subcommittee of the University-wide Strategic Planning Committee reviewed the Biology Department. A copy of their report is attached (Appendix, item B). A part of the report is our Department's statement on the Mission and Goals of the Undergraduate Program, which was written by the members of our Undergraduate Policy Committee (chr. S. Altenbach).

5. Graduate Curriculum.

a. Graduate student recruitment. Although we made special efforts to recruit three exceptional graduates with funds from the BSNM, none of them decided to come to UNM. This is the first year, in the four years we have been recruiting graduate students, that we did not get at least half of those recruited to attend UNM. I attribute this to the political instability of the University caused by the mismanagement and interference of the UNM Regents. As an aside, we also had difficulty hiring faculty for the same reasons.

b. Degrees awarded. During the FY we awarded 10 Ph.D. degrees, 6 M.S.I degrees and 1 M.S.II degree. The students who received these degrees and their current whereabouts or progress are listed below.

Ph.D.s

S. Crowley. Currently working in the Department of Zoology, The University of Washington, Seattle, WA. In the Fall, 1986, he will begin Law School at The University of Washington.

G. Dodson. Postdoctoral Fellow, University of Queensland, Brisbane, Australia.
E. Foster. Research and Development Division, Biotechnology Laboratory, Adolph Coors Co., Ft. Collins, CO.
J. Gillespie. Postdoctoral Fellow, Department of Periodontics, University of Texas, Health Science Center, San Antonio, TX.
J. Hastings. Assistant Professor of Biology, Coe College, Cedar Rapids, IA.
C. Henderson. Unemployed, living in Albuquerque. Currently a finalist for two postdoctoral positions.
D. Klemm. Postdoctoral Fellow, Cell Biology Department and Cancer Research Center, UNM School of Medicine.
L. Marshall. Postdoctoral Fellow, Departmente de Biologie, Universite Laval, Quebec, Canada.
D. Moore. Assistant Professor of Biology, Emporia State College, Emporia, KS.
C. White. Internship, Cary Arboretum, Millbrook, NY.

M.S.I

T. Haynes. Nondegree student, UNM. Will apply to Medical School for FY 1987-88.
L. Hertel. Coordinator of anatomy and physiology labs, Department of Biology, UNM.
G. Hill. Ph.D. candidate, on fellowship, Department of Zoology, The University of Michigan, Ann Arbor, MI.
R. Jennings. Ph.D. candidate and teaching assistant, Department of Biology, UNM.
M. Roman. Ph.D. candidate and research assistant, Department of Biology, UNM.
S. Sain. Ph.D. candidate and research assistant, Botany Department, The University of Minnesota, Minneapolis, MN.

M.S.II

K. Al-Qattan. Employed within the Bureau of Science and Industry, Government of Kuwait.

c. Graduate student teaching awards. During the FY, nine of our graduate teaching assistants were rated "Excellent" or "Outstanding(*)" by their students in the campuswide ICES teacher evaluation program one or more times in one or more semesters.

These were: Summer 1985: K. Johnson, K. Schoenly; Fall 1985: A. Wattam, B. Wilson, S. Wright*; Spring 1986: A. Gerstell, T. Haynes, W. Kuipers (3 lab sections), S. Wright and M. Yeaman.

This year's winners of our Department's Graduate Student Teaching Awards ($100) were: Summer 1985: S. Wright; Fall 1985: T. Haynes; and Spring 1986: W. Kuipers.

d. Graduate student committee service. During the FY the following graduate students served the Department as members of important standing committees: Computer Use: O. Fuller, K. Schoenly; Graduate Policy: O. Fuller; Representatives to Faculty Meetings: J. Cook, S. Gardner; Student Research Allocations: C. Clark, H. Dinkeloo, N. Gentz, B. Wattam; Graduate Student Selection: F. Cox; Seminar: L. Fitzgerald, R. Jennings; Undergraduate Policy: P. Gegick.

e. Graduate student grants, publications, papers presented, etc. During the FY, 22 of our active graduate students made professional contributions or received professional awards exclusive of those done jointly with their major professors. These included 27 papers and seminars presented at regional, national and international meetings and/or at other universities; 6 publications in refereed journals; 2 awards for an outstanding student paper (K. Johnson, E. Trotter); 26 grants/awards received for research support from professional societies or granting agencies [Al-Qattan, Clark (4 awards), Gentz (7 awards), George (2 awards), Hartman, G. Hill (5 awards), Johnson, McCallum, Shagam and Sullivan (3 awards)]; one Challenge Assistantship (Miller), one Fulbright Scholarship to France (Farr); two NSF predoctoral dissertation improvement grants (Sullivan, Trotter); one Atomic Energy Commission Fellowship (3 years) at the Savannah River Ecology Lab (Hartman); and two UNM

Foundation Awards for Excellence in Teaching (Haynes and Wright). These awards/achievements are in addition to (1) departmental teaching awards (p.6), (2) jobs and postdocs secured by our degree recipients (pp.4-5), and in-house research and travel awards, of which there were 22.

6. Adjunct professors, Joint Appointments, etc. Several of our faculty hold honorary joint appointments in other departments and a number of professionals in other academic units, the private sector, industry and in governmental labs hold appointments in Biology; these people lend breadth and strength to our overall program. These included at least the following in FY 1985-86:

Adjuncts: R. Cates, Professor, Brigham Young University; R. Conant, Professor, UNM; T. Fritts, Associate Professor, Denver Wildlife Research Center; D. Hafner, Assistant Professor, NM Museum of Natural History; D. Hsi, Professor, NMSU; K. Ono, Assistant Professor, UNM; E. Rypka, Professor, Lovelace; N. Scott, Associate Professor, DWRC; R. Smartt, Assistant Professor, NMMNH; B. Van Horne, Assistant Professor, Colorado State University; J. Wiens, Distinguished Professor, CSU.

Joint Appointments (with us): T. Best, Assistant Professor, General College; R. Kelley, Professor, Anatomy; D. Kidd, Professor, General College; P. Risser, Professor, VP/Research; R. Waterman, Professor, Anatomy; S. Wood, Associate Professor, Physiology.

Joint Appointments (with other departments): O. Baca, Professor, Microbiology; T. Kogoma, Professor, Cell Biology; K. Vogel, Associate Professor, Anatomy.

Visiting Research Assistant Professors: W. Cress, H. Grover, T. Koob, J. Schultz, C. White.

Herbarium Affiliates: M. Caffey, K. Clary, E. Crowder, A. Cully, R. Fletcher, P. Knight, M. Toll.

Emeriti Professors: W. Degenhardt, H. Dittmer, W. Koster, L. Potter.

7. Professional and Technical Support Staff. One of the most important componants of our very active Department is our

dedicated support staff. The technical and professional positions are listed in last year's annual report (p. 8). Without this dedicated group the Department could not function.

8. Biology Faculty.

a. Teaching excellence. Eleven of our faculty were rated as "Excellent" or as "Outstanding(*)" by their students in the campuswide ICES teacher evaluation program one or more times in one or more semesters last FY.

These were: Fall 1985: Altenbach (2 courses), Chiovetti*, Dahm, Kerkof* (2 courses), Martin, Trujillo, Wiens; Spring 1986: Altenbach* (2 courses), Chiovetti* (2 courses), W. Johnson, Kerkof* (2 courses), Loker, Marshall, Martin, Toolson (2 courses).

b. Committee service (*indicates chairperson): Biological Society of New Mexico: Duszynski*, Findley, Potter; Chairman's Advisory: Crawford, Findley, Natvig, Vogel, Wiens; Computer Use: Rice; A & S Graduate Policy: D. Ligon; EM Advisory: Baca, Chiovetti*, Duszynski, Kerkof, Kogoma, Vogel; Graduate Policy: Baca, Dahm, Findley, Natvig, Toolson*; Graduate Student Selection: Barton*, Rice, Yates; Graduate Teaching Awards: Chiovetti, S. Ligon; Lab Animal Utilization: S. Ligon, Riedesel*, Yates; Hi Tech/Government Agency Liaison: Altenbach, Gosz*, Koob, Vogel; LAI Liaison: Findley*, Fritts, Scott, Yates; Library: Crawford; Public Relations: Dahm, Duszynski*, Potter, Wiens, Yates; Seminar: Chiovetti, Marshall, Wiens*; Space: Baca, Crawford*, Dahm, D. Ligon, Natvig, Root; Special Advisors: Forestry, Wildlife - Martin; Health sciences, premed - Bourne; Preveterinary med - Duszynski;

Undergraduate Policy: Altenbach*, Chiovetti, Kerkof, S. Ligon;

Undergraduate Advisors: G. Johnson, W. Johnson, Martin, Toolson.

c. Professional activities, Biology Faculty, 1984.

(1). Books and texbooks.

None

(2). Edited volumes.

None

(3). Chapters/major review articles.

BACA
Genomic analysis of phase I and phase II Coxiella burnetii with restriction endonucleases. In: Rickellsiae and Rickettsial Diseases. VEDA Publishing House of the Slovak Academy of Sciences, Bratislava, Czechoslovakia (and A.T. O'Rourke, M. Peacock, J.E. Samuel, M.E. Frazier, D.O. Natvig and L.P. Mallavia).

CRAWFORD
Decomposition in arid environments: Role of the detritivore gut. In: South African Journal of Science 80:170-176 (and E.C. Taylor).

KOGOMA
The role of RNase H in initiation of DNA replication in Escherichia coli. In: Molecular Biology of Bacterial Growth (M. Schaechter, F.C. Neidhart, J. Ingraham and N.O. Kjeldgaard, eds.). Jones and Bartlett Publishers, Inc. Boston. Mass. pp. 311-324 (and H. Bialy, N.L. Subia, T.A. Torrey, G.G. Pickett and K. von Meyenburg).

LIGON
Woodhoopoe. In: A dictionary of Birds (B. Campbell and E. Lack, eds.) British Orn. Unim. pp. 658-659.

TOOLSON
Electron spin resonance. In: Handbook of Natural Pesticides: Methods, Volume II. Isolation and Identification (N.B. Mandava, ed.) CRC Press, Boca Raton. pp. 477-484.

WIENS
Modeling the energy requirements of seabird populations. In: Seabird energetics (G.C. Whittow and H. Rahn, eds.). pp. 255-284. Plenum Publishing Co., New York.

Vertebrate responses to environmental patchiness in arid and semiarid ecosystems. In: The ecology of natural disturbance and patch dynamics (S.T.A. Pickett and P.S. White, eds.). pp. 169-193. Academic Press, New York.

374

Habitat selection in variable environments: shrubsteppe birds. In: Habitat Selection in Birds (M.L. Cody, ed.). pp. 227-251. Academic Press, New York.

Spatial scale and temporal variation in studies of shrubsteppe birds. In: Community Ecology (J. Diamond and T.J. Case, eds.). pp. 154-172. Harper and Row, New York.

Overview: The importance of spatial and temporal scale in ecological investigations. In: Community Ecology (J. Diamond and T.J. Case, eds.). Harper and Row, New York (and J.F. Addicott, T.J. Case and J. Diamond).

(4). Scholarly Articles

ALTENBACH
Functional anatomy of the shoulder and arm of the fruit-eating bat Artibeus jaimaicensis. Journal of Zoology, London A. 205:157-177 (with J.W. Hermanson).

Cell cycle distribution patterns and generation times of L929 fibroblast cells persistently infected with Coxiella burnetii. Infect. Immun. 47:366-369 (and T.O. Scott, E.T. Akporiaye, R. DeBlassie, and H.A. Crissman).

Genomic analysis of phase I and phase II Coxiella burnetii with Restriction Endonucleases. J. Gen. Microbiol. 131:1,543-1,546 (with A. O'Rourke, M. Peacock, J. Samuel, M. Frazier and D. Natvig).

BARTON
Oxidation of protoporphyrinogen in the obligate anaerobe Desulfovibrio gigas. J. Bacteriol. 164:316-320 (with D.J. Klemm).

CHIOVETTI
Correlative ion and electron microscopy of biological soft tissue embedded in low temperature resins. Microbeam Analysis - 1985 (J.T. Armstrong, ed.). pp. 125-128 (with S. Chandra and G.H. Morrison).

CRAWFORD
Boundary dynamics: a conceptual framework for studying landscape ecosystems. Oikos 45:421-427 (and J.A. Wiens and J.R. Gosz).

DAHM
Composition and possible origin of detrital material in streams. Ecology 66:297-299 (with P. Sollins and C.A. Glassman).

Nostoc (Cyanophyta) productivity in Oregon stream ecosystems: invertebrate influences and differences between morphological types. J. of Phycology 21:223-227 (with A.K. Ward and K.W. Cummins).

Uptake of dissolved organic carbon in mountain streams. Verh. Internat. Verein Limnol. 22:1842-1846.

DEGENHARDT
Aponomma elaphense Price, 1959 (Acari: Ixodidae): Diagnosis of the adults and nymph with first description of the larve. Proc. Biol. Soc. Wash. 98:711-717 (with J.E. Keirans).

DUSZYNSKI
Eimeria from bats of the world: A new species in Tomopeas ravus from Peru. J. Parasit. 71:204-208 (and L.J. Barkley).

Coccidian parasites (Apicomplexa: Eimeriidae) of Microtus spp. (Rodentia: Arvicolidae) from the United States, Mexico, and Japan with descriptions of five new species. J. Parasit. 71:302-311 (with T.L. Vance).

Eimeria ladronensis n. sp. and E. albigulae (Apicomplexa: Eimeriidae) from the wood rat, Neotoma albigula (Rodentia: Cricetidae). J. Protozool. 32:548-550 (with D.W. Reducker).

Eimeria spp. (Apicomplexa: Eimeriidae) infecting Peromyscus rodents in the southwestern United States and northern Mexico with descriptions of two new species. J. Parasit. 71:604-613 (with D.W. Reduker and L. Hertel).

Eimerians from different karyotypes of the Japanese wood mouse (Apodemus spp.) with descriptions of two new species and a redescription of Eimeria montgomeryae Lewis and Ball, 1983. J. Parasit. 71: 808-814 (with C.D. Wash and T.L. Yates).

Coccidian parasites (Apicomplexa: Eimeriidae) from insectivores: New species from shrew moles (Talpidae) in the United States. J. Protozool. 32:577-580.

FINDLEY
A search for pattern in butterfly fish communities. American Naturalist 126:800-816 (and M.T. Findley).

KOGOMA
Function of ribonuclease H in initiation of DNA replication in Escherichia coli K-12. Mol. Gen. Genet. 200:103-109 (and N.L. Subia and K. von Meyenburg).

RecA protein acts at the initiation of stable DNA replication in rnh mutants
of Escherichia coli K-12. J. Bacteriol. 163:439-444 (and K. Skarstad, E. Boye, D. von Meyenburg and H.B. Steen).

Toxicity and mutagenicity of plumbagin and induction of a possible new DNA repair pathway in Escherichia coli. J. Bacteriol. 164:1309-1316 (with S.B. Farr and D.O. Natvig).

LIGON
Shared paternity in the acorn woodpecker. Behav. Ecol. Sociobiol. 17:39-41 (with N. Joste and P.B. Stacey).

Cooperative breeding in Lanius shrikes. I. Habitat and demography of two sympatric species. Auk 102:754-765 (with S. Zack).

Cooperative breeding in Lanius shrikes. II. Maintenance group-living in a nm-saturated habitat. Auk 102:766-773 (with S. Zack).

LOKER

Schistosoma mansoni: Agglutination of sporocysts, and formation of gels on miracidia transforming in plasma of Biomphalaria glabrata. Experimental Parasitology 58:56-62 (with M.A. Yui and C.J. Bayne).

Immune recognition of Schistosoma mansoni primary sporocysts may require specific receptors on Biomphalaria glabrata hemocytes. Parasit. Immun. 6:519-528 (with M.A. Yui and J.A. Stephens).

Plasma components which mediate cellular defenses in the gastropod mollusc Biomphalaria glabrata. Develop. and Comparative Immunol. 9:523-530 (with C.J. Bayne, C.A. Boswell and M.A. Yui).

MARSHALL

Plasticity in yield components in response to fruit predation and date of fruit initiation in three species of Sesbania. J. Ecol. 73:71-81 (with D.A. Levin and N.L. Fowler).

Plasticity in the components of yield in natural populations of three species of Sesbania. Ecology 66:753-761 (with N.L. Fowler and D.A. Levin).

Proximal causes of multiple paternity in wild radish, Raphanus sativus. Am. Nat. 126:596-605 (with N.C. Ellstrand).

The impact of domestication on distribution of allozyme variation within and among cultivars of radish, Raphanus sativus. L. Theoret. Appl. Genet. 69:393-398 (with N.C. Ellstrand).

Interpopulation gene flow by pollen in wild radish, Raphanus satirus. Am. Nat. 126:606-616 (with N.C. Ellstrand).

MOLLES

Recovery of stream invertebrates from flash flood. The Southwestern Naturalists 30:279-287.

NATVIG

Toxicity and mutagenicity of plumbagin and the induction of a possible new DNA-repair pathway in Eschirichia coli. J. Bacteriol. 164:1309-1316 (with S.B. Farr and T.K. Kogoma).

Genomic analysis of Phase I and Phase II Coxiella burnetii with restriction endonucleases. J. Gen. Microbiol. 131:1543-1546 (with A.T. O'Rourke, M. Peacock, J.E. Samuel, M.E. Frazier, L.P. Mallavia and O. Baca).

POTTER
Mancos shale and plant community relationships: Field observations. J. of Arid Environ. 9:137-145 (and R.C. Reynolds and E.T. Louderbough).

Mancos shale and plant community relationships: Analysis of shale, soil, and vegetation transects. J. of Arid Environ. 9:147-165 (and R.C. Reynolds and E.T. Louderbough).

TAYLOR
Estimating the ends of the sensitive period for diaphase induction in arthropods. J. Theor. Biol. 117:319-336.

TOOLSON
Epicuticular hydrocarbons of Drosophila pseudoobscura (Diptera: Drosophilidae): identification of unusual alkadiene and alkatriene positional isomers. Insect. Biochem. 15:25-34 (with G.J. Blomquist and D.R. Nelson).

Uptake of leucine and water by Centruroides sculpturatus (Ewing) embryos (Scorpiones: Buthidae). J. Arachnol. 13:303-310.

VOGEL
Characterization of Proteoglycans from Adult Bovine Tendon. J. Biol. Chem. 260:9,298-9,306 (and D. Heinegard)

The core proteins of large and small interstitial proteoglycans from various connective tissue form distinct subgroups. Biochem. J. 230:181-194 (with D. Heinegard, A. Bjorne-Persson, L. Coster, A. Franzen, S. Gardell, A. Malmstrom, M. Paulsson, and R. Sandfalk).

Variability in proteoglycan synthesis among six strains of normal human adult skin fibroblasts. Conn. Tiss. Res. 14:89-97 (and K. Campbell).

WIENS
Territory size variations in shrubsteppe birds. Auk 102:500-505 (and J.T. Rotenberry and B. Van Horne).

Statistical power analysis and community-wide patterns. Amer. Nat. 125:164-168 (with J.T. Rotenberry).

Boundary dynamics: a conceptual framework for studying landscape ecosystems. Oikos 45:421-427 (and C.S. Crawford and J.R. Gosz).

Response of breeding passerine birds to rangeland alteration in a North American shrubsteppe locality. Journal of Applied Ecology 22:655-668 (and J.T. Rotenberry).

YATES
Scapanus orarius. Mammalian Species 253:1-5 (with G.D. Hartman).

The role of voucher specimens in mammal collections: characterization and funding responsibilities. Acta Zoologica Fennica 170(II):81-82.

Eimerians from different Karyotypes of the Japanese Wood Mouse (Apodemus spp.), with descriptions of two new species and a redescription of Eimeria montgomeryae Lewis and Ball, 1983. J. Parasit. 71: In press December 1985 (with C.D. Wash and D.W. Duszynski).

(5). Abstracts, notes, book reviews, agency technical reports.

BACA
Cell cycle distribution patterns and generation times of L929 cells persistently infected with Coxiella burnetii. Abstract No. D13. Abstracts of the Annual Meeting of the American Society for Microbiology. Las Vegas, Nevada. March 3-7.

BARTON
Role of Nitrogen, Phosphorus and Iron in the Occurance of Algal Blooms at Abiquiu and Cochiti Reservoirs. #185. New Mexico water Resources Research Institute, NM State Univ. Las Cruces, NM. p. 152 (with G.V. Johnson).

Iron(II)-dependent growth of Escherichia coli. Abstracts of the 85th Annual Meeting of the American Society for Microbiology. Las Vegas, NV. I124 (with M.A. Tafoya and B. Saiz).

Biochemical characteristics of Mycobacterium phlei grown under conditions of oxygen deficiency. Abstracts of the 85th Annual Meeting of the American Society for Microbiology. Las Vegas, NV. U1 (with J. Gillespie and E.W. Rypka).

CRAWFORD
Book Review: Wallwork, J.A. 1982. Desert soil fauna. New York:Praeger. Reviewed in Journal of Arid Environments 8 (1985).

DAHM
Factors affecting the uptake of DOC in streams. Abstracts for 70th Annual Meeting, Ecological Society of America, p. 161.

Optical deterioration of Crater Lake, Oregon: the result of sewage contamination? Abstracts for 48th Annual Meeting, American Society of Limnology and Oceanography, p. 59 (with D.W. Larson and N.S. Geiger).

Aerobic-anerobic interfaces as important regions of food production for stream benthos. Abstracts for 33rd Annual Meeting, North American Benthological Society, p. 28 (with J.R. Sedell).

Influence of debris flows on stream ecosystems in mountain basins: hot spots and cold spots. Abstracts for 33rd Annual Meeting, North American Benthological Society, p. 22 (with J.R. Sedell and F.E. Everest).

Observations on the limnological recovery of volcanically impacted Spirit Lake, Washington. Symposium on Mount St. Helens Five Years Later, Eastern Washington University, p. 17 (with D.W. Larson).

Eutrophication of Crater Lake, Oregon. Abstracts for International Symposium on Applied Lake and Watershed Management, p. 34 (with D.W. Larson and N.S. Geiger).

DEGENHARDT
Geographic Distribution: Heptotyphlops dolcis dulcis. S. Sar Herp. Review 15:114-115.

DUSZYNSKI
Coccidian parasites from sciurid rodents from the Western United States and Northern Mexico. SW Assoc. Parasitol. Lake Texoma OK. April (with T.P. Hill).

The coccidia of the European mole, Talpa europea, in England. SW Assoc. Parasitol. Lake Texoma OK. April (with A.R. Wattam).

Coccidian parasites of shrews (Blarina and Sorex spp.) collected from Canada, Japan, and the United States. SW Assoc. Parasitol. Lake Texoma OK. April (with L.A. Hertel).

Coccidia from the harvest mouse (Reithrondontomys megalotis) collected in California, New Mexico and Mexico. SW Assoc. Parasitol. Lake Texoma OK. April (with C.D. Wash).

Host specificity in the coccidia of small mammals: Fact or Fiction. Invited paper. First Intl. Cong. Protozoology of Hungary, Budapest, September.

FINDLEY
Morphologic patterns in New Mexican small mammal communities. Inter. Theriological Congress. August 1985. Abst. #193.

Size and shape in southwestern rodent communities. Amer. Soc. Mammalogists. June 1985. Abst. #90.

JOHNSON, G.
Effects of salts on growth and nitrogen fixation by Azolla mexicana. Proc. 61th Annual Meeting Southwestern & Rocky Mtn. Div. Amer. Assoc. Adv. Science, p. 35.

Effect of salinity on growth of Azolla mexicana on N_2 and fixed N. p. 326. In: Nitrogen fixation research progress. H.J. Evans, P.J. Bottomley and W.E. Newton (eds.). Martinus Nijhoff Publishers, Boston.

Role of Nitrogen, phosphorus and iron in occurrence of algal blooms at Abiquiu and Cochiti Reservoirs. Tech. Comp. Report #185. NM Water Resources Res. Inst. 153 pp. (with L.L. Barton).

LIGON
Cooperation in birds. Review: G.E. Woolfenden's and J.W. Fitzpatrick's "The Florida Scrub Jay: Demography of a cooperative breeding bird." Science 227:1,573-1,574.

LOKER
Leucocytosis and precipitate formation in hemolymph of Biomphalaria glabrata infected with Echinostoma paraensei. Abstract #63. Program & Abstracts, 60th Annual Meeting American Society of Parasitologists, Athens GA. 4-8 August 1985.

Immunity to trematode larvae in the snail Biomphalaria. Abstracts of the Symposium on Immune Mechanisms in Invertebrate Vectors, Zoological Society of London. 14-15 November 1985.

MARSHALL
Variation in extent of multiple paternity among plants and populations of wild radish. Amer. J. of Botany 72:876 (with N.C. Ellstrand).

MARTIN
Manuscript reviews for UNM Press.

MOLLES
Case building behavior by caddisfly larvae and its relation to their geographic ecology. Abstract for the Bull. Ecol. Soc. of America: Program Issue.

NATVIG
Molecular genetic approaches to evolution in the genus Neurospora. Third International Congress of Systematic and Evolutionary Biology Abstracts, p. 133 (abstract of poster presentation). (with J.W. Taylor).

Random fragment hybridization: A tool for studying phylogenetic relationships in the genus Neurospora. J. Cell Biochem. Supplement 9C:189 (abstract of poster presentation).

POTTER
Permanent line transects and clip-plots of Cerro Grade Accession, Bandelier National Monument, 32 pp. Final Report to SW Regional Office of National Park Service, Santa Fe, NM (with R. Tierney).

Ecology of felsenmeers in New Mexico, 27 pp. Final Report to SW Regional Office of National Park Service, Santa Fe, NM (with R. Tierney).

RIEDESEL
Overhydration following ingestion of glycerol solution. Abstract for the Amer. Physiol. Soc. meetings, April 14-21, Federation of American Societies of Experimental Biology. Fed. Proc. 44:1046.

TOOLSON
Reproductive biology of scorpions. Amer. Arachnology 32:11.

Evaporative cooling in the desert cicada, Diceroprocta apache. Amer. Zool. 25:144.

VOGEL
Variability in proteoglycan synthesis among six lines of normal adult skin fibroblasts. American Soc. for Cell Biol. Atlanta, GA. J. Cell. Biol. 101:338a (with K. Campbell).

WIENS
Simulation modelling of marine bird population energetics, food consumption, and sensitivity to perturbation. U.S. Dept. Commer., NDAA, OCSEAP Final Rep. 30:599-644 (with R.G. Ford and D. Heinemann).

Review of "A field guide to birds of the USSR" by V.E. Flint et al. Auk 102:240.

Review of "Birds of the world in philately" by Ridgeley and Eglajs. Auk 102:241.

Review of "Oklahoma ornithology: an annotated bibliography" by Gryzbowski and Schnell. Auk 102:241.

Review of "Birds of southern California's Deep Canyon" by Weathers. Auk 102:436-437.

Review of "Geographical ecology" by MacArthur. Auk 102:437.

YATES
Systematics and historical biogeography of the Talpidae: A synthesis. 4th International Theriological Congress, Edmonton, Alberta, Canda, August, Abst. (with D.W. Moore).

The value and future of systematic collections of mammals. 4th International Theoriological Congress, Edmonton, Alberta, Canada, August, Abst.

Genic divergence between llama (Lama glama) and alpaca (Lama pacas). American Society of Mammalogists Annual Meeting, Orono, Maine, June, Abst. (with E.J. Gentz).

Chromosomal, genic and morphological variation in the agile kangaroo rat (Dipodomys agilis). Amer. Society of Mammalogists Annual Meeting, Orono, Maine, June, Abst. (with T.L. Best, R.M. Sullivan and J.A. Cook).

Genic divergence in Rio Grande cutthroat trout (Salmo clarki viginalis). Southwestern Association of Naturalists Annual Meeting, Phoenix, Arizona, April, Abst. (with D.W. Moore, D. Reduker and D. Hafner).

Genic relationships among the Apodemus of Japan. Southwestern Association of Naturalists Annual Meeting, Phoenix, Arizona, April, Abst. (with B. Frank, C. Wash and D. Moore).

Genetic identification of a hybrid animal. AAZPA Nat'l Conference, Columbus, Ohio, September, Abst. (with E.J. Gentz).

(6). Grant proposals submitted.

BARTON
Mycobacteria grown under conditions of oxygen deficiency. To: NIH on 6/21/85 for $169,882. 4/1/86-3/30/89. (Pending).

CHIOVETTI
Purchase of a Scanning Electron Microscope. To: UNM Foundation. 6/1/85-12/31/85. $35,000. (Not funded).

Purchase of a Scanning Electron Microscope. To: Kresge Foundation. 5/1/855/1/86. $30,000. (Not funded).

Purchase of a Transmission Electron Microscope. To: NSF. 1/1/85-12/31/85. $118,400. (Funded, but declined).

Purchase of a transmission Electron Microscope. To: NIH-MBRS. 7/1/85-12/31/85. $86,000. (Funded).

Electron Microscopy Support Services for Pre-opening Exhibit (Contract). To: State of NM, office of Cultural Affairs, NM Museum of Natural History. 10/31/85-12/31/85. $250. (Funded).

Electron Microscopy Support Services for Traveling Exhibit, 1986-87 (Contract). To: State of NM, office of Cultural Affairs, NM Museum of Natural History. 7/1/86-6/31/87. (Pending).

Purchase of a Scanning Electron Microscope. To: NSF. 6/1/86-12/31/86. $120,000. (Not funded).

CRAWFORD
Landscape Spatial Patterns and Boundary Dynamics in a Semi-Arid Ecosystem. To: NSF Ecosystems Program. $745,366. (Co-PI with John Wiens (PI)). (Not awarded).

DAHM
The role of microbes on the chemistry of geothermal fluids. To: Sandia National Laboratories. 1 year. $30,000.

Influence of vegetation and bedrock on buffering of acid deposition. To: Eisenhower Consortium for Western Environmental Forestry Research. 2 years. $50,000.

Purchase of a scanning electron microscope. To: National Science Foundation, Biological Instrumentation Program. 1 year. $120,000. (Not funded).

Beaver: their effect on hydrology, water yield and water quality. To: Water Resource Research Institute of New Mexico. 1 year. $24,989.

DUSZYNSKI
A proposal to pay publication costs for research projects completed under NMF&G contracts. To: New Mexico Fish and Game. 1 year. $6,500.

Purchase of a scanning electron microscope and auxillary equipment. To: NSF, Biological Instrumentation Program. 1 year. $120,000. (with R. Chiovetti, et al.) (Not funded).

KERKOF
Purchase of a Scanning Electron Microscope. To: NSF. $120,000. (Not funded).

Minority Access to Research Careers (MARC). To: NIH. (Amount not stipulated).

KOGOMA
Stable DNA Replication Mutants of E. coli. To: NATO Grant for international collaboration in research. $6,000. June 1985-July 1986. (Awarded (Co-PI K. von Meyenburg)).

LIGON
Sexual selection: a test of the ideas. To: NSF. 3 years. $240,000. (with R. Thornhill). (Awarded).

LOKER
Biological Control of Snail-Borne Parasites in Kenya. To: U.S. Agency for International Development. 3 years. $138,315. (Pending).

Parasite-Induced Activation and Suppression of Host-Immune Responses: An Invertebrate Model. To: BRSG Committee at UNM. 1 year. $3,800.

Immunology of Host-Parasite Relationships: An Invertebrate Model. To: UNM Research Allocations Committee. 1 year. $2,500.

MARSHALL
Maternal regulation of mate number in wild radish, Raphanus sativus. To: NSF. $168,643.

MOLLES
Influence of sublethal doses of heavy metals on the physiology of stoneflies. To: EPA. 3 years. $280,000. (Not awarded).

Further studies of limiting factors of the Socorro Isopod, Thermosphaeroma thermophilum. To: NM Dept. of Fish and Game. 1 year. $6,000. (Awarded).

Proposal for Scanning EM. To: NSF.

Succession of Forest Streams in New Mexico. To: NSF dissertation improvement proposal. 1 year. $6,000. (Funded).

POTTER
Reassessment of understory and ponderosa growth eight years after the La Mesa fire, Bandelier National Monument. To: NPS. 5/85-5/86. $7,446.

RIEDESEL
Overhydration with Glycerol Solutions. To: U.S. Army Medical Research & Development Command. 1 year. (Pending).

Exercise Cost after Overhydration with Glycerol. To: American Heart Association, NM Affiliate Chapter. 1 year. $12,450. (Pending).

TAYLOR
Evolution of diapause induction in the Indian Meal Moth: experimental tests of a theory. To: NSF. 3 years. $128,000.

TOOLSON
Biochemical adaptation of Drosophila pseudoobscura to desiccation stress: Genetic analysis and field studies. To: NSF. 3 years. $171,035. (Not funded).

Regulation of transcuticular water flux rates and cuticle permeability in cicadas (Insecta: Homoptera). To: NSF. 3 years. $224,436. (Pending).

Effects of Zinc and Aluminum on Osmoregulation in Plecoptera Larvae. To: EPA. 3 years. $281,383. (Co-PI with Molles and Dahm). (Not funded).

Effects of Zinc on Osmoregulation in Stonely Larvae. To: NMWRRI. 1 year. $25,000. (Not funded).

TRUJILLO
Allostric regulation of Liver Phosphofructokinase. To: NSF. 3 years. $600,000.

Ligand Binding sites of Muscle Phosphofructokinase. To: NIH. 3 years. $225,000.

Expression of rat liver phosphoenol pyruvate carboxykinase in E. coli. To: Research Allocations Committee. $5,000.

VOGEL
Proteoglycan Structure Metabolism and Role in Tendon. To: NIH. 3 years. $304,040.

Scanning Electron Microscope. To: NIH. $124,900.

Purchase of Transmission Electron Microscope. To: NIH. $95,700.

Purchase of a Scanning Electron Microscope. To: NSF, Biological Instrumentation Program. $120,000.

WIENS
Landscape spatial patterns and boundary dynamics in a semi-arid ecosystems. To: NSF. 3 years. $745,366. (Not funded).

YATES
Historical zoogeography of southwestern montane mammals: a test of the variance and ecological hypotheses. Dissertation improvement grant. To: NSF (on behalf of R.M. Sullivan). 18 months. $5,840. (Funded).

Host genetic factors affecting specificity of coccidia of small mammals. To: NIH MBRS program. 4 years. $90,047. (3rd year renewal request).

Premanagement laboratory analyses of New Mexico vertebrates, NM Dept. of Fish and Game. 1 year. $20,000. (Funded).

Reorganization, updating and computerization of recent mammal collections of the Museum of Southwestern Biology. To: NSF. 4 years. $193,000. (Funded).

(7). Grant proposals funded.

BACA
Purchase of a transmission electron microscope. To: (NIH) MBRS Program. 2 years. $86,000. (with B. Chiovetti, D. Duszynski, P. Kerkof, T. Kogoma, and K. Vogel).

Public Health Service, NIH, Minorities Biomedical Research Support Grant, $21,345 for 1984.

BARTON
Biochemical characterizations of Mycobacteria grown under reduced oxygen levels. To: UNM Research Allocations Committee. $3,000.

Metabolism of Fe(II) in Bacteria. To: NIH part of the Minority Biomedical Program. $21,000.

CHIOVETTI
Purchase of a Transmission Electron Microscope. To: NIH MBRS-supplemental. 7/1/85-12/31/85. $86,000.

Electron Microscopy Support Services for Pre-opening Exhibit (contract). To: State of NM, Office of Cultural Affairs, NM Museum of Natural History. 10/31/85-12/31/85. $250.

A new approach to Low Temperature Embedding. To: UNM Research Allocations Committee. 3/1/85-6/15/85. $5,000.

DAHM
The role of microbes on the chemistry of geothermal fluid. To: Sandia National Laboratories. 10/1/85-9/30/86. $30,000.

Nitrogen cycle interactions with chemolithotrophic and heterotrophic processes in Mount St. Helens impacted lakes and hot water seeps. To: NSF. 2 years. $21,494 for 1985.

DUSZYNSKI
A proposal to pay publication costs for research projects completed under NMF&G contracts. To: NM Fish and Game. 1 year. $6,500.

Host genetic factors affecting specificity of the coccidia of small mammals. To: NIH-MBRS. 4 years. $27,938. (2nd year).

FINDLEY
Reorganization, updating and computerization of the recent mammal collection, Museum of Southwestern Biology. To: NSF. 11/1/82 for $100,000. (Renewed for $93,000 for 1985-86). (with T.L. Yates).

JOHNSON, G.
Selection for salt tolerant Azolla for biosolar nitrogen fixation in hydroponic culture systems. To: NM Water Resources Research Institute. $10,248.

KERKOF
NIH-MBRS Supplemental Shared Instrumentation: Purchase of a Transmission Electron Microscope. 8/1/85-12/31/85. $86,000.

Action of TSH on thyroid gland cells in culture. 1/1/84-12/31/87. NIH-MBRS. $24,354.

KOGOMA
DNA Replication in E. coli: Regulatory Mutants. 3/1/85-2/28/90. $928,214.

MBRS Supplemental Grant Shared Instrumentation. $86,000.

Genetic and Biochemical Studies on Stable DNA Replication in E. coli. To: MBRS (NIH). $10,220.

Application of Genetic Engineering to Non-invasive Diagnosis, NM Dept. of Development and Tourism. $45,000.

Stable DNA Replication Mutants of E. coli. To: NATO. 6/84-7/85. $6,000.

LIGON
Sexual selection: a test of the ideas. To: NSF. 3 years. $240,000. (with R. Thornhill).

Cooperative raptor research and management. To: Dept. of Energy and BLM. 2 years. $181,300. (with J.R. Bednarz).

LOKER
Parasite-Induced Activation and Supression of Host-Immune Responses: An Invertebrate Model. To: BRSG Committee at UNM. 1 year. $3,800.

Immunology of Host-Parasite Relationships: An Invertebrate Model. To: UNM Research Allocation Committee. 1 year. $2,350.

MARSHALL
The consequences of multiple paternity in plants. To: RAC. $2,500.

MARTIN
Continued disbursement of funds for final phases of work on the renovation work for the Herbarium/Ethnobotany Laboratory. To: UNM Foundation. $9,500.

MOLLES
Further Studies of limiting factors of the Socorro Isopod, Thermosphaeroma thermophilum. To: NM Dept of Fish and Game. $6,000.

Succession of forest streams in New Mexico. To: NSF dissertation improvement grant. 1 year. $6,000.

Studies of population limiting factors of the Socorro Isopod, Thermosphaeroma thermophilum, NM Dept. Fish and Game. $2,000.

NATVIG
Phylogenetic analysis of Neurospora using cloned nuclear-DNA hybridization probes. To: NSF. 3 years. $120,000.

POTTER
Reassessment of understory and ponderosa growth eight years after the La Mesa fire, Bandelier National Monument. To: NPS. 1 year. $7,446.

Evaluation of burro exposures, Bandelier National Monument. To: NPS. 2/84-4/85. $5,273.

Permanent live transects and clip plots of the Cerro Grande Accession, Bandelier National Monument. To: NPS. 1 year. $8,100.

RIEDESEL
Overhydration with Glycerol. To: UNM Medical School, Clinical Research Committee. 1985. $15,000.

TAYLOR
Evolution of diapause induction in the Indian Meal Moth: Experimental tests of a theory. To: NSF. 3 years. $128,000.

Theoretical analysis of the evolution of hibernal diapause induction in insects. To: NSF.

TRUJILLO
Expression of Rat Liver Phosphoseuolpyruvat Carboxykinase in E. coli. To: Research Allocations Committee. $5,000.

VOGEL
Fibroblast Proteoglycans and Connective Tissue Matrix. To: NIH. 3 years. $57,369 for 1 year.

Proteoglycan Structure Metabolism and Role in Tendon. To: NIH. 3 years. $84,888 for 1 year.

Glycosaminoglycans of the Aging Cell. To: NIH Research Career Development Award. 1 year. $50,122.

MBRS, NIH, DRR. 1 year. $17,593.

WIENS
Patch dynamics in shrubsteppe ecosystems. Plant chemistry, arthropod distributions. To: NSF. $2,000.

Bird population and community patterns in shrub desert habitats: testing hypotheses of intercontinental convergence. To: NSF. $6,000.

Bird communities in Australian and North American arid zones. National Geographic Society. $3,000.

YATES
Historical zoogeography of southwestern montane mammals: a test of the variance and ecological hypotheses. Dissertation improvement grant. To: NSF (on behalf of R.M. Sullivan). 18 months. $5,840.

Host genetic factors affecting specificity of coccidia of small mammals. To: NIH MBRS program. 4 years. $27,938. (2nd year).

Premanagement laboratory analyses of New Mexico vertebrates, NM Dept of Fish and Game. 1 year. $20,000.

Reorganization, updating and computerization of recent mammal collections of The Museum of Southwestern Biology. To: NSF. 4 years. $193,000.

Survey of the mammals of Bolivia-Genetics. To: NSF. 3 years. $61,724.

(8). Papers/posters presented.

(a). Non-invited papers read or posters displayed.

BACA
Cell cycle distribution patterns and generation times of L929 cells persistantly infected with Coxiella burnetii. American Society for Rickettsiology. 5th National Conference, 1-3 March 1985. Laguna Beach CA (with T. Scott, E. Akporiaye, R. DeBlassie and H. Crissman).

Persistant infection of host cells with Coxiella burnetii. American Society for Rickettsiology. 5th National Conference, 1-3 March. Laguna Beach CA (with M. Roman.

A mechanism that accounts for persistent infection of host cells with Coxiella burnetii. NM Branch of ASM. Albuquerque, NM. 4-5 October.

Seminar, "A model that accounts for persistent infection with the Q Fever agent." Washington State Univ., Pullman, WA. (Dept. of Bacteriology and Public Health). 17 May.

Seminar, "Research on pathogenesis of Coxiella burnetii." Battelle Pacific Northwest Laboratories, Richland, WA. (Life Sciences Dept.). 20 May.

Seminar, "Persistent infection by a rickettsial agent: a new model." Northern Arizona University, Flagstaff, AZ. (Dept. of Bio.). 16 April.

Seminar, "Q Fever and Coxiella burnetii: a model for host-parasite interactions." UNM Medical School (Basic Sciences). 19 September.

BARTON
Differential binding of FITC-lectins to Azospirillum brasilense. NM Branch of Amer. Soc. for Microbiol. Albuquerque, NM (with J. Yagoda Sagum and W. Reed).

Mechanism of iron(II) transport in Escherichia coli. NM Branch of Amer. Soc. for Microbiol. Albuquerque, NM (with J.C. Rodriguez and M.A. Tafoya).

Enhanced iron uptake in plants by endomycorrhical fungi of the genus Glomus. NM Branch of Amer. Soc. for Microbiol. Albuquerque, NM (with W.A. Cress and G.V. Johnson).

Purification and characteristics of protoporphyrinogen oxidase from Desulfovibrio gigas. NM Branch Amer. Soc. for Microbiol. Albuquerque, NM (with D.J. Klemm).

Characterization of formic dehydrogenase activity in Desulfovibrio gigas. NM Branch Amer. Soc. for Microbiol. Albuquerque, NM (with T. Hanes).

Enhanced iron transport in Sorghum bicolor by rhizospheric bacteria. 3rd Internat. Sympos. on Iron Nutrition and Interaction in Plants. Lincoln, NE (with G.V. Johnson and S.O. Miller).

The role of endomycorrhizal fungi in iron absorption by Hilaria jamesii. 3rd Internat. Sympos. on Iron Nutrition and Interactions in Plants. Lincoln, NE (with W.A. Cress and G.V. Johnson).

The effect of Azospirillum on iron absorption and translocation by sorghum bicolor. 1st Internat. Sympos. on Iron Transport, Storage and Metabolism. Tubingen, FRG (with G.V. Johnson and S.O. Miller).

CHIOVETTI

Correlative ion and electron microscopy of biological soft tissue embedded in low-temperature resin. Joint meeting, Microbeam Analysis Society and Electron Microscopy Society of America. Louisville, KY. August (with S. Chandra and G.H. Morrison).

DAHM

Optical deterioration of Crater Lake, Oregon: the result of sewage contamination? American Society of Limnology and Oceanography/ Ecological Society of America Meeting. Minneapolis, MN. 17-21 June (with D.W. Larson and N.S. Geiger).

Aerobic-anaerobic interfaces as important regions of food production for stream benthos. North American Benthological Society Meeting. Corvallis, OR. 25-28 June (with J.R. Sedell).

Influence of debris flows on stream ecosystems in mountain basins: hot spots and cold spots. North American Benthological Society Meeting. Corvallis, OR. 25-28 June (with J.R. Sedell and F.E. Everest).

Eutrophication of Crater Lake, Oregon. International symposium on Applied Lake and Watershed Management. Lake Geneva, WI. 13-16 November (with D.W. Larson and N.S. Geiger).

DUSZYNSKI

Coccidian parasites from sciurid rodents from the Western United States and Northern Mexico. 18th Annual Meeting, Southwestern Association of Parasitologist (SWAP). Lake Texoma, OK. 12 April (with T.P. Hill).

The coccidia of the European mole, Talpa europea, in England. Presented at SWAP (with A.R. Wattam).

Coccidian parasites of shrews (Blarina and Sorex spp.) collected from Canada, Japan and the United States. Presented at SWAP (with L.A. Hertel).

Coccidia from the harvest mouse (Reithrodontomys megalotis) collected in California, New Mexico, and Mexico. Presented at SWAP (with C.D. Wash).

FINDLEY
Morphologic spacing in small mammal communities. Southwestern Assoc. of Naturalists Annual Meeting. Glendale, AZ

Size and shape in southwestern rodent communities. Am. Soc. Mammalogists, Annual Meeting, Univ. Maine, Orono. 16-20 June.

Reef fish communities along a longitudinal species richness gradient. Amer. Soc. Naturalists/Soc. Study of Evolution joint meeting. Chicago. 23-26 June (with M.T. Findley).

JOHNSON, G.
The characterization of iron uptake by iron-efficient and iron-inefficient soybeans grown in cell suspension culture. 3rd Internat. Sympos. on Iron Nutrition and Interactions in Plants. Univ. of Nebraska at Lincoln. 25-28 June (with S.L. Sain).

The role of endomycorrhizal fungi in iron absorption by Hilaria jamesii. 3rd Internat. Sympos. on Iron Nutrition and Interactions in Plants. Univ. of Nebraska at Lincoln. 25-28 June (with W.A. Cress and L.L. Barton).

Enhanced iron transport in Sorghum bicolor by rhizospheric bacteria. 3rd Internat. Sympos. on Iron Nutrition and Interactions in Plants. Univ. of Nebraska at Lincoln. 25-28 June (with L.L. Barton and S.O. Miller).

Effects of salts on growth and nitrogen fixation by Azolla mexicana. Southwestern and Rocky Mt. Div. Amer. Assoc. Adv. Sci. Ann. Mtg. Tucson, AZ. 19-23 March.

Effects of salts on growth and nitrogen content of Azolla mexicana. Poster presented at 6th Internat. Sympos. on Nitrogen Fixation. Corvallis, OR. 4-10 August.

Enhanced iron uptake in plants by endomycorrhizal fungi of the genus Glomus. Fall Mtg. of NM Branch, Amer. Soc. Microbiol. Albuquerque, NM. 4-5 October (with W.A. Cress and L.L. Barton).

LIGON
Progress report of Red-cockaded woodpecker given to Internat. Council for Bird Preservation. Cooper Ornithological Society.

Territory dynamics in a population of green Woodhoopoes, 1975-1984. Amer. Ornithologists Union.

LOKER
Leucocytosis and precipitate formation in hemolymph of Biomphalaria glabrata infected with Echinostoma paraensei. 60th Ann. mtg. Amer. Soc. of Parasitologists. Athens, GA. 4-8 August.

MARSHALL
Interpopulation gene flow in wild radish, Annual Meeting, Society for the Study of Evolution. Chicago, IL. June (with N.C. Ellstrand).

The consequences of multiple paternity in wild radish. GRMPB Meeting. Utah. September.

NATVIG
Molecular genetic approaches to evolution in the genus Neurospora. 3rd Inter. Congress of Systematic and Ecolutionary Biology Abstracts. (with J.W. Taylor).

Random fragment hybridization: a tool for studying phylogenetic relationships in the genus Neurospora. UCLA Conference: Molecular Genetics of Filamentons Fungi. Keystone, CO.

REIDESEL
Overhydration following ingestion of glycerol solution. Amer. Physiol. Soc. Mtgs. 14-21 April 1985. Federation of American Soc. of Experimental Biology (with D.Y. Allen).

TAYLOR
Developmental contraints and adult involvement in diapause induction. Soc. for the Study of Evolution. Chicago, IL. June.

TOOLSON
Evaporative cooling in the desert cicada, Diceroptrocta apache (Insect: Homoptera). Ann. Mtgs. Amer. Soc. of Zoologists. Baltimore, MD. 30 December.

VOGEL
Variability in Proteoglycan Synthesis Among Six Lines of Normal Adult Skin Fibroblasts. American Soc. for Cell Biol. Atlanta, GA. November (with K. Campbell).

YATES
Genic divergence between llama (Lama glama) and alpaca (Lama pacas). Amer. Soc. of Mammalogists Annual Meeting. Orono, ME. June (with E.J. Gentz).

Chromosomal, genic and morphological variations in the agile kangaroo rat (Dipodomys agilis). Amer. Soc. of Mammalogists Annual Meeting. Orono, ME.

Genic divergence in Rio Grande cutthroat trout (Salmo clarki virginalis). Southwestern Assoc. of Naturalists Annual Mtg. Phoenix, AZ. April (with D.W. Moore, D. Reduker and D. Hafner).

Genic relationships among the Apodemus of Japan. Southwestern Assoc. of Naturalists Annual Mtg. Phoenix, AZ. April (with B. Frank, C. Wash and D. Moore).

Genetic identification of a hybrid animal. AAZPA Nat'l Conference. Columbus, OH. September (with E.J. Gentz).

(b). Invited papers/symposium presentations

ALTENBACH
Bat flight muscle function and the scapulohumeral lock. 7th Internat'l Bat Research Conference and 3rd European Bat Research Symposium. University of Aberdeen, U.K. 19 August (with J.W. Hermanson).

BARTON
Characteristics of ferrons ion uptake by Escherichia coli. 1st Internat. Sympos. on Iron Transport, Storage and Metabolism. Tubingon, FRG (with B.L. Saiz, M.A. Tafoya and H.C. Krivan).

CHIOVETTI
A new approach to low temperature embedding: Quick freezing, freeze-drying and direct infiltration in Lowicryl K4M. Fourth Pfefferkorn Conference on Biological Specimen Preparation. Grand Canyon, AZ. April (with S.A. Little, J. Brass-Dale and L.J. McGuffee).

DAHM
Factors affecting the uptake of DOC in streams. Ecological Soc. of America/American Soc. of Limnology and Oceanography Meeting. Minneapolis, MN. 17-21 June.

Observations on the limnological recovery of volcanically impacted Spirit Lake, Washington. Symposium on Mount St. Helens Five Years Later. Cheney, WA. 16-18 May (with D.W. Larson).

DUSZYNSKI
Host specificity in the coccidia of small mammals: fact or fiction. First International Conference of Hungary on Protozoology. Budapest. 3-6 September.

FINDLEY
Morphologic patterns in New Mexican small mammal communities. 4th Internat. Theriological Congress. Univ. Alberta, Edmonton. 22-25 August.

Reef fish communities along a longitudinal species richness gradient. BYU, Dept. BIO., Provo, UT. November.

Ecomorphology: a 5 lecture mini-course. BYU, Provo, UT. November.

394

KOGOMA
Role of RNase H in Initiation of DNA Replication in E. coli. Presented in the Seminar: Specificity in DNA Replication in Bacteria. The ASM Ann. Mtg. Las Vegas, NV. March.

LOKER
Immunity to trematode larvae in Biomphalarie. Zoological Society of London Symposium on Immune Mechanisms in Invertebrate Vectors. 14-15 November 1985. London, England (with C.J. Bayne).

MOLLES
Case-building behavior by caddisfly larvae and its relation to their geographical ecology. Symposium. Ecological Society of America. Minneapolis, MN. June.

RIEDESEL
Respiratory patterns in hibernating Spermophilus lateralis. International Symposium. Standford University. 6-11 October.

TOOLSON
Reproductive Biology of Scorpions. Amer. Arachnolog. Soc. Sympos. (Recent Advances in Scorpion Biol.). Los Angeles, CA. 24 June.

WIENS
Interspecific competition in birds: evaluating the evidence. Symposium on competition in bird communities, American Ornithologists Union. Tempe, AZ. October (Keynote speaker).

YATES
Evolution of the Talpidae: lack of evidence for deme-size/drift models. Dept. of Zoology Univ. of Georgia. Athens, GA. May.

Chromosomal conservatism in fossorial Insectivora. Savanah River Ecology Laboratory-section of Ecology and Genetics. Aiken, SC. May.

Systematics and historical biogeography of the Talpidae: A synthesis. 4th Internat'l Theriological Congress. Edmonton, Alberta, Canada. August. (with D.W. Moore).

The value and future of systematic collections of mammals. 4th Internat'l Theriological Congress. Edmonton, Alberta, Canada. August.

(9). Journal editor.

YATES
Museum of Southwestern Biology Publications, Managing Editor. Southwestern Naturalist, Advertising Editor.

(10). Member of editorial board.

CRAWFORD
Journal of Arid Environments
Scientific Review of Arid Zone Research

DUSZYNSKI
Journal of Protozoology

FINDLEY
Occasions Papers of the Museum of Southwestern Biology.

RIEDESEL
Sun Daggar to Space, Centennial publication of NM Chapter, Sigma Xi.

TRUJILLO
Journal of Laboratory Clinical Analysis

VOGEL
European Journal of Cell Biology

WIENS
Publication Series, Museum of Southwestern Biology, UNM.
Editorial Consultant, BIOSIS (Biological Abstracts) 1984-1986.

(11). Officer/board member, major professional society/granting agency.

BACA
Treasurer and board member (elected), Society for the Advancement of Chicanos and Native Americans in Science.

BARTON
Co-Chairman of Organizing Committee for 4th Internat. Symp. on Iron Nutrition in Plants with an Emphasis on Microbial Activities. Albuquerque, NM. 1987.

Vice-president of NM Branch of Amer. Soc. for Microbiol.

DAHM
National Park Service, Crater Lake National Park Water Quality Study, peer review panel member since 1982.

DEGENHARDT
Parliamentarian, New Mexico Herpetological Society.

DUSZYNSKI
Regional representative (elected) to Executive Council, American Society of Parasitologists, for the Southwestern Association of Parasitologists.

FINDLEY
Board of Directors, Amer. Soc. of Mammalogists.

JOHNSON, G.
Vice-Chairman, Enviornmental Sciences Section, Southwestern and Rocky Mt. Div. Amer. Assoc. Adv. Sci.

KOGOMA
NIH Microbial Physiology and Genetics Study Section.

LIGON
Nominated for Board of Directors, Cooper Ornithological Soc.

VOGEL
NIH Study Section, Cellular Physiology and Biology (II), regular member.

YATES
American Society of Mammalogists, Recording Secretary; Member Board of Governors.

Southwestern Assoc. of Naturalist, Member Board of Governors.

(12). Service.

ALTENBACH
Consultant to British Broadcasting Corporation for filming of bat/pesticide interaction for Tomorrow's World (a weekly series aired in the U.K.).

Consultant to the Nature Conservancy on the management of the bat caves in the Journada del Muerto Lava flow. Socorro County, New Mexico.

Consultant to NM Museum of Natural History in preparation of bat-related exhibits.

Refereed 1 paper for J. Mammalogy.

Chairman (Biology), Undergraduate Policy Committee.

Biology, High-Tech Committee.

A & S/Univ., Teaching Resources Committee.

BACA
Nominating committee for the American Society for Rickettsiology's officers.

Co-Chairman of the 5th Nat. Conference of the Amer. Society for Rickettsiology. Laguna Beach, CA. 1-3 March.

Chaired a scientific session at the NM Branch of the American Society's annual meeting. 5 October.

Presentation at Albuquerque High School on behalf of the NM Academy of Science Visiting Scholar Program. 13 February.

On-going collaborative research with H. Crissman, Los Alamos Scientific Labs (selected to participate as an investigator utilizing the LANL Flow Cyctometry Resource (NIH Grant P41-RR01315).

Collaborative research project with L. Mallavia. Washington State Univ., Pullman, WA.

Refereed 3 papers for Infection and Immunity.

Refereed 1 proposal for Manitoba Health Research Council.

Refereed 25 proposals for National Research Council and Ford Foundation's Postdoctoral Fellowships for Minorities Program.

Administrative Intern in the Provost's Office (Spring Semester).

Coordinator of cell/molecular/micro seminar.

Accepted Prof. Max Dunford's invitation to serve on NM State Univ. institutional biosafety committee which deals specifically with recombinant DNA.

Graduate school recruitment trip in the Los Angeles/San Diego area for the Graduate School.

Albuquerque Home Visits Project, Office of School Relations.

Biology, Space Committee.

Biology, Undergraduate Policy Committee.

Biology, EM Advisory Committee.

Biology, Graduate Committee.

Biology, Search Committee for a parasitologist.

A&S/Univ., Vice chairman of the Southwest Hispanic Research Institute's Policy Board.

UNM/Albuquerque Schools Liaison Committee.

Sandia-University Research Program Committee.

UNM/Biomedical Research Support Grant Committee.

A&S/Univ., Minority Biomedical Research Support Program Advisory Board.

A&S, Human Subjects Committee.

A&S/Univ., Search Committee for Vice President for Research.

A&S/Univ., President's Science and Technology Advisory Committee.

BARTON
Program Committee for UNM Branch of Sigma Xi.

Program Committee for Regional Meeting of American Society for Microbiology (ASM).

Consultant with C.E. Engineering, Inc., Martinez, CA, on selenium metabolism.

Director of Microbiological Culture Center.

Presented seminar at New Graduate Student Seminar.

Cooperated with Dept. of Pathology in the hosting of Dr. F.M. Harold as a seminar speaker at UNM.

Biology, Graduate Student Selection Committee - Chair.

BOURNE
Curriculum Development: Biol 415, Animal Development.

Transfer Student Advisor for Colleges of Nursing and Pharmacy.

Biology, Undergraduate Policy Committee, Spring 1985.

Health Professions Advisor.

A&S/Univ., Student Standards Committee.

CHIOVETTI
Unpaid consultant, Dr. Valsala Khoshy, VA Medical Center, Albuquerque, NM.

Dept. Physical Antropology, UNM, professional services (EM).

Depts. of Anatomy, Pharmacology and Cell Pathology, UNM, design of low-temperature embedding apparatus, professional services (EM).

Dept. of Chemistry, Cornell University, sample preparation for secondary ion mass spectroscopy, professional services (EM).

New Mexico Museum of Natural History, SEM/photographic/graphic support for "Exploring Microspace" exhibit at NMMNH, professional services (EM).

Electron microscope facility, Director.

Tour of EM Facility for Advanced Science Class, Albuquerque High School.

Biology, EM Advisory Committee, Chairman.

Biology, ICES Coordinaotr/Graduate Teaching Awards.

Biology, Seminar Committee.

Biology, Undergraduate Policy Committee

CRAWFORD
Seminar, Roles of desert invertebrates. Kuwait Univ.

Seminar, Role of the gut in desert detritivores. Kuwait Univ.

Seminar, Prospects of desert development. Kuwait Univ.

Seminar, Surface-active arthropods in desert dune environments: patterns in space and time. Desert Ecological Research Unit, Gobabeb, Namibia, University of Peitermaritzburg, University of Port Elizabeth, Univ. of Pretoria, and Univ. of Witwatersrand in South Africa.

Seminar, Role of the gut in desert detritivores. Desert Ecological Research Unit.

3 lectures to the Desert Ecology Class at Kuwait Univ. March 1985.

Talk on insects to an entomology group associated with the NM Museum of Natural History. February 1985.

Routine communication with all kinds of people about insects and other arthropods in this region.

External examiner on 2 Ph.D. dissertations: one at Witwatersrand Univ; one at Univ. of Cape Town, South Africa.

Member, Committee on Desert and Arid Zone Research (CODAZR).

Refereed 3 papers for Ecology, Scientific Reviews on Arid Zone Research, Soil Fertility and Biology.

Refereed 3 proposals for NSF.

Refereed 1 proposal for Australian Research Grants Scheme.

Curator, Insect Collection.

Assistant Chairman, Biology Dept.

Loren D. Potter Retirement Committee.

Biology, Sevilleta National Wildlife Refuge Study Committee, Chair.

Biology, Chairman's Advisory Committee.

409

Biology, Library Liaison.

Biology, Space Committee, Chair.

A&S/Univ., Curriculum Committee.

DAHM
Environmental Improvement Division, State of NM, Santa Fe, NM. 8 August 1985. Aquatic ecosystems in the blast zone of Mt. St. Helens.

Seminar, UNM Anatomy/Pathology seminar, Albuquerque, NM. 24 September 1985. Extremely thermophilicin organisms in volcanic environments.

Seminar, Sandia National Labs, Albuquerque, NM. 29 October 1985. Extreme Thermophiles.

Seminar, NM Bureau of Mines and Mineral Resources and NM Institute of Mining and Technology, Socorro, NM. 14 November 1985. Response of aquatic ecosystems in the blast zone of Mt. St. Helens - 1980-1985.

Ecological Society of America, Annual Meeting in Minneapolis, MN. 20 June 1985. Co-organizer and co-chair of a special symposium on "Dissolved Organic Carbon in Lotic Ecosystems."

North American Benthological Meeting, Corvallis, OR. 26 June 1985. Co-chair for the session entitled, "Carbon/Nitrogen Metabolism."

Refereed 1 paper for Journal of Freshwater Biology.

Refereed 7 proposals for NSF.

Refereed 1 proposal for National Research Council of England.

Speaker's bureau of UNM guest lecturer to community organizations, 3 public talks given in Albuquerque during 1985.

Biology, Seminar Committee.

Biology, Space Committee.

Biology, Public Relations Committee.

Biology, Graduate Policy Committee.

Biology, EM Advisory Committee.

A&S./Univ., Speakers Committee.

DEGENHARDT
Refereed 1 proposal for NSF.

Curator, MSB, Herpetology.

Talk and tour for Johnson County Community College group (Kansas).

Tour for Artesia high school group.

DUSZYNSKI
Society of Protozoologists, Executive Council of Ad hoc Member.

American Society of Parasitologists, member of Graduate Student Awards Committee.

Southwestern Association of Parasitologist, Archivist.

Seminar, Dept. of Biology, University of Texas at El Paso. October.

First International Conference of Hungary on Protozoology, Budapest. 3-6 September 1985. Co-chair of Symposium on "Genetics and Morphogenesis."

American Men and Women of Science, listed.

Who's Who in America, listed in 44th Edition (1986).

President, Biological Society of New Mexico

Chairman, Potter Retirement Committee

Departmental EM Advisory Committee

Refereed 21 papers for Journal of Protozoology, Journal of Parasitology, Transactions of the American Microscopical Society, Zeitschrift fur Parasitenkunde, Journal of Wildlife Diseases.

Departmental Chairman.

UNM, Science Education Advisory Committee.

A&S, Committee to Form College of Science.

UNM, President's Strategic Planning Committee, 4 subcommittees.

Pre-Veterinary Advisor.

FINDLEY
American Society of Mammalogists, C. Hart Merriam Committee, Honorary Membership Committee.

Refereed 7 papers for American Naturalist, Journal of Mammalogy, Revista Chilena de Biologia, Southwestern Naturalist.

Refereed 3 proposals for NSF.

Refereed 1 proposal for National Geographic Society.

Director, Museum of Southwestern Biology.

Curator of Chiroptera, MSB.

Secretary-Treasurer, Biology Soc. of NM.

Two scheduled museum tours for grade school classes.

Village of Corrales Bosque Advisory Commission.

Biology, Chairman's Executive Committee.

Biology, Graduate Policy Committee.

Biology, Latin American Inst. Liaison Committee.

JOHNSON, G.
Committee on Desert and Arid Zone Research (CODAZR), Southwestern and Rocky Mt. Div. American Assoc. for Advancement of Science (chairman).

Member Steering Committee of International Interdisciplinary.

Symposia on Iron Nutrition and Interactions in Plants.

Seminar, Selection for FE-efficiency of Soybean by cell culture. Iowa State Univ., Ames, IA. 15 November 1985.

Undergraduate Advisor.

4-H Club Project Leader (Rabbits).

Presented 2 hour lecture in Bio. 402/502, Consequence of Nuclear War.

Member board of trustees, Shepherd of the Valley Presbyterian Church.

Advisor for several mid and high school student's Science Fair projects.

Biology, Plant Ecologist Search Committee (1984-85).

Biology, Physiological Plant Ecologist Search Committee (1985-86).

JOHNSON, W.
Contracted with Harper and Row to read and criticize the entire manuscript of the 2nd Edition of Genetics by Farnsworth.

Served as the Biology representative at a meeting of UNM science faculty with the science faculty of Sandia Prep and Albuquerque Academy.

Assistant Chair (1984-85).

Transfer Student Advisor.

Undergraduate Advisor.

Processing of applications for degree forms.

Routing of curriculum changes.

Dept. representative at Senior Day

Dept. representative at Contemporary Issues in Science Forum.

Dept. representative at UNM Medical School Motivational Workshop.

Dept. contact person for the University Combined Fund Drive.

A&S/Univ., Student Standards and Grievance Committee.

KERKOF
Analyzed biology courses taught in Albuquerque high school system and suggested a list of courses to satisfy the 20 credit hours for Education majors specializing in the Biological Sciences.

Biology, Undergraduate Policy Committee.

Biology, Electron Microscope Facility Committee.

Univ., Admissions and Registration Committee.

Univ., Research Allocations Committee.

Univ., Radiations Protections Subcommittee, Chair 1/3 meetings.

The Credentials Component of the Health Sciences Advisory Committee.

The Minority Biomedical Research Support Student Selection Committee.

KOGOMA
Seminar at Dept. of Microbiology, Technical University of Denmark. July 1985.

Seminar at Dept. of Mol. Cell and Develop. Biol., Univ. of Colorado. December 1985.

Refereed 5 papers for J. Bacteriol., J. Mol. Cell. Biol., Gene.

Refereed 26 proposals for NIH as a primary reviewer.

Refereed approx. 240 proposals for NIH as a study section member.

Refereed 2 proposals for NSF.

Faculty preparation for the external review on our Graduate Program.

Biology, Graduate Policy Committee.

LIGON
Amer. Orn. Union, Chairman, member, Committee on Spotted Owl Management, and member, Committee on Biography.

Refereed 20 papers for Animal Behavior, Ecology, Science, Amer. Nat., Auk, Condor.

Refereed 4 proposals for NSF.

Curator of Birds.

Biology, Herpetology Search Committee, Chair.

Biology, Space Committee.

A&S/Univ., Dean's Promotion Committee.

Biology Dept. rep. to A&S Graduate Committee.

A&S rep. to Senate Graduate Committee.

LIGON, S.
Biology, ICES Coordinator/Graduate Teaching Awards.

Biology, Laboratory Animal Utilization Committee.

Biology, Undergraduate Policy Committee.

LOKER
Consultant for the Front Royal Conservation Center, Front Royal, VA, regarding a problem with snail-borne nematode parasites affecting rare species of hoofstock.

Refereed 2 paper for J. Parasitology.

Reviewed an article for American Malacological Bulletin commemorative volume entitled Perspectives in Malacology.

Advisor for 15 undergraduates at Virginia Commonwealth University.

Biology Dept. rep. during tours of animal facilities at Medical School, Biology Dept. and Psychology Dept.

VCU's General Biology Committee, Cell Biology Committee and Ad Hoc Planning Committee for General Biology.

VCU's Pre-Med Advisory Committee.

MARSHALL
Seminar, State University of New York at Stoney Brook.

Seminar, University of Toronto.

Seminar, University of Alaska.

Seminar, University of San Diego.

Seminar, University of California, Riverside.

Refereed 6 papers for Ecology, Evolution, American Journal of Botany, American Naturalist.

Biology, Seminar Committee.

Biology, Search Committee for Plant Community Ecologist.

MARTIN
Consultant to Poison Control Center, poisonous plant identification.

Expert witness, marijuana court case.

Consultant to Village of Los Ranchos.

Sponsor, U.S. Forest Service Workshop on Plant ID.

Curator of the Herbarium and Museum of Botany.

Sponsor, Castetter Laboratories for Ethnobotany.

General advisor for Dept. of Biology, undergraduate.

Preforestry advisor, undergraduate.

Biology, Potter Retirement Committee.

Biology, Potter Replacement Committee.

Biology, Cates Replacement Committee.

Biology, Sevilleta Committee.

Univ., Faculty Senate Library Committee, Chairman.

Univ., Faculty Senate, 1/2 year.

Univ., UNM Press Committee.

Univ., Southwestern Studies Committee.

406

Presented an invited paper to NM State Garden Clubs Workshop at Ghost Ranch in September, "Vegetation of New Mexico."

Member of the Botanical Garden Advisory Committee.

Member of the Botanical Advisory Committee for the NM Natural History Museum.

Presentation on polyploid derivation of modern cultivated plants to the General Botany Class.

Obained a gift of 1,110 lichen specimens from the C.B. Jones Estate.

Presented an invited paper to the "Gardening in the Southwest" course at the Albuquerque Garden Center. 20 February 1985.

Presentation of "Wildflowers of New Mexico" talk to the Sierra Club. 16 September 1985.

A talk to the Northwestern Kiwanis Club on the subject of "Poisonous Plants." 20 March 1985.

Served as a member of the Speakers Bureau.

Participated in Senior Day.

Participated in Parents Day.

Presentation to the Statemans Club, "Poisonous Plants." 13 December 1985.

Presentation to the Sunrise Civitan Club, "Wildflowers of New Mexico." 13 November 1985.

A talk on "Wildflowers of New Mexico" Monte Community Center, Tijeras, NM. 13 September 1985.

Invited paper to the Southwest Institute in June, "Flora of the Rio Abajo."

Gave several Herbarium and Greenhouse tours to various on-campus and off-campus groups.

Numerous plant identifications and much advice about native and cultivated plants to various individuals in the community, colleagues in other institutions, and assorted agencies.

MOLLES
Consultant to City of Albuquerque through Southwest Land Research, Inc., Albuquerque. Developed the ecological portion of a use/preservation plan for the Rio Grande Bosque including a plan for development and funding of a program of Bosque studies of UNM. Several meetings with city, state and federal agencies relative to proposal, presentations at several public meetings.

Consultant to Dept. of Computer Science, Minho Univ., Portugal.

Consultant to Dept. of Marine Biology, Univ. of the Algarve, Portugal.

Consultant to Instituto Universitario University of Tras-os-Montes, Portugal.

Refereed 1 paper for Ecology.

Refereed 3 proposals for NSF.

Fish Museum Curator.

Undergraduate Advisor.

Biology, Parasitologist Search Committee.

NATVIG
Refereed 1 paper for Experimental Mycology.

Refereed 4 proposals for NSF.

Biology, Chairman's Executive Committee.

Biology, Graduate Policy Committee.

Biology, Seminar Speaker Selection Committee.

Biology, Physiological Plant Ecologist Search Committee.

POTTER
Seminar, National Park Services Water Resources Training Course, Yampa River Field Session. 1-3 June 1985. Invited instructor.

Seminar, Dartmouth College Geology Field Session, Lake Powell. 14-20 November 1985. Invited guest lecturer.

Eisenhower Consortium for Western Environmental Forestry Research meeting, Las Cruces, NM. February 1985. University Delegate. Board of Directors of Biological Society of New Mexico.

Wrote history of Biology Department for upcoming centennial celebration.

RIEDESEL
Sigma Xi, UNM Chapter, Executive Committee and Centennial Project Committee.

NM Regional Science Fair, Judge.

Refereed 2 papers for Physiological Zoology, Laboratory Animal Science.

409

Refereed 3 proposals for NSF.

Biology, Laboratory Animal Care and Use Committee, Chairman.

A&S/Univ., Laboratory Animal care and Use Committee.

TAYLOR
Refereed 4 papers for Ann. Ent. Soc. Amer., J. Theor. Bio., Env. Ent., Am. Nat.

Refereed 1 book chapter.

Refereed 9 proposals for NSF.

Biology, Departmental Honors Program.

Biology, Computer Use Committee.

A&S/Univ., Computer Use Committee.

TOOLSON
Refereed 4 papers for Physiological Zoology, South African Journal of Science, J. of Insect Physiology.

Refereed 2 proposals for NSF.

Undergraduate Advisor.

Biology, Graduate Policy Committee, Chairman.

Biology, Physiological Plant Ecologist Search Committee, Chairman.

Univ., Research Policy Committee.

A&S, Graduate Policy Committee.

TRUJILLO
Seminar presented to Biochemistry Dept., UNM Medical School.

A&S/Univ., Radiation Control Committee.

VOGEL
American Soc. for Cell Bio., member Public Policy Committee.

American Soc. for Cell Bio., member Legislative Action Committee.

Seminar, Shriver's Hospital, Montreal, Quebec, Conn. Tiss. Research Dept. April 1985.

Seminar, NSF, Cell Bio. Division, Washington, D.C. June 1985.

Seminar, NIH, Mineralized Tissue Res. Branch, Bethesda, MD. April 1985.

Seminar, Univ. of Washington, Dept of Pathology, Seattle, WA. August 1985.

Refereed 20 papers for Eur. J. Cell Biol., J. Biol. Chem., J. Cell. Physiol., Conn. Tiss. Research.

Refereed 24 proposals for NIH as a primary reviewer, 240 on a study section.

Refereed 2 proposals for NSF.

Biology, Chairman's Executive Committee.

A&S/Univ., AAUW Scholarship Selection Committee.

A&S/Univ., Search Committee, Assistant Provost.

WIENS
Ecological Soc. of America, member, Publications Committee.

Seminar, Univ. of Western Australia, Ecology of bird communities. March.

2 Seminars, Western Australia Institute of Technology, Ecology of bird communities. March.

Seminar, Univ. of Western Australia/History and Philosophy of Science. The Historical development of ecological controversies. March.

Seminar, Murdoch Univ., Perth Australia. Ecology of bird communities. March.

Seminar, Univ. of Queensland, Brisbane. Ecology of bird communities. April.

Seminar, Griffith Univ., Brisbane. Ecology of bird communities. April.

Seminar, Univ. of Sydney, Australia. The ecology of disturbance in communities. May.

Seminar, Colorado State Univ. Shrubsteppe plant chemistry/arthropods. October.

Seminar, Univ. of Cordoba, Argentina. Ecology of bird communities. November.

Seminar, Instituto Argentino de Investigaciones de las Zonas Aridas, Mendoza, Argentina. Ecology of bird communities. November.

Refereed 11 papers for American Naturalist, Oikios, Ecology, Science, Arid Environments.

Refereed 3 proposals for NSF.

Refereed 1 proposal for Smithsonian Institution.

Refereed 1 proposal for Australian Nat'l Grants Scheme.

Sponsored Friday ecology discussion group, Dept. of Biol.

Biology, Seminar Committee, Chairman.

Biology, Plant Community Ecology Search Committee, Chairman.

Biology, Chairman's Executive Committee.

Biology, Public Relations Committee.

YATES
Amer. Soc. of Mammalogists, Chairman, Systematic Collections Committee; member, Program Committee.

Southwestern Assoc. of Naturalists, Chairman, Development Committee.

Refereed 12 papers for J. Mammalogy, Mammalian Species, Evolution, Auk, Science, Southwestern Naturalist.

Refereed 14 proposals for NSF.

Refereed 1 proposal for Nat'l Geographic Society.

Curator of Mammals.

Gave talks to: Wildlife Rescue, Share with Wildlife Comm., numerous MSB tours and Genetic Analysis for Rio Grande Zoo.

Biology, Graduate Student Selection Committee.

Biology, Laboratory Animal Utilization Committee.

Biology, Liaison Committee with the Latin American Institute.

Biology, Public Relations Committee.

UNM Faculty/Staff Club, President.

(13). Special Category.

ALTENBACH
Slide and cine program on bats and bat flight prepared for the NM Museum of Natural History.

Standard frame-rate cine footage on sand movement during sand dune formation prepared for the NM Museum of Natural History.

High-speed and standard frame rate footage of roadrunner locomotion and bird flight prepared for the NM Museum of Natural History.

Bat Guano Cave illustrating stratography of deposits prepared for the NM Museum of Natural History.

High-speed 35 mm cine footage of bat flight shot for Francis Thompson, Inc., NY, for use in IMAX film entitled On The Wing for the Smithsonian Air and Space Museum.

High-speed and standard frame rate footage of bat flight and roosting behavior shot for The Nature of Things, a production of the Canadian Broadcasting Corporation.

BARTON
Invited to participate in the People-to-People program to China which would be in the area of fermentation technology.

BOURNE
Rated Outstanding Teacher by ICES.

CHIOVETTI
Instructor and course evaluation system (ICES)

Spring 1985:	Biol. 548	- Outstanding
	Biol. 502	- Outstanding
Fall 1985:	Biol. 547	- Outstanding

CRAWFORD
Invited Visiting Professor for three weeks in March, 1985, at the Univ. of Kuwait, Dept. of Zoology.

Invited Visiting CSIR Fellow, Desert Ecology Research Unit, Namib Desert Research Station, August - December 1985.

DUSZYNSKI
The Journal of Protozoology, Advertising Editor.

LIGON
Invited Symposium Speaker at the 19th Internat'l Ornithological Congress to be held in June 1986.

MARTIN
Presidential Recognition Award, UNM Outreach Program, 1985.

Leopold Conservation Award for 1985.

MOLLES
Fulbright Research Award to Portugal, Ecology of Caddisflies.

POTTER
Biology addition was designated Potter wing.

Establishment of the Loren D. Potter Chair in Plant Ecology in the UNM Biology Dept.

TRUJILLO
Member of Amer. Soc. of Biological Chemists.

VOGEL
UNM Lectureship-Professorship (1984-86).

Research Career Development Award, NIH.

WIENS
Invited to evaluate Argentine research plans for the ecology of Chaco ecosystems by Argentine Academy of Sciences (CONICET). November 1985.

Fulbright Senior Scholar, Univ. of Sydney (1984-85).

Member, Blue Ribbon Advisory Panel, Scientific Study of the Mono Lake ecosystems, State of California Assembly (1985-87).

Visiting Professor, Univ. of Sydney (Sept. 84 - June 85).

YATES
Appointed as one of two American members on the Internat'l Commission on Systematic Collections by the Internat'l Union of Biological Sciences.

9. Museum of Southwestern Biology (MSB). The MSB consists of six divisions each with its own curator: Herbarium (Martin), Herpetology (Degenhardt), Ichthyology (Molles), Invertebrates/Aquatic Invertebrates (Crawford), Mammalogy (Yates) and Ornithology (D. Ligon). Dr. J. S. Findley is Director of the MSB and serves to coordinate the activities of the entire museum process.

The functions of the MSB are research, education and service. Because several of the Division Curators are out of the country (Yates, Bolivia; Molles, Portugal) and because of the interregnum between Professor Degenhardt and Professor Snell, our newly hired Curator of Herpetology, only one divisional report is at hand as of this date. I enclose the report of the Division of Mammals (Appendix, item C) which is more or less typical of the activity of

the Herpetology and Herbarium sections, but is considerably more active than the other sections.

The most important item affecting the MSB during the past academic year was certainly the retirement of Professor Degenhardt, who has been Curator of Herpetology for over 20 years, and the hiring of Professor Howard Snell in that capacity. With the arrival of Dr. Snell, we anticipate an increasingly vigorous program in the Herpetology Division.

In June, 1985, the curatorial personnel of the Division of Mammals extended an invitation to the American Society of Mammalogists to hold their annual meeting on the UNM campus in June, 1987. That invitation was accepted, and reiterated in June, 1986, at Madison, Wisconsin. Thus the Division of Mammals and other members of the American Society of Mammalogists in the Department will be especially busy during the coming academic year in preparation for the advent of 600-1000 mammalogists from various parts of the world.

10. Castetter Laboratory for Ethnobotanical Studies (CLES). The CLES provides modern vegetational studies and paleoethnobotanical analyses in coordination with archaeological investigations. For information on members of the lab and their specific research interests and expertise, consult our 1984-85 Annual Report (pp. 54-55). An update of the CLES Technical Series for FY 1985-86 is in the Appendix (item D).

11. Electron Microscope Facility. The department's EM Facility is directed by Dr. Robert Chiovetti. His annual report is attached (Appendix, item E).

12. Biology Department Land Holdings. See our 1984-85 Annual Report for current land holdings. No new land was acquired in FY 1985-86.

13. L. D. Potter Endowed Chair. A detailed history of the development of the Potter Chair is given in our 1984-85 Annual Report. Currently the Potter Chair consists of two endowment accounts. One, the Ross-Brown Endowment (No. 492-031-000) in the General Accounting Office was established with funds from the sale of land to UNM. In the first nine months, this account accrued approximately $2,600 in interest; the approximate value of this account is now $65,000. The second account is with the UNM Foundation. The balance in this account, as of 31 March 1986 is $7,571.82.

14. Departmental Seminar Series. The Department devotes a portion of its overhead return each year to support a strong seminar program that features distinguished outside speakers in many disciplines. During FY 1985-86 our seminar series featured the following individuals.

Dr. Ken Armitag, University of Kansas, "Competition and cooperation in marmot societies."

Dr. Chris Bayne, Oregon State University, "Invertebrate contributions to immunology: the evolution of self-defense."

Dr. Eugene Bovee, University of Kansas, "Life among the protozoa."

Dr. Michael Breed, University of Colorado, "Kin recognition in social bees."

Dr. Nancy Burley, University of Illinois, "Mating preference in monogamous birds."

Dr. Cliff Crawford, University of New Mexico, "Habitat selection and food choice in a Namib desert detritivore."

Dr. Kenneth Cummins, Appalachian environmental laboratory, "Riparian zone control of stream ecosystem structure and function."

Dr. Jonathan Gershenzon, Washington State University, "Sunflower terpenoids--systematic and ecological significance."

Dr. Ray Huey, University of Washington, "Lizard ecology and physiology."

Dr. Paul Jackson, Los Alamos Scientific Laboratory, "Aspects of plant cell metabolism."

Dr. Mike Kahn, Washington State University, "Bacteria-plant interactions."

Dr. Richard Karban, University of California Davis, "Organization of the plant-feeding fauna on Erigeron glaucus: Experimental manipulations of a simple community."

Dr. Bruce Kline, Mayo Clinic, "The control of extrachromosomal DNA replication in prokaryotes."

Dr. Tom Kunz, Boston College, "Energy expenditure in free-living bats."

Dr. Paul Mann, University of New Mexico, "Manipulation of hybridoma techniques to generate greater antibody diversity."

Dr. Bruce Milne, Harvard University, "Time scale dependent variation in landscape structure and fractal geometry."

Dr. Norman Negus, University of Utah, "Mammalian reproductive strategies: Adaptive respones to changing environments."

Dr. Mary Price, University of California Riverside, "Mechanisms of resource partitioning in desert rodent communities."

Dr. Andy Stephenson, Pennsylvania State University, "Effects of selective fruit abortion on seed quality."

Dr. Don Strong, Florida State University, "Density-vague population dynamics."

Dr. John Wiens, University of New Mexico, "The structure of Australian shrub-desert bird communities."

B. Plans and Recommendations

Plans for the upcoming FY include adding several new courses to our undergraduate curriculum (natural history of New Mexico; history of biology; health, wellness and disease), redesign of our

non-majors course (110-111), develop plans to implement a BA in Biology, secure final funding approval for the Biology Annex, push the concept of a new building for biology in the forseeable future, and replace Drs. Kogoma and Wiens.

C. Appointments to Staff

August 1985. Beth Dennis was hired as a Graphics Technician to replace Yevonn Ramsey who left in June to do free-lance work (for better salary). September. Paulita Aguilar replaced Kevin Montoya as Bookkeeper. December. Eddie Walker was hired as EM Lab Tech IV. January 1986. Carol Martindale replaced Paulita Aquilar as Bookkeeper. March. William Gannon replaced William Barber as Collections Manager of the Mammal Division MSB. April. Clarence Mason replaced Earl George as Lab Tech V (we share this position with Geology). June. Desiree McConnell was hired as Lab Animal Tech III and Rhonda Germano was hired as Receptionist to replace Carolyn Hill.

D. Separations from Staff

July 1985. Kevin Montoya, Bookkeeper, left the Department to accept a higher paying job. September. William Barber, Collection Manager, left to accept a higher paying job. January 1986. Phillip Chappel, Lab Tech IV, left to accept a higher paying job; Brigitte Wilson, Receptionists, left to accept another position; Paulita Aquilar, Bookkeeper, left to accept another job. March. Marilyn Altenbach, Lab Animal Tech III, left for health reasons. June. Earl George, Lab Tech V, retired.

D[1]. Staff Promotions

July 1985. Mary Alice Root from Academic Support Aide to Administrative Coordinator and Melinda Bealmear from CS V to Staff Assistant. January 1986. Peter Curtiss from Lab Tech II to Lab Tech III. March. Roy Ricci from Lab Animal Tech III to Lab Animal Tech IV.

E. Sponsored Research

Records on grant proposals submitted to outside agencies are kept in our Department on an annual basis (i.e., by year). The information here is for 1985: (a) during 1985, 18 of our 30 FTE faculty (60%) submitted 47 proposals to outside agencies; (b) during 1985, 20 of our 30 FTE faculty (67%) received new awards or renewal of previously awarded grants totaling 47 separate awards.

The outside contracts in force in our Department on 30 June 1986 totaled $2,389,898. This information is summarized in Table I (p. 54).

Table I. Active Research Grants/Contracts Held by Department of Biology Faculty as of 30 June 1986.

Faculty Member(s)	Agency	Title	Amount Awarded	Duration
Baca	NIH-MBRS	Phase variation in Coxiella burnetti	$ 80,684	I/1/84 - XII/31/87
Barton	NIH-MBRS	Fe(II) transport system	78,864	I/1/84 - XII/31/87
Bednarz	DOE	Cooperative raptor research & management	181,314	IV/1/85 - III/31/87
Cates/Gosz	NSF	Plant secondary chemistry	225,000	VII/1/86 - XI/30/87
Cully	NMF&G	Prairie dog	15,000	VII/1/85 - VIII/1/86
Dahm	Sandia	Microbes in geothermal fluid	23,334	X/1/85 - IX/30/86
Dahm	NSF	Subcontract, Univ. Washington	19,618	XII/1/84 - XI/30/86
Duszynski	NMF&G	Publications for NMF&G	6,500	XII/18/85 - XII/31/86
Duszynski/Yates	NIH-MBRS	Host genetic factors/host specific	137,559	I/1/84 - XII/31/87
Kerkof	NIH-MBRS	Thyroid gland cells	91,585	I/1/84 - XII/31/87
Kogoma	NIH-MBRS	DNA replication in E. coli	38,220	I/1/84 - XII/31/87
Kogoma	NIH	DNA replication (year 11)	155,350	III/1/86 - II/28/87
Loker	BRSG	Schistosome-snail immunity	3,400	XI/22/85 - VII/22/86
Molles	NMF&G	Isopod culture system	9,686	IX/1/85 - XII/31/86
Natvig	NSF	Phylogenetic analysis of Neurospora	120,213	II/1/84 - VII/31/87
Rice	NSF	Natural selection of habitat preference	114,988	VIII/15/84 - I/31/87
Sullivan	NSF	Ph.D. improvement-montane mammals	5,840	V/15/85 - X/31/86
Taylor	NSF	Evolution of diapause	127,978	X/15/85 - IV/31/89
Thornhill	NSF	Ecological determinants	73,766	V/1/83 - X/31/86
Thornhill	NSF	Sexual selection	76,999	IV/1/84 - IX/30/86
Thornhill/Ligon	NSF	Selection in red jungle fowl	240,000	II/1/86 - VII/31/89
Trotter	NSF	Ph.D. improvement-forest & streams	2,999	XII/1/85 - XII/1/86
Trujillo	NIH-MBRS	Regulation of carbohydrate metabolism	7,446	I/1/86 - XII/31/86
Vogel	NIH-MBRS	Fibroblast proteoglycans	65,793	I/1/84 - XII/31/87
Vogel	NIH	Fibroblast proteoglycans/CT matrix	78,150	I/1/86 - XII/31/87
Vogel	NIH	Proteoglycan structure	84,888	IX/23/85 - VIII/31/86
Yates/Findley	NSF	Updating recent mammal collections	193,000	XI/1/82 - VII/31/87
Yates	NMF&G	Genetics and chromosomal variations	20,000	VII/1/86 - VI/30/87
Yates	NSF	Bolivia mammals/genetics	61,724	XI/15/84 - IV/30/88
Yates	NMF&G	Ichthyology (Rio Grande)	50,000	VI/3/86 - XII/31/87
			$2,389,898	

II. Biologists in the News

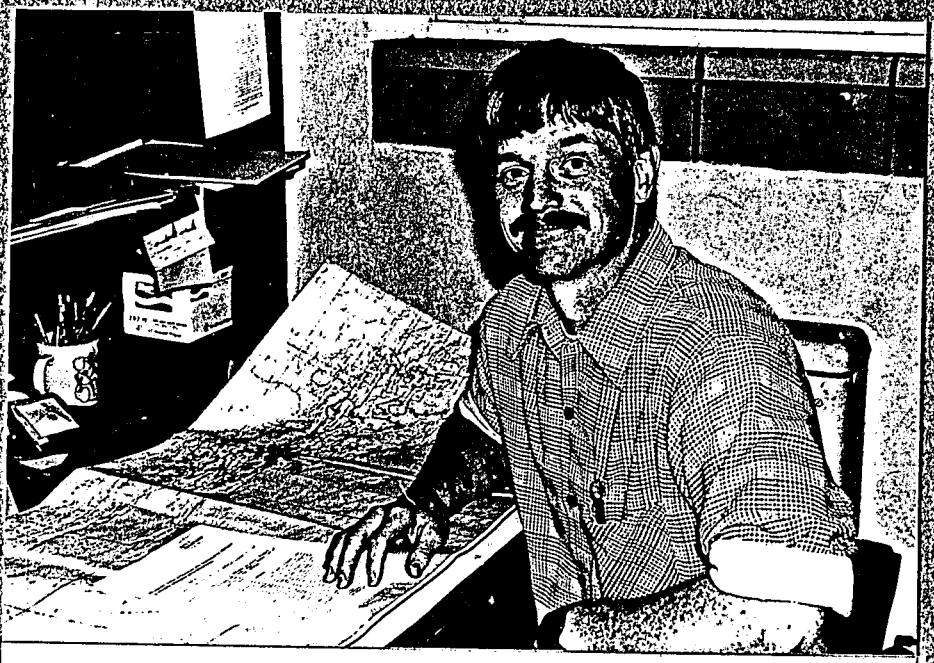
In Biology we take great pride in the accomplishments of our people. Examples of some of their accomplishments during FY 1985-86 are highlighted in the following pages.

Inspired principally by the early works of Professor Edward Castetter, after whom the Biology Building is named, the Ethnobotany Lab appeared on the scene in the late 70's. Its pioneering organizers were Karen Clary, Anne Cully, and Mollie Toll, who collectively have degrees and/or extensive training in biology, anthropology, and archaeology. As a unit of the Biology Department, the Ethnobotany Lab is housed close to the Herbarium, and while space is limited down there, enthusiasm and effort is most certainly not. The three ethnobotanists possess a diversity of skills, which they use to help reconstruct past environments as these relate to human economic systems. Essentially, this entails the identification of plant material from archaeological sites. Funding for the operation comes from contracts with the Office of Contract Archaeology, the Navajo Tribe, the Park Service, and a number of other organizations.

Recently, Karen, Anne, and Mollie, who are ably assisted by UNM graduate Beth Crowder, agreed to host the Society for Ethnobiology's Ninth Annual Ethnobiology Conference. This will take place at UNM during 21-23 March, and will continue the Society's traditionally eclectic inquiry into human interactions with the plant and animal world. Among the 100 or more expected participants will be about a dozen ethnobiologists from Mexico and Canada. The presence of such a well-attended conference at UNM is a clear acknowledgement of the quality of research going on in the Ethnobotany Lab.

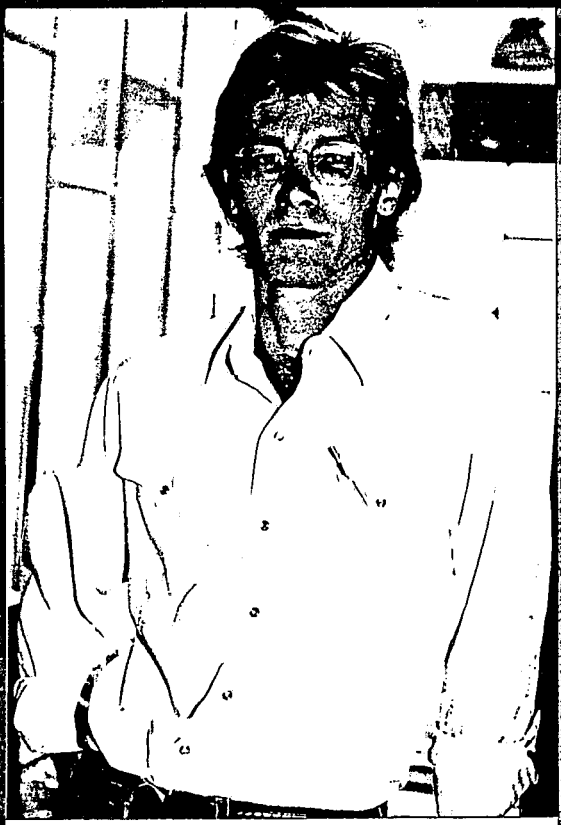
Eric S. (Sam) Loker is a parasitologist who joined our department as an assistant professor in 1985. Sam has a B.S. from Cornell, an M.S. from the University of Michigan, and a Ph.D. from Iowa State University where, after his earlier emphasis in ecology, he specialized in immunobiology. In 1978-79, as he neared completion of his doctoral studies, Sam held a Fulbright-Hays Full Grant for a year at the East African Institute for Medical Research in Mwanza, Tanzania. Since that time his research has focused on the blood flukes causing schistosomiasis (bilharzia). Specifically, he and his students study the immune responses of transmitter snails to intermediate stages of the parasitic worms.

Prior to coming to UNM, Sam spent two years as a postdoctoral research associate at Oregon State University, and then another two years at Virginia Commonwealth University, where he was an assistant professor of biology. Sam Loker's broad experience with the ecology and immunobiology of parasitic systems should promote both diversity and unity in the Biology Department.



By the end of this summer Robert M. Sullivan will have completed the requirements for a Ph.D. in this department and achieved an academic record of which he can be proud. A little history is in order. Bob received his B.S. and two masters degrees at Humboldt State University. There, the behavioral ecology of marine mammals was his major research interest. Coming to UNM in 1980, he changed the research emphasis to rodents and took an increasingly eclectic view of the natural world. The title of his dissertation, "Historical biogeography of Southwest montane mammals: A test of the vicariance and ecological hypothesis," seems to reflect this holistic attitude.

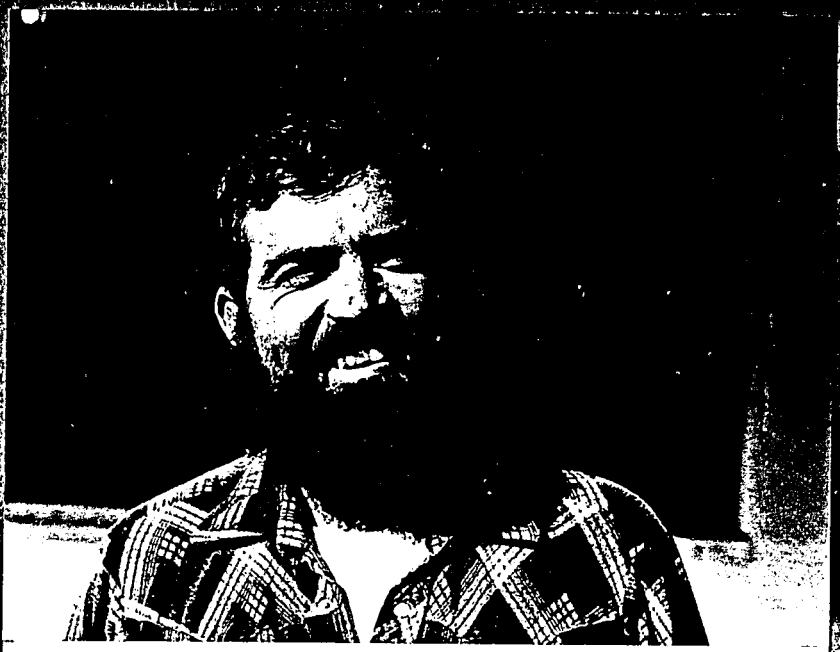
Since 1979, Bob has managed to author or co-author nine papers in refereed journals, and present 14 papers at meetings and seminars. His research has been supported by six research grants (totaling more than $20,000) from agencies outside the university, by two awards from the American Society of Mammalogy, and by a Dissertation Improvement Grant from NSF. Since Bob's avowed goal is "to be a good scientist," it is reasonable to conclude from his success to date that he is well on his way. Currently a curatorial research associate of the Museum of Southwestern Biology, his training and progress throughout his graduate career should carry him far. We wish him the best.



As a senior research associate, Dr. Tom Koob has worked closely with our own Dr. Kathryn Vogel for about a year in a mutual quest to understand the properties of macromolecules comprising tendons. Results of their NIH-supported research show that regions of bovine tendon subjected to compression have biochemical and mechanical properties resembling those of articular cartilage, which itself does not occur in tendon. This interesting discovery implies a broad developmental plasticity for such tissue, and may have implications regarding its capacity to heal from stress-related injury -- a possibility not unnoticed by sports medicine clinicians.

Tom's interest in the structural biochemistry of tissues goes back to his doctoral research at Washington University in St. Louis, where he studied hormonal regulation of mammalian collagenases. These enzymes break down collagen, the structural protein of cartilage, a tissue on which he again focused as a research associate at Harvard Medical School and Children's Hospital Center during 1980-84.

Meanwhile, starting in 1977 as a Ford Foundation and NIH post-doctoral fellow at Harvard, and continuing to this day, Tom established a second line of scientific endeavor: one linking structural biochemistry with reproductive biology. Connective tissue in female reproductive tracts of mammals and elasmobranch fishes (sharks and their relatives) took on special importance to Tom, who proceeded to concentrate on the latter in subsequent summers at Mount Desert Island Biological Laboratory in Maine. And while he works on elasmobranchs at the biochemical level (i.e., structure and function of steroids produced in the ovary's corpus luteum), his questions apply to the evolutionary level, specifically to the evolution of viviparity (birth of young without going through a shelled egg stage) in this ancient line of vertebrates. Tom's breadth of interest therefore has much to be commended in a biology department. Do we hear a call for another departmental seminar?



Adjunct Assistant Professor Herbert D. Grover acted as contributing editor and organizer of a special issue of BioScience in October, 1985. This issue focused on the topic, "After Nuclear War," and for this effort the journal received an Olive Branch Award for outstanding coverage of the nuclear arms debate. The award is sponsored annually by the Editors' Organizing Committee, the Writers' and Publishers' Alliance for Disarmament, and New York University's Center for the Study of War, Peace, and the News Media.

Herb, who filled in for Dr. Jim Gosz during 1984-86 while Jim directed the NSF Ecosystems Program in Washington, D.C., chairs the Ecological Society of America's Ad Hoc Committee on Nuclear War. Here at UNM he is known for his classes dealing with the ecological consequences of nuclear war, including the prospects of a devastating "nuclear winter".

Herb's dedication to this subject of universal concern led the BioScience issue to be selected as a winner from 50 publications entering more than 150 articles for both adults and young adults.

Professor William C. Martin is no stranger to these halls, having been a UNM faculty member since 1958. A well-known plant taxonomist and long-time curator of the department's Herbarium, Bill has also been affiliated for many years as a research associate with the Los Angeles County Museum. In this brief space it would be impossible to document his numerous advisory, consultative, and contractual associations with public and private organizations in New Mexico and elsewhere. It should be noted, however, that the Herbarium, like other units of the Museum of Southwestern Biology, continuously serves many individuals and agencies, both within and without the scientific community.

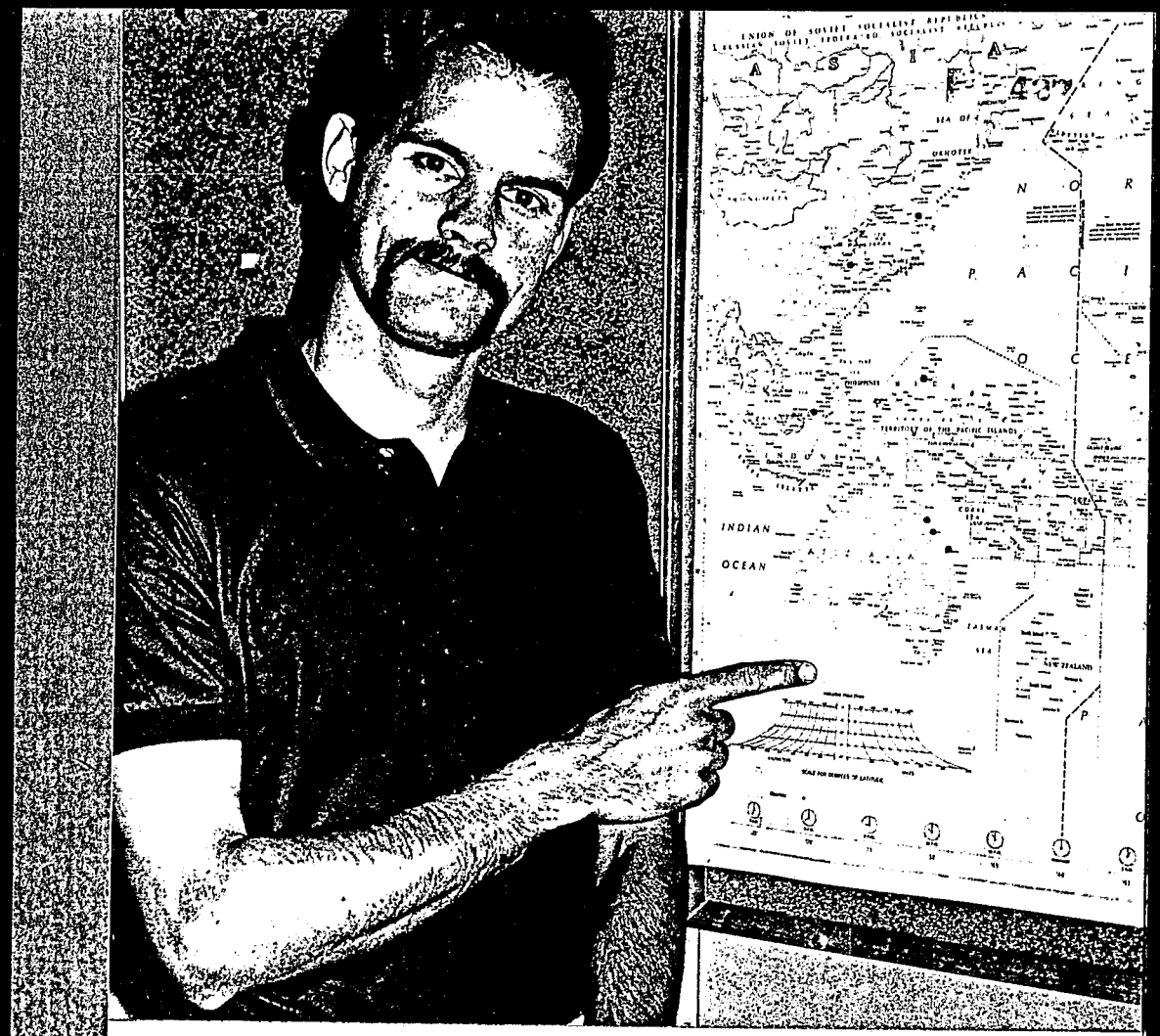
Bill's Flora of New Mexico class has been a popular choice of countless students over the years. In addition to teaching this and advanced courses, Bill, together with his graduate students, has significantly advanced the study of regional floristics in the Southwest. This has been done through several books and manuals, most recently including his monumental "A Flora of New Mexico" (published by J. Cramer) and "Summer Wildflowers of New Mexico" (published by UNM Press). Both are co-authored by C.R. Hutchins and the former book was carefully edited by the late Professor C. Clayton Hoff, whom many will remember as a rigorous scholar and teacher.

The many contributions of Bill Martin are perhaps best expressed in a name bestowed on him by his students; it is "P.C.," which stands for "Plant Chief."

Recently retired Profesor Emeritus Loren D. Potter was the central figure in three books published by UNM Press between 1984 and 1986. That surge of publication activity caps a distinguished career in plant ecology for this long-time former department chairman and resource-oriented biologist.

The title of the first book is "Water Resources in the Southern Rockies and High Plains." It was written by Potter, James R. Gosz (also of this department and the current director of the Ecosystems Program at NSF), and Clarence A. Carlson, Jr. Loren and first author, Carolyn Barnard, wrote the second book, "New Mexico Grasses: A Vegetation Key." The third, "Principles and Methods of Reclamation Science: With Case Studies from the Arid Southwest," was edited by Loren and Charles C. Reith, both of whom contributed chapters.

Barnard received her M.S. and Reith his Ph.D. under Potter's direction shortly before he retired. Carolyn now teaches biology at Highlands High School, while Charles is with IT Corporation in Carlsbad, as is N. Timothy Fisher, who was another chapter contributor to the final publication, and another of Loren Potter's master's students.



Dr. Gary Dodson will be leaving, in June, for a 2-year postdoctoral study in Australia. He's not the first UNM biologist to do research "down under". Rich Bradley, Darryl Gwynne, Randy Thornhill, and John Wiens all have visited that magnificent continent in recent years, as has our stellar ornithologist/ administrative coordinator, Mary Alice Root. But Gary will deal with smaller animals than do the others: he'll concentrate on the picture-winged flies in the family Tephritidae. Some of these beautiful little dipterans are important pests of fruit, and considering that one such insect is called the Queensland fruit fly, it seems more than coincidental that Gary was awarded a University of Queensland Postdoctoral Research Fellowship.

Actually, although Gary has a strong background in entomology -- and did a superb job of organizing and curating this department's insect collection -- his fundamental interests lie in behavioral ecology and evolution. As a student of Randy Thornhill he did his doctoral research on the behavior and ecology of tephritid flies forming galls on rabbitbrush (Compositae: Chrysothamnus spp.). In Australia, however, Gary may shift the emphasis of his research somewhat and emphasize host (the flies) - parasitoid (small wasps) relationships. Whatever he does, we are confident that Dodson's determination will get the job done.

ONE DOWN, FOUR TO GO—Dr. George Sutton examines one of the Canada geese in the collection at the OU Bird Range. Assistants Dave Ligon (left) and John Wiens look on. The range has three specimens of this type of goose but [illegible] of the other four types which go through Oklahoma. Dr. Sutton [illegible] help in procuring the others. (Transcript Photo)

Unearthed recently from the nest of a burrowing owl near San Antonio, this astonishing photograph illustrates the stoic attentiveness and primitive plumage of juvenile biologists in days gone by. Since their precocial posturings were so recorded, David Ligon and John Wiens have alternatively sprouted, then molted, an assortment of presumably fitness-related adornments on face and cranium. And whereas the growth now on Ligon may be a last-ditch, if slightly unkempt, manifestation of the power of sexual selection, whiskers produced a few years ago on the mandible of Wiens conveyed -- when juxtaposed against his imposing brow and forehead -- a decided impression of Darwin reborn.

David is now a practiced "helper" at his own nest, having finally emerged "out of Africa" with vast numbers of slides (and some data). John, on the other hand, is preparing to migrate north to the shortgrass prairies of Colorado. He says he wants to keep in touch with former nestmates, so we should hold him to that utterance. Although bonds developed along the ontogenetic pathway of life may seem a bit unusual (as that old photo suggests), if the initial investment has been strong they should persist over many seasons.

65

Tina Bigelow and Shawn B. Wright, both graduate students in Biology, recently received the [illegible] UNM Faculty Association, Inc. awards for excellence in teaching. Tina was selected as one of the two Outstanding Teaching Assistants, and was given a $500 check. Shawn was given Honorable Mention and $[illegible].

Originally from Kansas City, Tina attended West Texas State University. As an undergraduate she became interested in cell biology, and after completing the B.S. in Biology in 1982 she came to UNM on a Tinkle Cell Biology [illegible]. There she pursued graduate training under the direction of Dr. Barry Hart [illegible]. Her master's thesis, "Characterization of a [illegible] Reductase Activity in the Sulfate-Reducing Bacterium, Desulfovibrio [illegible]," resulted in an M.S. degree in Biology this May. Tina hopes eventually to transfer her teaching skills to the practice of medicine, but first she'll work for a year or so. In her role as TA, for which she also received the Biological Society of New Mexico's Outstanding Teaching Assistant award in 1985, she taught labs in Health Science Major Biology (230) and in Natural Science (100). She says she has no secret for good teaching other than to be prepared, and to treat students with patience and respect. "If you take that approach, they reciprocate," she adds.

Shawn is an eastern product with a B.S. from Pennsylvania State University and an M.S. from Northeastern University. Both degrees are in biology. Long interested in fresh water biology, Shawn came to UNM to work with Dr. Manuel Molles, presently a Fulbright Scholar in Portugal. At Northeastern, Shawn studied the community composition of stream macroinvertebrates in relation to stream rehabilitation. At UNM he is concentrating on how predator-prey interactions affect caddisfly case morphology and behavior. His TA duties at UNM have included teaching labs in Principles of Biology (122), Human Anatomy and Physiology (247), and Ichthyology (487), in addition to Limnology (491), where he helped Dr. Cliff Dahm develop an entirely new lab program. Shawn also gave a number of lectures in the latter course. In 1985 he received the Biological Society of New Mexico's Outstanding Teaching Award for the summer term. Why is Shawn such an effective teacher? He offers a simple answer: "I enjoy teaching."

APPENDIX

VOL. 2, MARCH 1986

[432

the biological society of new mexico

NEWSLETTER

GREETINGS AND APOLOGIES

This is our second attempt at a newsletter to the alums of the Biology Department of the University of New Mexico. We meant to have this off to you a bit sooner, but it seems we do better with grant proposal deadlines than with other communications. Nevertheless, here we are again, hoping to inform you mainly of things that happened to us between June 1984 and June 1985. Admittedly, that's not quite current, but since the single best summary of recent significant developments is the Departmental Annual Report covering that span of time, we must make do with what we have. So please read on.

PHYSICAL FACILITIES

Research labs in our old wing were renovated for our programs in microbial physiology, molecular genetics, Neurospora studies, and pollen analysis. We also improved our computer facilities by squeezing funds out of bond monies, grant overhead, teaching funds, and faculty research contracts -- but for a university the size of UNM our computer holdings are still inadequate. One bright point: we were recently rewarded by a grant from NIH-MBRS for a new transmission electron microscope. The instrument is now in operation in a very attractive and functional Electron Microscopy Facility that occupies completely renovated rooms in the old wing basement. Come by and take a look!

UNDERGRADUATE CURRICULUM

We recognize the need to delineate areas of study as clearly as possible for our undergraduates. With this in mind we've revised the undergraduate curriculum so that students can now graduate with an emphasis in one of the following areas: botany, evolution/ecology, microbiology, molecular-cellular biology, physiology, and zoology. We think we offer a rigorous, high quality undergraduate program in biology that trains pre-professionals effectively and that also satisfies students who simply want to graduate with a thorough grounding in the study of life. Last year 70 students graduated with the BS in Biology.

GRADUATE REVIEW

Last spring, at our request, the graduate program in biology was reviewed by a panel of nationally recognized scientists. Their task was simplified by a comprehensive set of data provided by a hardworking Graduate Self-Study Committee. You'll be interested in comments, given in the Appendix, that were excerpted from the review group's final report. If you read it you'll note that while we have much to be proud of, to reach our full potential we need more adequate resources and more faculty members.

DEPARTMENT OF BIOLOGY
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GRADUATE PROGRAM

Thanks in large part to you alums and other donors, The Biological Society invited and successfully recruited two out of three outstandng graduate students acvitely sought after by other universities. Similar funds in 1984-1985 made possible $100 Graduate Student Teaching Awards to Jim Bednarz and Steve Zack (now on post-doctoral fellowships in Venezuela and New Mexico, respectively), to Ann O'Rourke who is still with us, and to Gary Dodson who is all set to do post-doctoral study in Australia.

Our graduate students are an integral part of our total effort. They work with us on important departmental committees (7 committees last year), and contribute either with faculty or independently to journals and at meetings. This independence last year resulted in 32 papers presented at regional, national, or international meetings, 4 publications in refereed journals, 4 awards from professional societies for outstanding presentations, 10 grants for research support, one UNM Presidential Fellowship, one Fulbright Scholarship to France, and one NSF doctoral dissertation grant. We're pleased to have such a vigorous, dedicated group of young scientists in our midst.

ENDOWED CHAIR

The department's first Endowed Chair, the Loren D. Potter Chair in Plant Ecology was established to honor Loren's contributions to the department and his research efforts in field plant ecology. Ecological studies pertaining to natural resources started in this department with the course "Plant Ecology/Field Botany" in 1908-09 -- before a regular textbook in ecology was available. A substantial base for the endowment was obtained from the appraisal price of two parcels of land donated to the Biology Department in 1972 by Harry Ross and Arthur Brown. The amount of $63,215 has been placed in a Trust Fund called the Ross-Brown Endowment within the UNM Endowment fund. Additional funds for the Potter Chair were solicited by the Biological Society through a general mailing to 1,416 Biology alumni and friends. As of June 30, 1985 an additional $7,000 was generated by contributions. The total endowment will accumulate interest until 1991, at which time only the annual interest income is to be used to support the research and related scholarly activities of the holder of the Potter Chair, who will be a tenured UNM plant ecologist with national recognition for work emphasizing field studies. Further additions to the fund, tax-exempt, can be made by check payable to the "UNM Foundation L.D. Potter Endowment Fund" and sent to the Biology Department.

FACULTY

Here now is a look at our full-time faculty and some of their recent activities. We go through the list in alphabetical order.

ALTENBACH, SCOTT, Associate Professor, Vertebrate Anatomy and Morphology. Scott was acclaimed Outstanding Undergraduate Teacher of the Year at UNM last year. His tremendous teaching talent, particularly at the beginning biology level, is widely known in the state and region. Last year Scott also presented a major invited paper at an international conference on bat research.

BACA, OSWALD, Associate Professor, Microbiology. Last year Oz gave invited papers in London and Czechoslovakia (the latter at an international symposium on Rickettsiae and rickettsial diseases), and had several research papers published. Now in his final year of a large NSF grant, he was recently awarded another grant by PHS-NIH-MBRS for nearly $60,000.

BARTON, LARRY, Associate Professor, Microbial Physiology. Larry received an $80,000 NIH-MBRS grant for his research on transport systems in bacteria. He also published a research paper.

BOURNE, EARL, Associate Professor, Human Anatomy and Physiology. Earl continues to be responsible for teaching rigorous courses to many students in UNM's paramedical program.

CATES, REX, Associate Professor, Plant-Herbivore Ecology. Rex is an example of what's happening to UNM because of poor support by the state. He had over $200,000 in NSF and Forest Service grants, had actually brought in over 2 million dollars worth of outside support since 1975, and last year was a Texas A&M Distinguished Lecturer. Nevertheless, BYU made him an offer that UNM couldn't match. Fortunately for us, Rex will continue to do jointly supported research with UNM biologists.

CHIOVETTI, ROBERT, Assistant Professor, Electron Microscopy. Bob's recent efforts resulted in the EM Facility discussed on page 1. Last year he also published several papers and gave a number of invited seminars; his community service has been extensive.

CRAWFORD, CLIFFORD, Professor, Terrestrial Invertebrate Ecology. Last spring, Cliff went to the University of Kuwait, where, as a visiting professor, he gave seminars, lectured, and reviewed the Zoology Department. A member of two editorial boards of journals dealing with desert research, Cliff also wrote a review and research paper on the role of arthropod gut flora in desert ecosystems.

DAHM, CLIFFORD, Assistant Professor, Aquatic Ecology. This new Cliff joined us in 1984 and has already been funded by NSF, Sandia National Labs, and the Forest Service for a total exceeding $350,000, some of it shared. His diverse research includes nitrogen cycle interactions on Mt. St. Helens, microbial studies in geothermal fluids, and the effects of catastrophic disturbances on stream ecosystems. Cliff wrote a book chapter on the last of these subjects, and presented several regular papers at meetings, in addition to giving invited papers at international meetings in Israel and Japan.

DEGENHARDT, WILLIAM, Professor, Herpetology. In addition to his teaching and curatorial duties, Bill continues to study the biology of reptiles. Results of some of his work were recently published.

DUSZYNSKI, DONALD, Professor and Chairman, Parasitology. Don somehow manages to continue work (the chair) with pleasure (teaching and research). Holder of grants from NIH and the NM Department of Game and Fish, he's an editorial board member of a major journal, and a member of the Executive Council of the American Society of Parasitologists. Last year he also published two papers and presented eight at national meetings.

FINDLEY, JAMES, Professor, Mammalogy and Evolutionary Biology. Together with Terry Yates, Jim received $93,000 from NSF to reorganize and update the Museum of Southwestern Biology's outstanding mammal collection. In recent years Jim has found that tropical reef fish communities offer intellectual challenge and aesthetic allure. Meanwhile, he also serves on the Board of Directors of the American Society of Mammalogists.

GOSZ, JAMES, Professor, Ecosystem Ecology. Jim is on leave during 1984-86 as NSF Director of Ecosystem Studies. Being in Washington, however, hasn't totally removed him from scholarly effort. Back at the shop his more than $600,000 (some shared) in grants keeps an active program going on forest nutrients. While all this was going on, Jim wrote four book chapters.

GROVER, HERBERT, Visiting Associate Professor, Ecosystem Ecology. As a temporary replacement for Jim Gosz, Herb has also become well known for his articles and other contributions to the theme of "nuclear winter," which may well be the major environmental consequence of nuclear war.

JOHNSON, GORDON, Associate Professor, Plant Physiology. New Mexico Water Resources supported Gordon's recent studies of nitrogen fixation by a salt-tolerant plant in hydroponic culture. Gordon also published a paper and gave several presentations at regional meetings.

JOHNSON, WILLIAM, Associate Professor, Genetics. Bill kept busy this last year with his duties as Assistant Chairman, and also as a very active member of a variety of departmental and university committees.

KERKOF, PAUL, Associate Professor, Cell Physiology. Paul continues to rank as one of UNM's outstanding teachers. His research on thyroid stimulating hormone action on cultured thyroid cells is supported by a grant from NIH-MBRS.

KOGOMA, TOKIO, Associate Professor, Molecular Genetics. Tok, who is one of the eminent scientists in the field of DNA replication, had over $150,000 in grants from three agencies last year. He also served on an NIH Review Panel, published five papers, and gave several national meeting papers and invited seminars.

LIGON, DAVID, Professor, Ornithology and Animal Behavior. NSF and the National Geographic Society supported Dave's studies on population structure and communality in the Green Woodhoopoe's he's studied over the years in Kenya. Besides his teaching and research, Dave serves on several national society committees and contributed a book chapter last year.

MARTIN, WILLIAM, Professor, Plant Systematics. As usual, Bill's public service as Herbarium Curator is but one feature of his busy professional life. Floristics studies and Herbarium and Ethnobotany lab improvment needs resulted in funding by the Forest Service and the UNM Foundation. Bill, who is also a Research Associate of the Los Angeles Natural History Museum, gave two invited seminars and co-authored two books on the flora of New Mexico last year.

MOLLES, MANUEL, Associate Professor, Aquatic Invertebrate Ecology. Manuel, who is now in Portugal as a Fulbright Scholar, studies the structure of stream insect communities. Last year this work produced a journal article, four papers at meetings, an invited seminar, and support by New Mexico Game and Fish for his continuing research on the endangered Socorro isopod.

NATVIG, DONALD, Assistant Professor, Molecular Evolutionary Biology. NSF gave Don $120,000 last year for a phylogenetic study of Neurospora. Don teaches in the introductory biology program as well as in his own area, but found time to give five papers at regional and national meetings.

POTTER, LOREN, Professor, Plant Ecology. Never one to slow down, Loren's final year of his distinguished career at UNM saw him co-author two books, one on New Mexico grasses, the other on regional water resources. He also wrote two papers and gave several others at meetings. The National Park Service supported two of his vegetation studies. Now, as professor emeritus, Loren seems to be just as active in scientific and departmental affairs as he's ever been.

RICE, WILLIAM, Assistant Professor, Population Genetics. Shortly after joining us in 1984, Bill landed a large NSF grant to study the evolution of habitat selection and reproductive isolation, using Drosophila. Bill adds teaching strength to our genetics program as well. He just had several articles published and gave two invited seminars in the SUNY system, New York.

RIEDESEL, MARVIN, Professor, Environmental Vertebrate Physiology. With the help of grants from the Air Force and UNM, Bud and his students continue to study how vertebrates, including humans, respond to various physiological stresses.

TAYLOR, FRITZ, Associate Professor, Population Biology. Two NSF grants, totalling nearly $200,000, went towards Fritz's work with diapause induction in pest insects. Fritz also wrote two papers, and was both an invited speaker at and the editor for a symposium in Germany on insect life-cycle strategies.

THORNHILL, RANDY, Associate Professor, Behavioral Ecology and Evolution. Randy is another colleague with two NSF grants. Social behavior and sexual selection are his areas of study. A very busy biologist, Randy last year wrote three papers and three book chapters, gave five papers at meetings and six seminars at U.S. and English universities, was one of four invited eminent biologists to participate in a Canadian forum on the evolution of behavior, and was recently asked to be one of three speakers at the initiation of a field station at Uppsala University, Sweden.

TOOLSON, ERIC, Associate Professor, Physiological Ecology. Another of our premier introductory biology teachers, Eric is also supported by NSF for his studies on the physical and biochemical nature of insect cuticle in relation to water loss. Eric wrote a paper on this subject, and presented two others at national meetings.

TRUJILLO, JOHN, Associate Professor, Developmental Biology. Besides teaching courses in his field, John is also an associate editor of a professional journal. Last year he gave two invited seminars at other universities.

VOGEL, KATHRYN, Associate Professor, Cell Physiology. Two NIH grants for her studies of cell surface properties are only part of what Kate keeps up with these days. She's also co-editor of a professional journal and an NIH Study Section member, and has written two journal articles and a book chapter, in addition to giving three national meeting papers and five invited seminars. One of our two UNM Presidential Junior Professors, Kate spent a semester doing research at NIH, Bethesda.

WIENS, JOHN, Professor, Avian and Community Ecology. This past year John was a Fulbright Scholar in Australia, where his research was also supported by grants from NSF and the National Geographic Society. Meanwhile, NSF also funded his ongoing work in North American shrubsteppe ecosystems. Finishing his last year as editor of the Auk but continuing on the editorial boards of Biological Abstracts and the Ecological Society of America, John also managed to write five papers and five book chapters, and gave four invited international lectures.

YATES, TERRY, Associate Professor, Mammalian Systematics. Besides sharing a large NSF grant with Jim Findley for updating and reorganizing the Mammal Museum, Terry has two other NSF grants: one for a genetic survey of Bolivian mammals and another to study the genetics of mammalian hosts with respect to coccidian parasites. Terry is our other UNM Junior Presidential Professor; last year he wrote two papers and one book chapter, gave four papers at national meetings, presented an invited seminar, and was a board member of a national society.

ADDITIONAL APPOINTMENTS

A cluster of active scientists interacts with the Biology Department in a variety of ways. We list these people here to give you a broader view of our scholarly effort.

Adjunct Professors: Roger Conant (retired former Curator, Philadelphia Zoo), Tom Fritts (Fish and Wildlife Service), Kathryn Ono (Fish and Wildlife Service), Eugene Rypka (Lovelace Foundation), Norman Scott (Fish and Wildlife Service).

Adjunct Research Professors: Jack Cully (UNM/Southwest Ecological Consulting Associates), David Hafner (NM Natural History Museum), Kathryn Ono (Fish and Wildlife Service), Richard Smartt (NM Natural History Museum), Bruce Woodward (UNM).

Joint Appointments: Troy Best (UNM General College), Robert Kelley (UNM School of Medicine), Robert Waterman (UNM School of Medicine). Note that the following regular faculty members are joint appointees in other UNM departments: Oswald Baca (Microbiology), Tokio Kogoma (Cell Biology), William Martin (Anthropology), Kathryn Vogel (Anatomy).

Visiting Research Professors (Post-doctoral Appointees): Steve Austad (with Randy Thornhill), Tom Koob (with Kathryn Vogel), Deborah Malka (with Tok Kogoma), Beatrice Van Horne (with John Wiens).

New Assistant Professor: Dianne Marshall, who specializes in plant reproductive strategies, was recently appointed to fill the vacancy left by Loren Potter's retirement. Eric (Sam) Loker, a parasitologist with a background in schistosomiasis and the helminth-related diseases, joined our faculty at the same time.

OTHER PERSONNEL

About 20 full- or part-time support staff, headed by Administrative Assistant Mary Alice Root, are an indispensible component of the department's teaching and research effort. These vital people include office specialists, lab and animal technicians, and individuals responsible for the storeroom and greenhouse. In addition to the above, a variable number of technicians are employed on grant funds and are essential for our heavily funded research activities.

MUSEUM OF SOUTHWESTERN BIOLOGY

Consisting of six divisions, the Museum is a focal point for research and teaching. It also serves the city, state, and region on a nearly daily basis throughout the year by identifying organisms and making available specimens for study groups. Jim Findley is the Museum's director. The curators are Bill Martin (Herbarium), Terry Yates (Mammals), Bill Degenhardt (Reptiles and Amphibians), Dave Ligon (Birds), Manual Molles (Fish), and Cliff Crawford (Insects). So far some 20 grants, totalling over $280,000, have been awarded to the Museum.

CASTETTER LAB FOR ETHNOBOTANICAL STUDIES

The Castetter Lab serves contracted archaeological research by specializing in vegetation surveys and analyses of pollen, macrobotanical remains, coprolites, and flotation residues. Its personnel, who are all trained in field archaeology and botany, include Beth Crowder, Karen Clary, Ann Cully, and Mollie Toll.

THE BIOLOGICAL SOCIETY OF NEW MEXICO

Because of decreased revenues in the state, appropriations to the University have not kept pace with the increasing needs and costs of operation. Increases in salaries and operational budgets have been nil for several years. Although the Biology Department's research activity has continued to expand and its scientific productivity is truly outstanding, many areas of teaching and research lack fiscal resources, which are needed to attain the type of excellence for which we are striving. For example, unless research funds are available, university support for one meeting per year is 60% of air fare and no per diem. Some alumni have asked how they may support the increased excellence in biological education and research. To make this possible, the Biological Society of New Mexico was formed.

A. Organization:

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, and foundations and to administer grants 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. Such purposes shall be pursued directly through sponsorship of educational programs, support of education-related research, and any other activities, academic processes, or programs that benefit our primary goal of excellence.

The Society is authorized to receive, disburse, and administer funds, grants, stipends, honoraria, property, or any other interests for educational purposes. Tax-exempt gifts may be given with designation to be used for specific purposes, e.g., student fellowships, research support, or whatever, as long as the purpose fits the objectives of pursuing excellence in biological education and research at UNM. The funds will be administered by the Board of Directors under the laws of New Mexico governing non-profit corporations and the federal laws governing tax-exempt educational organizations approved by the U.S. Internal Revenue Service.

B. Activities:

1. Graduate Student Recruitment: The Society arranges for and contributes to visitation costs to the department of high caliber applicants.

2. Graduate Student Support: The Society makes awards, as funds become available, to students showing excellence in teaching.

3. Continuing Education and Professional Stature: The Society assists graduate students and faculty to attend and give papers at professional meetings.

4. Local Seminars and Symposia: The Society hopes to allocate funds to sponsor seminars and symposia in Albuquerque, thus attracting national attention to UNM and the Biology Department.

5. Newsletter: The Society publishes this newsletter, which is made available to all past and present graduates in Biology, and to members of the public who may wish to join the Society and thereby lend their strength and support.

C. Designated Use of Funds:

If contributions are earmarked for designated purposes such as teaching areas, research projects, equipment, or awards, the Society will carry out the wishes of the donors involved. Otherwise, donations will be used according to our discretion to fill our most immediate needs.

D. Membership in the Biological Society of New Mexico:

1. Any person contributing an annual fee, on a calendar year basis, of $15 or more is appointed a member of the Society and will receive the Newsletter. As with membership in all professional societies this is a tax deduction.

2. Any person contributing $25 will be appointed a member and on request will receive a T-shirt or tank top of excellent quality with the logo and name of the Society.

3. Any person or organization contributing a lump sum of one thousand dollars or more is appointed a patron of the Society. Patrons are entitled to membership benefits for life and will receive a Certificate of Patronage. Anyone contributing $10,000 or more will be considered a "Patron Saint" of the Society.

4. All memberships and contributions are tax exempt.

5. Please mail memberships and contributions by check payable to "The Biological Society of New Mexico" to:

Secretary-Treasurer, Biological Society of New Mexico
Biology Department
The University of New Mexico
Albuquerque, New Mexico 87131

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D E T A C H A N D M A I L

Name _____ UNM Degree _____ Year _____ Other Degrees ____

Current Mailing Address _____

Current Occupation _____

Other Activities _____

_____

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Enclosed check $ _____

If $25 or more and you desire a shirt, check appropriate boxes:

T-shirt ☐ Blue ☐ Small ☐

Tank top ☐ Cream ☐ Medium ☐

Large ☐

APPENDIX

Research: "Graduate education and research are strong by both national and international standards. The major focus of strength is in ecology and evolution." "A secondary focus of strength in biology is in molecular and cell biology, an area where a subset of mainly younger faculty have developed solid reputations and strong research programs within the last decade. Research excellence in this area enhances the intellectual climate of the department and presents opportunities for department-wide cooperation in new hybrid disciplines such as molecular evolution, metabolism of ecologically significant biomolecules, and microbial ecology." (A considerable part of the report deals with suggestions and recommendations of how to assist in bringing about this cooperation). "A high proportion of faculty and graduate students is as productive in research, in obtaining extramural funding for research programs, and in graduate teaching as faculty at any institution." "It is noteworthy that more than one faculty member in the department maintains several simultaneous research grants." "The quality and number of scientists visiting the Biology Department to deliver talks and to confer with faculty and students are outstanding."

Attitudes: "An impressive atmosphere of shared ideas, critical appraisal, and collaboration has developed among students and faculty in ecology and evolution. With few exceptions, the graduate students feel they are favorably served by the attitudes of faculty toward them." "The seminar program is an important indication of excellence in the department. The department has dedicated a significant fraction of its resources to this function." "The graduate program is strong by any measure." "We found the graduate students committed to their teaching duties. Students perceive that they are getting quality educations that will afford them good job opportunities after graduate school. They are excited and knowledgeable about ideas and progress in their respective disciplines and are pleased about having made the decision to study at the University of New Mexico."

Resources: "The wisdom of the long-standing policy at UNM to emphasize ecology and evolution in research and graduate education takes advantage of a special resource that has cost nothing but continues to pay handsome rewards. The geography and environs provide a very special context to researchers in environmental and organismal biology. This resource base is not available to many longer-established departments of biology on the east and west coasts. Of great value to all sectors of the department is the fine building housing the Biology Department."

Administration: "The department's present strength owes much to a succession of intensely dedicated chairmen, who have given much from their individual careers to the betterment of biology at UNM. The current chairman is highly dedicated to the growth of excellence in research, teaching, and service."

Needed Improvements: "The curriculum does not pay sufficient attention to modern molecular approaches to biology. The molecular and cellular biology component is conversely lacking in awareness that organisms have in fact evolved from earlier ones, and that they all function in complex ecosystems, and students in this area do not take advantage of the strengths in ecology and evolution." "The department lacks a coherent, well-designed graduate curriculum in molecular and cellular biology." "Coordination with the Medical School in the area of graduate courses and curriculum is inadequate or nonexistent." "Resources for use of quantitative methods in biostatistics, data collection, and analysis are inadequate."

Graduate Needs: "Support from the university for graduate research funds and travel to meetings, particularly given the productivity of the students, is inadequate and underutilizes this talented and energetic group." (This is an area where contributed money made to the Biological Society of New Mexico could be advantageously used.) "Teaching loads of graduate students are too high in comparison with comparable institutions. Access to journals and books is inadequate for a modern research department." (Perhaps this will be partially remedied by the current construction of an Engineering and Science Library just west across the street from the Biology Annex - the old Pharmacy building.)

Faculty Needs: "The ratio of total biology faculty to biology majors is too small. Plant science, biometrics, and molecular evolution are examples of areas which deserve strengthening."

A set of recommendations has been developed after carefully reviewing documents provided by the Department of Biology (including the UPTF Report for Biology [1984], 1984-85 Annual Report, Briefing Booklet for External Review of the Graduate Program in Biology [1985] and the faculty curriculum vitae). In addition, the subcommittee interviewed the Chair of Biology and met with faculty of the department to collect additional information not included in the written documents.

DESCRIPTION

The Department of Biology, which consists of 31 faculty members, is involved in both undergraduate and graduate education. The undergraduate program is for students wishing a Bachelor of Science degree in Biology. In addition, undergraduate students who are non-majors in Biology enroll in Biology courses as part of their liberal arts education. A third group of undergraduate students serviced by the Biology department include students enrolled in health sciences and pre-professional areas such as nursing, pharmacy, dental, medical, veterinary and HPER students. Unfortunately, the teaching program is restricted by the small number of faculty relative to the size of the student body. As compared to comparable universities in the Southwest, the Biology department at UNM has approximately half the number of faculty as needed for the number of students enrolled. This is supported by data included in Table IV of the UPTF report (page 10) and by the graduate Unit Evaluation Team Report (page 100 of Annual Report).

The graduate program in Biology emphasizes original research for students who are highly motivated to pursue careers as professional doctoral-level biologists. High quality graduate students are presently being recruited through efforts of several faculty who began a fund to bring in prospective students for interviews. These funds were contributed by faculty in the Department, demonstrating a commitment by the faculty for a quality graduate program. The Department emphasizes areas of biology as related to ecology and evolution and has yet had the necessary resources to build a strong base in other areas of biology (e.g., molecular and cellular biology). This was recognized as a weakness by the Graduate Unit Review Report.

The number of graduate student applicants since 1980 was 551, 165 were admitted and 124 accepted the position at UNM.

In addition to education, the departmental faculty is actively involved in research and obtaining extramural research support. In 1982, sponsored research dollars was $947,599 which increased to $1,242,356 in 1984. As of April 1, 1984, the total amount awarded was $2,424,584. Again, much of the research is in areas of ecology; however, there are faculty involved in molecular biology and biochemical research, but there is little departmental support for it, due to lack of resources and faculty. However, it was the intention of the department to develop a center for research and graduate training in ecology and evolution and this has been accomplished and should be continued. The areas of molecular and cellular biology are beginning to develop and the department should be encouraged to continue this development by being given additional resources.

MISSION AND GOALS OF THE UNDERGRADUATE PROGRAM

Undergraduate education is a primary mission of the Department of Biology at the University of New Mexico. To this end, the Department is dedicated to providing the following:

1) A cohesive program of studies for students wishing a Bachelor of Science degree in Biology. This assumes a general program to provide minimal breadth and depth of training for anyone receiving a degree in Biology. In addition, avenues for more specialized coursework, dependent upon faculty composition, expertise, and workload should be available to the extent possible. This program should be up-to-date, incorporate current trends, ideas and controversies, and stress the scientific method as a way of knowing, rather than merely a presentation of known facts and ideas. In general, this mission is successful. The department has a good undergraduate Biology degree program with six specialty tracts and a wide range of specialty courses available to undergraduates. The majority of these courses are up to date and students are informed of current ideas, trends and controversies.

2) A course or courses in Biology for non-majors. This is a vital part of any liberal education and should be offered with and without a laboratory to meet the needs of as many undergraduates as possible. This course or course series should provide the background that illustrates the biological principles important directly or indirectly to their lives and should equip people to ask informed questions or make informed decisions about biological issues that impact on humankind regardless of belief or discipline. It should introduce them to science as a way of knowing. At present, the department is in the process of developing a one-semester course to meet this critical need. The course should be in place by fall semester 1986.

3) Service courses in the health sciences and pre-professional areas. These should be provided as resources, as available personnel permit, although such courses are certainly part of the department's mission. These courses are perhaps the only exposure many pre-professional students have to biological concepts and principles with a big-picture point of view and with science as an underlying and unifying way of thinking and knowing. At present the department does a respectable job in this area by providing service courses for nursing, pharmacy, dental, medical, veterinary and HPER students.

4) Community interaction and education. An institution of higher learning has at its disposal a vast wealth of knowledge and is at the forefront of advancement of knowledge through science. Our responsibility is to make that knowledge available where needed and wanted. This can take the form of interaction with state, federal and private agencies, participation in "popular" educational events such as state fair displays, educational TV, displays or exhibits at the New Mexico Museum of Natural History and guest presentations for schools and organizations. This mission of the department is carried out by a few dedicated faculty who are willing to steal time from other endeavors (their research, their families, etc.). In general, however, such activities go unrewarded or even unnoticed and therefore there is little incentive to pursue such service with much commitment.

MISSION AND GOALS OF THE GRADUATE PROGRAM

The basic mission of the graduate program of the Department of Biology is to train graduate students for careers as professional biologists. Given the diverse nature of potential careers that graduate students choose to pursue, the faculty of the Department of Biology feels that it is essential that each student be broadly trained as educators and researchers.

Development of graduate students' teaching abilities is a primary goal of the Biology graduate program. It is essential that students be able to convey information to other students and peers, be it in the forum of the classroom, via seminars, or during presentation of their research results at scientific meetings. To that end, the majority of the Biology department's graduate students are supported by teaching assistantships for at least part of their tenure here. Moreover, most of their teaching assistants are used in the lower-division courses, thereby acquiring a broad exposure to the various disciplines in biology. In addition, students in the Ph.D. program are required, as part of their degree program, to give a minimum of six consecutive lectures in one of the Biology Department's formal lecture courses. The student's performance is observed by the faculty member responsible for the course, and a formal critique becomes part of the student's record.

A second goal of the graduate program is the training of their students to be critical scientists, capable of designing and conducting independent, fundable research programs. With the exception of a few Plan II Master's students, all graduate students in the Department are expected to design and complete an appropriate research project, and to publish their results in national and international refereed journals. Students' development as scientists is enhanced by the Biology Department's seminar programs. Weekly presentations by visiting scientists, as well as frequent 'in house' seminars, in which Biology Department faculty and graduate students present recent results from their own research, provide a vehicle for exchange of ideas and consequent development of the critical thought that is fundamental to scientific progress.

A measure of the success of one's graduate program is the accomplishments of its graduates. Biology's graduates generally have been quite successful in competing for post-doctoral positions, not only at academic institutions, but also in non-academic fields such as environmental consulting, museum directorships and computer analysts. Recent Ph.D. students have accepted positions at universities across the country, including Memphis State University (Jim Jacob), Colorado State University (Janice Moore), Coe College (Jon Hastings) and Illinois State University (Wayne Riddle). Sarah George is now Curator of Mammals at the Los Angeles County Museum, and Richard Bradley is a Lecturer at the University of Sidney, New South Wales, Australia. In addition, many recent graduates are now holding post-doctoral fellowships or research assistantships at universities around the world. In most cases, the competition for each of these positions has been severe, with applicants numbering in the hundreds. The department believes that the obvious success of its graduates speaks well of its approach to training graduate students.

RECOMMENDATIONS

In order for the Department of Biology to continue their programs in graduate and undergraduate education and to develop new research programs in molecular and cellular biology, we propose the following recommendations:

1. To broaden the graduate and undergraduate curriculum to include molecular and cellular biology.

Rationale

Additional FTE positions are urgently needed in the Biology Department. According to the figures stated in Table IV of the UPTF Report and on page 100 of the Graduate Unit Review, the size of the faculty is approximately one-half the size it should be. Therefore, teaching programs are severely restricted in terms of laboratory courses for undergraduate non-major students and breadth of teaching programs available to the students. It is essential that the students, both graduate and undergraduate, be exposed to cellular and molecular biology. Therefore, we recommend that a high priority should be the addition of FTE positions with expertise in these areas. It is difficult for this subcommittee to determine an exact number of FTE positions to add, but this should be negotiated between the Chair of Biology and the University administration. Without faculty members with interest in these "modern" areas of biology, the department will suffer by losing bright graduate students to other regional universities which offer these programs.

2. Supplement salaries for FTE faculty in the Department.

Rationale

As summarized in the Department of Biology Graduate Unit Evaluation (Table 6 and Appendix A), salary averages are lower than salaries at comparable regional universities. The average salaries of faculty in the Biology Department is also lower than faculty salaries in science departments within A & S at UNM. It will be increasingly more difficult to recruit young, excellent biologists to UNM and, to keep the "stars" of the department. This department has managed to develop an outstanding group of ecologists and environmentalists who are recognized on a national, and even, international level. It is essential that we keep these faculty at UNM and begin to recruit additional faculty in the other areas already discussed in recommendation 1.

3. Supplement salaries of Teaching Assistants.

Rationale

Because of the heavy teaching loads of faculty, there is a dependence on teaching assistants. The salary for a TA in

Biology was $5,500 (M.S.) and $5,850 (Ph.D.) for 1984-85. These salaries are no longer competitive with salaries offered at other universities. For this reason, students may choose to attend another school based on financial reasons, even though they prefer the program at UNM. The faculty of the Biology Department is actively attempting to recruit high-quality students (even at their own expense, as stated above). The University administration should recognize this commitment and address the problem of low TA salaries.

4. Add additional FTE positions in the area of biometry.

Rationale

It was clearly stated in the Graduate Unit Evaluation Report and in the interview with Dr. Duszynski, that the graduate program in Biology is severely restricted by the lack of adequate resources in biometrics. There is at present one junior faculty member with expertise in this area. This limitation was addressed by the External Review Group in their report and they also suggested introducing a program in microcomputers. This is essential if our students are to be competitive with students graduating from other schools. As part of the mission of the department, it is clear that the faculty feels committed to helping students find jobs upon graduation. To meet this objective, the students must have a broad background which would include modern technology.

5. Encourage administrators and faculty in the Department of Biology to enter into discussion with various medical school and pharmacy faculty and administrators to coordinate teaching programs in cellular and molecular biology.

Rationale

There are presently graduate courses taught in the Departments of Pathology, Microbiology and Cell Biology in the School of Medicine which would enhance the graduate program in Biology. A mechanism should be adopted which would permit biology students to enroll in these courses, even at the undergraduate level, and to encourage faculty on the North Campus to offer courses directed at the undergraduate and graduate level. This would need to be developed by both administration and faculty of the Medical School and the University.

ANNUAL REPORT - 1985
MAMMAL DIVISION
MUSEUM OF SOUTHWESTERN BIOLOGY
BIOLOGY DEPARTMENT
UNIVERSITY OF NEW MEXICO

NUMBER OF VISITORS

The museum hosted 359 people who used the collection for a total of 130 days. These included 51 professionals from outside the Biology Department and several school groups, from grade school through high school age.

NUMBER OF LOANS

The mammal collection processed 35 outgoing loans, including 4 loans of frozen tissues for use in electrophoretic or DNA studies. We also handled 20 incoming loans.

NUMBER OF ACCESSIONS

The museum accessioned 33 groups of specimens.

NUMBER OF SPECIMENS CATALOGED

775 specimens were cataloged into the main mammal collection (MSB 55056-55830) and 45 specimens were added to the mammal teaching collection (MTC 393-437).

UNIVERSITY COURSES USING THE COLLECTION

The museum assisted 2 Biology Department classes with loans of specimens from our teaching collection:

Biology 121	Principles of biology	1 loan
Biology 122	Principles of biology	4 loans
Biology 386	General vertebrate zoology	
Biology 490	Principals of systematics	

DISSERTATIONS OR THESES USING THE COLLECTION

Kilburn, K. 1984. Ecological hypotheses based on morphological differences between three species of shrews (Insectivora: Soricidae) 30 pp.

PUBLIC SERVICE

The mammal division hosted 4 groups of public school children, and answered several letters and phone inquiries every week.

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Best, T. L. UNM Research Allocations Committee. Intraspecific variation in mountain lions (Felis concolor) in North and South America. 1985.

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Duszynski, D. W. and T. L. Yates. National Institutes of Health, MBRS Program. Host genetic factors affecting specificity of coccidia of small mammals. Funded January 1984 ($90,047).

Gardner, S. L. American Society of Mammalogists. The coevolution between rodents and nematodes: Testing current hypotheses. April 1985 ($500).

Gentz, E. J. National Rifle Association. Genetic variation and inbreeding in elk. 1985 ($2500).

------. Vermejo Park Corporation. Genetic variation and inbreeding in elk. 1985 ($1200).

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------. University of Michigan Biological Station. Genetic variation and inbreeding in elk. 1985 ($350).

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Hafner, D. J., R. A Smartt and A. L. Metcalf. New Mexico Department of Game and Fish. New Mexico land snails. Funded 1985 ($20,000).

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Sullivan, R. M. Dissertation improvement grant submitted to the National Science Foundation. Historical biogeography of southwestern montane mammals: A test of the vicariance and ecological hypotheses. Funded March 1985 ($5800).

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Yates, T. L. and J. S. Findley. National Science Foundation. Reorganization, updating and computerization of the Recent mammal collections, Museum of Southwestern Biology. Funded January 1985 ($93,000).

T. L. Yates. National Science Foundation. Survey of the mammals of Bolivia-Genetics. Funded November 1984 ($61,724).

OCCASIONAL PAPERS OF THE MUSEUM OF SOUTHWESTERN BIOLOGY

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PAPERS PUBLISHED

Best, T. L. and J. A. Lackey. 1985. Dipodomys gravipes. Mammalian Species 236:1-4.

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Best, T. L. and A. L. Gennaro. 1985. Food habits of the western whiptail lizard (Cnemidophorus tigris) in southeastern New Mexico. Great Basin Nat. 45:527-534.

Findley, J. S. and M. T. Findley. 1985. A search for pattern in butterfly fish communities. American Naturalist 126:98-132.

Gardner, S. L. 1985. Helminth parasites of Thomomys bottae (Richardson) (Rodentia: Geomyidae), with the description of a new species of Hymenolepis (Cestoda). Can. J. Zool. 63: 1463-1469.

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Yates, T. L. 1985. The role of voucher specimens in mammal collections: characterization and funding responsibilites. Acta Zoologica Fennica 170:81-82.

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Best, T. L. and B. Hoditschek. Relationships between environmental variation and the reproductive biology of Ord's kangaroo rat (Dipodomys ordii). Mammalia.

Best, T. L. Patterns of morphologic and morphometric variation in heteromyid rodents. In Biology of the Heteromyidae (H. H. Genoways and J. H. Brown, eds.) American Society of Mammalogists Special Publication.

Best, T. L. Intraspecific morphologic variation in the Texas kangaroo rat, Dipodomys elator Merriam 1894 (Rodentia: Herteromyidae) Southwestern Nat.

Cook, J. A. The mammals of the Animas Mountains. Occas. Papers of the Museum of Southwestern Biology. 103pp.

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Gardner, S. L. Eimeria halleri sp. n. (Apicomplexa: Eimeridae) from the round stingray, Urolophus halleri (Rajiformes: Dasyatidae). Proc. Helminthol. Soc. Wash.

-------. Two new species of Litomosoides (Nematoda: Onchocercidae) from pocket gophers (Rodentia: Geomyidae) in Colorado. Syst. Parasit.

Gentz, E. J. and T. L. Yates. Genetic identification of hybrid camelids. Zoo Biol.

Hafner, M. S. and D. J. Hafner. Geographic distribution of tow Costa Rican species of Orthogeomys, with comments on dorsal pelage markings in the Geomyidae. Southwestern Nat.

Moore, D. W. and L. L. Janecek. Genic relationships among North American Microtus. J. Mammal.

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Yates, T. L. The value and future of systematic collections of mammals. Museology.

Yates, T. L., W. R. Barber, and D. M. Armstrong. Survey of North American collections of Recent mammals. J. Mammal.

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Sullivan, R. M. and T. L. Best. Systematics and biogeography of the agile kangaroo rat (Dipodomys agilis): Rediscovery of a species (D. simulans). Syst. Zool.

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Best, T. L., R. K. Chesser, D. A. McCullough, and G. D. Baumgardner. Genic and morphologic variation in California coastal kangaroo rats, genus Dipodomys (Rodentia: Heteromyidae). Texas Mammal Society.

Clark, C. L. Electrophoretic analysis of relationships between Peromyscus maniculatus oreas and P. m. austerus. Southwestern Association of Naturalists. Glendale, AZ.

------. Electrophoretic analysis of relationships between Peromyscus maniculatus oreas and P. m. austerus. American Society of Mammalogists. Orono, ME.

Cook, J. A., L. Krasnow, A. Lierhaus, and G. Ackerman. Food habits and breeding phenology of seabirds of Kodiak Island, Alaska. Southwestern Association of Naturalists. Glendale, AZ.

Dickerman, A. and B. May. Genic divergence in a three year old population of meadow vole (Microtus pennsylvanicus). Southwestern Association of Naturalists. Glendale, AZ.

Findley, J. S. Morphologic spacing in small mammal communities. Southwestern Association of Naturalists. Glendale, AZ.

Findley, J. S. Size and shape in southwestern rodent communities. American Society of Mammalogists. Orono, ME.

Findley, J. S. and M. T. Findley. Reef fish communities along a longitudinal species richness gradient. American Society of Naturalists/Society for the Study of Evolution joint meeting. Chicago, IL.

Findley, J. S. Morphologic patterns in New Mexican small mammal communities. Fourth International Theriological Congress. Edmonton, Alberta, Canada.

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Hafner, D. J. Immunological studies of the Nearctic Sciuridae: a review and reevaluation. American Society of Mammalogists, Orono, ME.

Hartman, G. D., L. W. Robbins, and M. H. Smith. Dispersal, reproductive strategies, and the maintenance of genetic variability in Gambusia affinis (Osteichthyes: Poeciliidae). Southwestern Association of Naturalists. Glendale, AZ.

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Riddle, B. R. Electrophoretic variation among northern populations of Onychomys leucogaster, and the Late Quaternary patterns of small mammal distribution among the Great Basin, Wyoming Basin, and Great Plains. Southwestern Association of Naturalists. Glendale, AZ.

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Yates, T. L. The value and future of systematic collections of mammals. Keynote address, Fourth International Theriological Conference. Edmonton, Alberta, Canada.

Yates, T. L. Evolution of the Talpidae: lack of evidence for deme-size/drift models. Invited paper presented to the Department of Zoology, University of Georgia, Athens.

Yates, T. L. Chromosomal conservatism in fossorial Insectivora. Invited paper presented to the section of ecology and genetics, Savannah River Ecology Laboratory, Aiken, SC.

POSTER PRESENTATIONS AT NATIONAL MEETINGS

Gentz, E. J. and T. L. Yates. Genic divergence between llama and alpaca. American Society of Mammalogists. Orono, ME.

Gentz, E. J. and T. L. Yates. Genetic identification of a hybrid animal. American Association of Zoological Parks and Aquariums. Columbus, OH.

FY 1985-86

CLES TECHNICAL SERIES #148-166

#148. Toll, Mollie S. Flotation analysis at an isolated 10th century pit structure (5MT8371) near Yellow Jacket, Colorado. Ms. on file, Division of Conservation Archaeology, Farmington, N.M. Doug Dykeman, Project Director. 18 pp. July 11, 1985.

#149. Toll, Mollie S. Flotation analysis of a Late Archaic/Basketmaker II seasonal use site: the Crystal Water Tank (NM-H-643). Ms. on file, Navajo Nation Cultural Resources Management Program, Window Rock, AZ. Ed Huber, Project Director. 8 pp. July 24, 1985.

#150. Toll, Mollie S. Flotation analysis at an early Navajo site (NM-G-2-1) near Navajo Reservior, N.M. Ms. on file, Navajo Nation Cultural Resources Management Program, Farminton, N.M. Larry Vogler, Project Director. 4 pp. July 29, 1985.

#151. Toll, Mollie S. Flotation investigations at the Coquilles Site, on the Mississippi River delta, Louisiana. Ms. on file, Jean Lafitte National Historical Park, New Orleans. Ted Birkedal, Project Director (National Park Service, Southwest Regional Office, Santa Fe). 9 pp. July 31, 1985.

#152. Clary, Karen H. An analysis of ten pollen samples from a Mississippi delta Marksville period archaeological sample from the Coquilles site. Ms. on file, Jean Lafitte National Historical Park, New Orleans. Ted Birkedal, Project Director (National Park Service, Southwest Regional Office, Santa Fe). 10 pp. August 30, 1985.

#153. Toll, Mollie S. Flotation investigations on Albuquerque's West Mesa: LA 33223. Ms. on file, Archeological Research Consultants, Albuquerque. Beth O'Leary, Project Director. 6 pp. Sept. 13, 1985.

#154. Cully, Anne C. (Pollen investigations at Kin Nahasbas (29SJ392), Chaco Canyon, New Mexico). Ms. on file, Chaco Center, National Park Service, Albuquerque. Larry V. Nordby, Chief. 12 pp. Sept. 24, 1985.

#155. Cully, Anne C. Pollen analysis at Una Vida Pueblo, Chaco Canyon, New Mexico. Ms. on file, Chaco Center, National Park Service, Albuquerque. Larry V. Nordby, Chief. 24 pp. Oct. 21, 1985.

#156. Clary, Karen. Pollen analysis of three samples from SJC 1138, a Basketmaker III-Pueblo I archaeological site along the La Plata River, near Farmington, New Mexico. Ms. on file, Division of Conservation Archaeology, San Juan County Museum Association, Farmington, New Mexico. Penelope Whitten, Project Director, 15 pp. Dec. 1, 1985.

458

#157. Toll, Mollie S. Flotation and macrobotanical remains at two Chacoan greathouses: Una Vida (29SJ391) and Kin Nahasbas (29SJ392). Ms. on file, Chaco Center, National Park Service, Albuquerque. Larry V. Nordby, Chief. 28 pp. Dec. 12, 1985.

#158. Toll, Mollie S. Flotation and macrobotanical evidence of plant use through Anasazi occupation of LA 50337, in the La Plata River Valley, NW New Mexico. Ms. on file, Museum of New Mexico, Laboratory of Anthropology. Brad Vierra, Project Director. 37 pp. March 31, 1986.

#159. Toll, Mollie S. Plant utilization patterns at 295J626, a Pueblo II village in Chaco Canyon, New Mexico: Flotation and Macrobotanical Analyses. Ms. on file, National Park Service, SW Regional Office, Santa Fe. Thomas C. Windes, Director. 43 pp. April 22, 1986.

#160. Toll, Mollie S. Floral analyses from various Chaco Canyon sites (flotation samples from Pueblo del Arroyo, Kin Kletzo and the Bc sites; macrobotanical remains from 295J597). Ms. on file, National Park Service, SW Regional Office, Santa Fe. Thomas C. Windes, Project Director. 7 pp. April 22, 1986.

#161. Limited flotation analysis of a late Puebloan fieldhouse in the Jemez Mountains, New Mexico. Ms on file, National Forest Service, Cultural Resources Division, Santa Fe. Sandy Marshall, Project Director. 5 pp. May 19, 1986.

#162. Toll, Mollie S. Flotation investigation of LA 16126, north of Gallup, New Mexico. Ms. on file, Museum of New Mexico, Laboratory of Anthropology. Tim Maxwell, Project Director. 6 pp. May 23, 1986.

#163. Toll, Mollie S. Floral remains from a post-contact Piro Pueblo in San Antonio, New Mexico: Pargas (LA 31746). Ms. on file, Office of Contract Archaeology, University of New Mexico, Albuquerque. Michael Marshall, Project Director. 9 pp. June 6, 1986.

#164. Toll, Mollie S. Flotation from the East Ruin: on Alto addendum. Ms. on file, Division of Cultural Research, National Park Service, Santa Fe, NM. Thomas C. Windes, Project Director. 5 pp. June 13, 1986.

#165. Clary, Karen H. Pollen analysis of LA 50337, an Anasazi Period Site, the La Plata River, northwestern New Mexico. Ms. on file, Laboratory of Anthropology Museum of New Mexico, Santa Fe, New Mexico. Brad Vierra, Project Director. 63 pp. June 16, 1986.

#166. Clary, Karen H. An analysis of pollen from the Tsegi Phase occupation (A.D. 1250-1300) of Turkey Cave (NA2520), Navajo National Monument, Northeastern Arizona. Ms. on file, National Park Service, Southwest Region, Santa Fe, New Mexico, Peter McKenna, Project Archaeologist. 30 pp. June 28, 1986.

Pollen Lab Activities 1985-1986

In the past year the pollen lab has processed approximately 300 pollen samples. We have performed analyses in regard to studies of paleoenvironment, early human subsistence patterns and agricultural origins for the Laboratory of Anthropology, Museum of New Mexico; the Smithsonian Tropical Research Institute; Temple University, Philadelphia; the Zuni Archaeological Project, Zuni, New Mexico, and the Office of Contract Archaeology, University of New Mexico.

These activities have resulted in the additional employment of a graduate student on a half-time basis, and a laboratory technician on a 3/4 time basis.

CLES Professional Activities 1985-1986

1.). CLES presented the course, "Ethnobotany 402/502." It was team-taught by Mollie S. Toll, Margaret Caffey-Moquin, and Karen H. Clary. The class was attended by students from both the Biology and Anthropology Departments.

2.). CLES, with the Department of Biology and Division of Natural Resources, sponsored the 9th Annual Ethnobiology Conference March 20-22, 1986. The conference was attended by approximately 180 participants from the United States, Canada, and Mexico. Participants delivered papers on topics such as ethnopharmocognosy, folk taxonomy, archaeobotany, ethnobotany of living cultures, agricultural systems, and the prehistoric utilization of both mammals and insects.

ANNUAL REPORT
ELECTRON MICROSCOPY FACILITY

The Electron Microscopy Facility continues to grow and to expand its services during a period of financial stringency. Our most notable recent acquisition is a new Zeiss EM109 transmission electron microscope. This instrument was purchased by funds from the NIH MBRS-Supplemental Program. The microscope now makes it possible for us to perform all of the major preparative techniques and to provide the highest quality transmission electron micrographs for personnel in the Biology Department.

We do not yet have a scanning electron microscope in the facility, but we anticipate bringing one on board shortly after the beginning of the Fall 1986 semester. During the past two years we have maintained a very close and amicable relationship with several departments in the School of Medicine (Departments of Anatomy, Pathology, Cellular Pathology, Pharmacology and Biochemistry). The majority of our interactions have been dedicated toward collaborative research and sharing of equipment. The EM Facility in the Medical School has recently made several major purchases of instrumentation, and we have been approached about taking delivery of the Medical School's ETEC scanning electron microscope.

This proposal was unanimously approved by the Biology Department's EM Advisory Committee; the transfer must now only be approved by the School of Medicine's EM Users' Committee. We should have the final approval for the transfer of the scanning EM by the first week of September.

TEACHING

The teaching component of the EM Facility's mission remains strong; both Biol 547 (Transmission EM) and Biol 548 (scanning EM) are filled for the 86-87 academic year, and we are forming a waiting list for the 87-88 academic year. We continue to limit the size of the classes to eight students per class, because of the intensive one-on-one instruction which must take place during some phases of the courses.

This past year we provided teaching in TEM and SEM to not only graduate students in the Biology Department, but to research personnel from the following:

Lovelace Inhalation Toxicology Research Institute
Veterans Administration Medical Center
Diagnostic Virology, State Health Laboratories
Department of Cell Biology, UNM Medical School

Department of Microbiology, UNM Medical School
Department of Chemistry, UNM

RESEARCH

Our main research interests continue to be the effects of specimen preparation upon ultrastructure and histochemical and immunohistochemical reactivity. There is definitely a large amount of interest in this area. For example, from one poster which was presented at the Cell Biology meetings two years ago (1) have come two invited presentations (2,3), an invited manuscript (4) two additional publications (5,6) and an invitation to participate in a minicourse on cryoelectron microscopy which will be presented in January 1987 at the University of California-Berkeley.

There are several laboratories which are now using the techniques which we have pioneered; these laboratories include the Department of Pharmacology at McMaster University in Hamilton, Ontario. The Department of Physiology at the University of California-Los Angeles is also gearing up for these techniques. We are also applying some of these procedures in collaboration with the University of Washington to examine some of the marine samples which have recently been collected from deep-sea geothermal vents by using the Alvin deep-sea submersible research vessel.

SERVICE

We include all services which the EM Facility provides to outside users in this category; these frequently coincide with teaching activities, since personnel from other departments and institutions often take the course to see whether EM is a viable alternative for analyzing a specific research problem. We have therefore been of service to the outside groups listed above under Teaching.

In addition, we have provided service to the School of Medicine in establishing a low-temperature embedding facility in the Basic Medical Sciences Building. We will also offer a workshop in the use of low-temperature embedding media for graduate students, faculty and research personnel in the School of Medicine. This workshop is scheduled to be given on August 22, 1986.

The EM Facility has participated heavily in the organization and planning for the Annual Meetings of the Microbeam Analysis Society and the Electron Microscopy Society of America. These meetings will be held in Albuquerque August 10-15, 1986. We have worked closely with Sandia National Laboratories, the Sperry Corporation,

462

the Institute of Meteoritics and the School of Medicine since the latter half of 1985 to ensure a successful meeting schedule.

REFERENCES

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2. Chiovetti, R., Little, S.A., Brass-Dale, J. and McGuffee, L.J. A new approach to low temperature embedding: Quick freezing, freeze-drying and direct infiltration in Lowicryl K4M. Fourth Pfefferkorn Conference on Biological Specimen Preparation, Grand Canyon, AZ, 1985 (Invited Presentation).

3. Chiovetti, R. The preparation of biological samples for quantitative electron microscopy: Some problems and some solutions. New Mexico Microbeam Users Group Technical Meeting, Albuquerque, NM, 1986 (Invited Presentation).

4. Chiovetti, R., McGuffee, L.J., Little, S.A., Wheeler-Clark, E. and Brass-Dale, J. 1986. Quick freezing, freeze-drying and embedding tissues in low temperature and low viscosity resins. J. Electron Micros. Tech., in press.

5. Chandra, S., Morrison, G.H. and Chiovetti, R. 1985. Correlative ion and electron microscopy of biological soft tissue embedded in low-temperature resins. In: Armstrong, J.T. (ed.), Microbeam Analysis - 1985, pp. 125-128.

6. Chiovetti, R., Little, S.A., Brass-Dale, J. and McGuffee, L.J. 1986. A new technique for low-temperature embedding: Quick freezing, freeze-drying and direct infiltration in Lowicryl K4M. In: Mueller, M., Becker, R.P., Boyde, A. and Wolosewick, J.J. (eds.), The Science of Biological Specimen Preparation for Microscopy and Microanalysis. SEM, Inc., AMF-O'Hare, IL 60666, pp. 155-164.

COLLEGE OF ARTS AND SCIENCES
THE REPORT OF THE DEPARTMENT OF CHEMISTRY
July 1, 1985 to June 30, 1986
Riley Schaeffer, Chairman

I. General Departmental Information

A. Significant Achievements During the Academic Year 1985-86

The Department has been making considerable efforts during the last five years to develop a stronger research and graduate education base. Efforts of the Graduate Recruitment Committee last year resulted in one of the best entering classes of graduate students we have had in the past few years. Our attempt to repeat that performance this year has been somewhat less successful as the Department has fallen still further behind the current regional and national level for stipends.

Efforts to recruit faculty continued this year with interviewing for three positions. Although we had a number of outstanding applicants, only one (Dr. Thomas Bein) accepted an offer. Two other offers were declined in favor of appointments at UCLA and Purdue. A major factor in these decisions to accept other offers is the high cost of starting up a research program in chemistry. In at least one of the instances we know that the offer included $250,000 to equip a laboratory.

The Fifth Annual Milton Kahn lecture was delivered May 9 by Prof. M. A. El-Sayed from the University of California, Los Angeles. As has become our custom, a reception and dinner followed the lecture. At that time, student awards were presented. Thirty students and parents attended as guests of the Department.

The Department received a grant from the National Science Foundation for the purchase of computing equipment. The primary purpose of this grant was to provide equipment for general, real time data acquisition and data reduction. It will also serve many incidental computing needs of the Department. A system consisting of two microvax units from Digital Equipment Corporation was installed in May. Our proposal to connect these with the Campus Data Communication Network was recently approved, with expenses to be paid from the Land and Permanent Fund.

The Department has experienced considerable difficulty with the high field NMR purchased two years ago. A variety of ills has resulted in the instrument being out of service more than fifty percent of the time. This situation came to a head in the spring and resulted in consultations with the legal department. As a result, General Electric NMR Instruments was informed of our intention to revoke acceptance of the instrument. At about the same time, Mr. Herb Taus, General Managert of General Electric NMR Instruments took an active interest in solving the problems. As a result, several more competent GE personnel have visited the Department and uncovered a variety of problems with both the software supplied with the instrument and mechanical and electrical faults. A preliminary agreement has been reached in

which the company agrees to have a fully operational instrument in place through September or accept return of the machine and refund its purchase price. We hope that we are finally on our way to the solution of a vexing problem, paricularly since no other reliable NMR instrument is now operational in the Department.

One of the most important activities that the Department carries out in conjunction with graduate education is the active series of seminars by which both students and faculty are introduced to current research as carried out in both this country and abroad. Visitors to this Department during the past academic year came from other universities, as well as industrial and governmental laboratories. They came from as far away as Italy and Germany and as close as Albuquerque. A list of seminar speakers is given in appendix B.

During the 1985-86 year 8 students were graduated with a B.S. degree in chemistry; 5 of our graduates were men and 3 were women. 6 students graduated with a B.A. degree in Chemistry; 4 of these graduates were men and 2 were women. In addition to the 14 chemistry majors, 32 men and 12 women took a minor in chemistry. At the graduate level, 7 men and 2 women were awarded the M.S. degree; 2 men and 2 women were awarded the Ph.D. in Chemistry. Students receiving degrees in Chemistry are listed below.

Students receiving the B.A. Degree in Chemistry in 1985-86

Vincent E. Digneo	David W. Hirshfield
Jim C. Kraner	Ricky G. Lovato
Oliver E. Madrid	Matthew J. Sery
Cleotilde R. Tafoya	Karen M. Weber
Alan K. Wood	

Students receiving the B.S. Degree in Chemistry in 1985-86

Rhett G. Alden	Daina Z. Avizonis
Kimberly J. Cline	Robert W. Irwin
Gary Lichtenstein	Patrick W. Luce
Steven D. Reed	Stephanie L. Renken

Students completing the Master's Degree in Chemistry in 1985-86

David A. Beach	Mary Alice Cooper
Pelayo F. Fernandez	Charles T. Koch
Jorge-Francisco Mariategui	John H. May
Jan Mintorovitch	Cathy D. Newman
Paul E. Zeitz	

Students completing the Doctor of Philosophy Degree in Chemistry in 1985-86

Susan D. Carson	William H. Hood
Chong-Hong Pyun	Maria Wells Tikkanen

A number of the students receiving the bachelors degree will go on for advanced study. Two of these will go to professional schools, one will pursue graduate studies in this department, and seven students have applied for graduate studies in Chemistry at other universities.

The Department of Chemistry presented the following awards for academic excellence to majors during the 1985-86 year:

Ms. Kimberly Cline, Ms. Stephanie Renken and Mr. Rhett Alden were named as recipients of the Paul Mozley Award given each year to outstanding seniors majoring in Chemimstry. Mr. David Hirshfield received the award sponsored by the American Institute of

Chemists as the outstanding graduating senior in Chemistry. Ms. Sally Peters Douglas was awarded the Merck Index Award. Ms. Tze Hei Yong received the John D. Clark award in Chemistry. 467

Mr. Neil Finnen was named as the recipient of the J. L. Riebsomer Memorial Prize in Chemistry. Mr. David Hirshfield received the Ann Kahn Memorial Prize in Chemistry. Ms. Cathy Newman and Mr. Jerzy Janik were the recipients of the Graduate Scholarship in Chemistry Award, given each year to outstanding students in the Graduate Program. Mr. Henry Owen, Mr. Timothy Bolek and Mr. Preston Herrington received the Dean C. Uhl Merit Scholarship Award. Five Uhl Presidential Scholarships were awarded. The recipients were David Witherspoon, Kristin Bauer, Jeffrey Brown, Kurt Clark, and Kamolparn Higgins

B. Significant Plans and Recommendations for the Near Future

One of the most crucial activities of the Department with respect to its growth in the research and graduate education area is the recruitment of graduate students. We are experiencing increasing difficulty in attracting qualified graduate students. The College is fully appreciative of the unusual situation in the field of chemistry but is unable to devote the resources necessary to solve the problem. Briefly, every qualified B.S. student in the country who wishes to enter graduate school is sought after by departments throughout the country. Recruiting is nationwide, not regional, and competition is intense. Typical

is the meeting that the University of Arizona will host in Tucson on February 14-15, 1987. They will invite candidates, at Arizona's expense, to visit the Department and compete for two $9000 fellowships for the full year. Twenty-eight $2000 and five $2500 fellowships will also be offered to supplement the TA stipend. About 15-18 first year TA's are awarded fellowships at Arizona. The 1985/1986 TA stipends at Arizona are $8600.00 per year for teaching two laboratories per week, and there are a number of fellowships and supplementary awards for TA's. More and more we find that the stipend here is not attractive to American students. Even though chemistry is such a vital portion of the undergraduate program of many departments on campus, we are finding it increasingly difficult to maintain a high quality of instruction. As demonstrated a year ago, when our stipends are competetive we can do well, but when we fall behind the decay begins at once. This critical problem must be confronted during the coming year. See Appendix A for recruiting statistics.

It is also important to note that another serious problem is still with us that also must be dealt with in the near future. Again, we point out that no method currently exists for systematic replacement of scientific equipment and instruments, either in undergraduate laboratories or dedicated to research. Each year we must eliminate more fundamental experiments from our undergraduate laboratory program because some instrument has finally died. Thus, we currently cannot allow second year students to do an nmr experiment - something available in almost all four year colleges of any quality - because the old equipment has given up the ghost. Furthermore, as the total equipment

inventory of the Department builds each year the lack of repair and maintenance funds ensures exponential growth of the problem. 469 One must question how a University can justify expenditures for face lifting on buildings and grounds and redesign of stationary, while cancers in the academic area go untreated.

The total value of accountable equipment has increased from $2,635,159 in 1984 to $3,137,285 at the end of the accounting period in 1985. Major pieces of equipment (over $10,000 purchase price) acquired during that reporting year were:

167183	Tektronix Digitizer	$23,407.
168161	Zeiss Microscope	18,093.
169651	Spectra I Laser	22,500.
169680	Hewlett-Packard Chromotograph	16,000.

The need for additional laboratory space persists. It is to be hoped that this problem will be addressed by the higher administration in the coming year. We again point out that new facilities are not only required to allow the research and graduate education function of the department to achieve the status demanded by the technical nature of the New Mexico community, but are mandated by simple safety considerations. Sooner or later if we do not alleviate crowding, an injury leading to court action will occur.

C. Appointments to Staff

479

Ms. Eva Quesnell joined the staff on 16 June 1986 as an Editorial Assistant II.

D. Separations

A maternity leave of absence for the period 2 June 1986 to 2 December 1986 was approved for Ms. Esther Gugliotta.

E. Promotions

Mr. Carl Hilton was promoted from the position of Storekeeper II to the position of Supervisor of Chemical Stores. Mr. Albert Schnoebelen was promoted from Administrative Assistant to Academic Support Aide II.

A list of the current faculty, staff and graduate students is given in Appendix C.

F. Sponsored Research

The Department has become increasingly agressive in the search for outside funds to support its research program. In the 1985-86 academic year the Department had the following active grants:

GRANTS ACTIVE DURING THE 1985-86 FISCAL YEAR

GRANT #	INVESTIGATOR	END DATE	SOURCE	AMOUNT
281-557-1XX	Allen	9/30/86	NSF	90,000.
281-254-3XX	Bustamante	6/30/86	NIH	73,626.
281-326-1XX	Bustamante	6/30/87	SEARLE	105,000.
281-504-1XX	Bustamante	9/15/87	SLOAN	25,000.
282-659-62X	Bustamante	12/31/85	MBRS	15,476.
282-659-52X	Bustamante	12/31/86	MBRS	17,666.
287-730-3XX	Bustamante	6/30/86	HITECH	35,000.
020-812-842	Deck	6/15/86	RAC	1,972.
281-156-1XX	Holder	8/31/86	PRF	49,000.
282-676-4XX	Litchman	12/31/85	MBRS	7,446.
282-676-5XX	Litchman	12/31/86	MBRS	8,176.
281-270-3XX	Morrow	6/30/86	U of CA	6,180.
282-631-4XX	Morrow	12/31/85	MBRS	22,783.
282-631-5XX	Morrow	12/31/86	MBRS	22,411.
282-633-4XX	Niemczyk	12/31/85	MBRS	10,950.
281-321-1XX	Ogilby	2/28/86	PRF	15,000.
281-411-1XX	Ogilby	9/30/85	SURP	30,000.
281-507-1XX	Ogilby	7/31/86	NSF	46,500.
281-507-2XX	Ogilby	7/31/87	NSF	50,000.
020-812-831	Ondrias	6/15/86	RAC	1,968.
281-285-1XX	Ondrias	8/31/86	PRF	15,000.
281-296-1XX	Ondrias	Open	ResCorp.	7,900.
281-355-2XX	Ondrias	6/30/86	NIH	58,967.
282-664-4XX	Ondrias	12/31/85	MBRS	16,206.
282-664-5XX	Ondrias	12/31/86	MBRS	15,476.
281-377-1XX	Ortiz	8/31/86	PRF	15,000.
281-411-2XX	Ortiz	9/30/85	SURP	30,000.
281-009-4XX	Paine	5/31/86	SANDIA	17,000.
281-381-1XX	Paine	3/31/87	PRF	52,500.
281-415-1XX	Paine	1/31/86	LANL	29,988.
281-415-2XX	Paine	9/30/86	LANL	41,983.
281-420-1XX	Paine w/Schaeffer	12/31/85	SANDIA	46,487.
281-420-22X	Paine w/Schaeffer	12/31/86	SANDIA	59,998.
281-482-1XX	Paine	12/31/86	NSF	57,800.
281-827-5XX	Paine	8/31/88	DOE	73,000.
281-632-1XX	Papadopoulos	OPEN	AMER CY	14,382.
			TOTAL	1,875,397.

In addition to the active grants, the following grant proposals were submitted during the year:

Proposals submitted 1985-86

PI	Sponsor	Action	From	To	Amount	Date
Bein	ACS-PRF	New			$ 18,000	5-23-86
Bustamante	NSF	New	8-25-00	8-30-00	1,135,771	12-13-85
Bustamante	Angus Chem	New			43,455	9-6-85
Bustamante	DHHS	Cont	7-1-86	6-30-91	919,502	9-26-85
Holder	ACS-PRF	Ext	9-1-82	8-31-86	0	9-19-85
Hollstein	Tsumura	New	1-1-87	12-31-88	38,216	6-27-86
Morrow	UC-SF	Cont	7-1-86	6-30-87	83,510	9-20-85
Niemczyk	LANL	Rev	4-15-86	3-31-87	44,954	3-7-86
Niemczyk	ARO	New			134,865	11-11-85
Niemczyk	LANL	New	1-1-86	12-31-86	26,554	10-31-85
Ogilby	DoD	New	7-1-86		118,978	11-12-85
Ogilby	ONR	New	1-1-86	1-1-89	150,000	8-27-85
Ogilby	DOE	New	2-1-86	2-1-87	0	12-10-85
Ogilby	AFOSR	New	2-1-86	2-1-89	280,277	7-29-85
Ogilby	DOE	New	9-1-85	9-1-86	0	7-29-85
Ogilby	NSF	Cont	2-1-86	2-1-87	50,000	1-2-86
Ogilby	DOE	New			0	2-4-86
Ondrias	NSF	New	5-1-86	7-28-00	354,673	11-6-85
Ondrias	DHHS	Cont	7-1-86	6-30-87	56,840	4-24-86
Ondrias	NSF	Rev	9-1-86	8-31-89	83,440	6-18-86
Ondrias	ACS-PRF	Ext	9-1-83	8-31-86	0	9-11-85
Ortiz	ACS-PRF	Ext		8-31-87	0	4-9-86
Ortiz	ACS-PRF	New	8-1-86	8-31-89	52,500	9-17-85
Ortiz	NSF	New	6-1-86	5-31-88	196,858	10-15-85
Paine	LANL	Supp	11-1-84	9-30-86	12,000	1-9-86
Paine	LANL	Ext	11-1-84	1-31-86	0	1-9-86
Paine	DOE	New			220,000	12-5-85
Paine	NSF	Cont	7-1-86	6-30-87	58,000	4-14-86
Paine	Sandia	Ext	7-1-84	5-30-86	0	7-25-85
Paine	LANL	Ext	11-1-84	12-31-85	29,988	11-6-85
Paine	DoD	New			271,300	11-12-85
Park	DOE	New	9-15-86	9-14-89	151,916	2-24-86
Park	Yukong	Rev	2-1-86	1-31-88	103,499	1-9-86
Park	Yukong	New	1-1-86	12-30-87	107,875	10-23-85
Satterlee	Sloan	Ext	9-16-85	9-15-87	25,000	11-15-85
Satterlee	DHHS	Cont	9-1-86	8-31-87	98,813	6-30-86
Satterlee	NSF	Cont	9-1-86		75,000	4-1-86
Schaeffer	Sandia	New	3-1-86	2-28-86	12,000	1-27-86
Schaeffer	Sandia	Cont	3-27-00	2-24-00	59,998	1-14-86
Schaeffer	Dreyfus	New	9-1-86	8-31-87	25,000	5-15-86
Schaeffer	NSF	Rev	10-1-85	12-25-00	90,000	7-25-85
Walters	DOE	New			0	6-12-86
Walters	DOE	New	11-1-85		0	10-28-85
Walters	Nat. Syn.	New	3-1-86	9-30-86	0	2-11-86
Walters	Sandia	Ext		7-31-85	0	7-11-85
TOTAL					5,128,782	

APPENDIX A

Applications Received for Graduate Study in Chemistry 473

1985-1986

State	APP	APR	DIS	INC	DEC	ENR
Arizona	8	6	1	1	4	2
Arkansas	4	3		1	3	
California	3	2		1	1	1
Colorado	6	3		3	3	
Connecticut	1		1			
Guam	1			1		
Idaho	2		1	1		
Illinois	3	2		1	2	
Indiana	4		1	3		
Iowa	1			1		
Kentucky	1			1		
Massachusetts	1			1		
Michigan	4	3		1	1	2
Minnesota	3	1		2	1	
Missouri	2			2		
Nebraska	2	1	1		1	
New Jersey	1	1				1
New Mexico	8	1	1	6	1	
New York	6	3	1	2	2	1
North Dakota	1	1			1	
Ohio	2			2		
Oregon	1			1		
Pennsylvania	1		1			
South Carolina	2	1		1		1
Tennessee	1	1				1
Texas	9	4	2	3	3	1
Utah	2	1		1	1	
Washington	1		1			
West Virginia	1			1		
Wisconsin	1			1		
Wyoming	1			1		
TOTALS:						
GRADUATES OF US SCHOOLS:	84	34	11	39	24	10

APP = Applied
APR = Approved
DIS = Disapproved
INC = Incomplete
DEC = Declined our offer
ENR = Students that we anticipate will enroll

Applications Received for Graduate Study in Chemistry

1985-1986

International Student Applications

Country	APP	APR	DIS	INC	DEC	ENR
Australia	1	1			1	
Bangladesh	2		1	1		
Canada	2		1	1		
China	41	8	4	29	4	4
Egypt	2			2		
England	1			1		
Ethiopia	1		1			
France	1	1			1	
India	17	2	7	8		2
Indonesia	2		1	1		
Iran	1			1		
Iraq	1			1		
Israel	3	1		2		1
Korea	2		1	1		
Libya	1		1			
Malaysia	4	2		2	2	
Mexico	1			1		
Nigeria	1		1			
Pakistan	7	1	2	4		1
Peru	1			1		
Philippines	1			1		
Russia	1		1			
Saudi Arabia	1		1			
Scotland	1			1		
Sri Lanka	20	3	7	10		3
Taiwan	14	4	6	4	1	3
Thailand	10	3	3	4		3
TOTALS:						
GRADUATES OF FOREIGN SCHOOLS:	140	26	38	76	9	17
GRAND TOTALS:	224	60	49	115	33	27

APP = Applied
APR = Approved
DIS = Disapproved
INC = Incomplete
DEC = Declined our offer
ENR = Students that we anticipate will enroll

APPENDIX B
Seminar Speakers Fall 1985

Dr. Baktham Singaram Purdue University August 9, 1985	"Chiral Synthesis via Organoboranes"
Dr. J. T. Knudtson Aerospace Corp September 6, 1985	"Vibrational Relaxation in Liguids Studied by Laser Spectroscopy"
Dr. Carl Seager Sandia National Lab. September 13, 1985	"Optical Absorption Spectroscopy Using Mirage Effects"
Dr. Ron C. Estler Fort Lewis College September 20, 1985	"Fun with Photons: Chemical Applications of Multiphoton Ionization Spectroscopy"
Dr. Stanley Gill University of Colorado September 27, 1985	"Cooperativity in Ligand Linked Aggregation Processes"
Dr. Larry Berliner Ohio State University October 4, 1985	"The Biophysics of Milk: α Lactalbumin"
Dr. Kevin S. Peters University of Colorado October 11, 1985	"Applications of Time-Resolved Photoacoustic Calorimetry to Problems in Organic, Organometallic, and Biochemistry"
Dr. Kenton H. Whitmire Rice University October 18, 1985	"Studies at the Interface of Transition Metal-Main Group Element Cluster Complexes: Zintl-Metal Carbonylates"
Dr. Jeremy Burdett University of Chicago October 25, 1985	"Rings and Things: A New Way to Look at Molecular and Solid State Structure"
Dr. Karl Seff University of Hawaii October 30, 1985	"Crystallographic Studies of Ion-Exchange into Zeolilte A--Unexpected Results"
Dr. Ernest B. Yeager Case Western Univ. November 8, 1985	"Macrocyclic Compounds in Oxygen Electrocatalysts"
Dr. Tom Albright University of Houston November 15, 1985	"New Uses of the Isolobal Analogy"

Dr. Celeste Rohlfing Los Alamos National Lab. November 21, 1985	"A Theoretical Investigation of the Hydrides and Carbonyls of Ni, Pd, and Pt"
Dr. Carl J. Maggiore Los Alamos National Lab. November 22, 1985	"Chemical Applications of MeV Ion Beams"
Dr. Brian Benicewicz Los Alamos National Lab. December 6, 1985	"Synthesis and Characterization of Liquid-Crystalline Enamine-Ketone Compounds"
Dr. Ed Clennan University of Wyoming December 13, 1985	"Singlet Oxidation of Electron-Rich Substrates"

Seminar Speakers Spring 1986

Dr. Stephen W. Downey Los Alamos National Lab. January 24, 1986	"Two Sides of Multiphoton Ionization: Resonance Ionization Mass Specyroscopy and Charged Particle Beam Neutralization"
Dr. Mark Ratner Northwestern University January 31, 1986	"Electron Transfer in Models, Molecules and Metals"
Dr. Robert Scheidt Notre Dame University February 4, 1986	"Metal Spin-States and Stereochemistry of Metalloporphyrin Monomers"
Dr. Elizabeth Holt Oklahoma State University February 7, 1986	Fluorescent Complexes of Copper (I)"
Dr. David Wharton Northeastern University February 13, 1986	"Copper in Cytochrome Oxidase: An Ironclad Case"
Dr. Bruce Schardt University of Calif. February 14, 1986	"Structural Studies at the Solid-Liquid-Interface: Specific Adsorption and Electrodeposition at Well-Defined Pt(III) Electrode Surfaces"
Dr. Joel M. Harris University of Utah February 14, 1986	High Sensitivity Laser Spectroscopy of Non-Fluorescent Samples"
Dr. Rosa Key-Schwartz Vanderbilt University February 14, 1986	"Photoelectron Spectroscopy of Selected Molecules"

Dr. Tudor Buican Los Alamos National Lab February 21, 1986	"Fourier Transform Flow Cytrometry: The Spectral Analysis of Individual Cells"
Dr. David Nesbitt University of Colorado February 26, 1986	"IR Laser Absorption Spectroscopy of Van der Waals Complexes in a Slit Supersonic Expansion"
Dr. Peter Kovacic University of Wisconsin February 28, 1986	"Unified Mechanism for Carcinogous and Anti-Cancer Agents"
Dr. Andrea Wayda AT&T Bell Laboratory March 3, 1986	"Lanthanoid Metals and Their Ions in Unusual Coordination Environments"
Dr. F. Ann Walker San Francisco State Univ. March 7, 1986	"EPR, Mossbauer and Structural Studies of Low Spin Ferric Heme Models of Heme Proteins"
Dr. Ivan Bernal University of Houston March 14, 1986	"The Phenomenon of Conglomerate Crystallization: Sterochemical Conditions Leading to Spontaneous Resolutions of Chiral Compounds"
Dr. Karl Kadish University of Houston March 28, 1986	"Chemistry and Electrochemistry of Novel Metalloporphyrins"
Dr. Barry Kilbourn Molycorp, Inc. April 4, 1986	"THE ASTERISK ELEMENTS or THE NOT-SO-RARE EARTHS"
Dr. John Gilbert University of Texas April 11, 1986	"[3,3]-Sigmatropic Rearrangements: Mechanism and Applications"
Dr. Franca Ascoli University of Rome April 25, 1986	"Properties of the Domain Encoded by the Central Exon in Myoglobin"
Dr. Peter Ogilby University of New Mexico April 25, 1986	"The Formation of Singlet Molecular Oxygen ($^1\Delta g$) in Solution. A Direct, Time-Resolved, Near Infrared Spectroscopic Study"
Dr. J. V. Ortiz University of New Mexico May 2, 1986	"Molecular Orbital Theory of F-Element Organometallics"

Prof. Dr. H. Nöth Universität München May 5, 1986	"Chemistry of Iminoboranes and Methylenboranes"
Prof. Dr. H. Schmidbaur Technische Universität München May 8, 1986	"Arene Complexes: A New Dimension in the Chemistry of Post Transition Metals""
Dr. M. A. El-Sayed UCLA May 9, 1986	"Intramolecular Energy Distribution Times in Ionic Dissociation by Two-Color Picosecond Laser Mass Spectrometric Techniques
Prof. Dr. W. Sundermeyer University of Heidelberg May 27, 1986	Fused Salts and Their Use as Reaction Media for Synthesis of Organic and Inorganic Compounds"
Prof. Dr. W. Haubold Institut für Chemie der Univ. Hohenheim West Germany June 23, 1986	"Boron in Preparative and Analytical Chemistry"
Dr. Michael G. Matturro June 27, 1986 Exxon Res. & Engineering	"Thioozonide Decomposition: Sulfur and Oxygen Atom Transfer

APPENDIX B

Divisional Seminar Speakers 1985-1986

Dr. Dale Schaefer Sept 3, 1985 Sandia Nat. Lab	"The Structure of Disordered Materials"
Dr. Marlon Scully Dept. of Physics, UNM September 6, 1985	"Suppressing Quantum Noise"
Dr. Jim Martin Sept 10, 1985 Sandia Nat. Lab	"Dynamic Light Scattering from Fractals"
Mr. Mike Cannavan SCIEX September 17, 1985	"An Introduction to Inductively Coupled Plasma - Mass Spectroscopy"
Dr. Alan Hurd Sept 17, 1985 Sandia Nat. Lab	"The Fusion-Limited Aggregation in Two Dimensions"
Dr. Vincent Ortiz Chemistry, UNM September 24, 1985	"Propagator Theory of Molecular Auger Spectra"

Dr. Richard Holder Chemistry, UNM September 27, 1985	"The Future of Chemical Dynamics. Perspectives from a Year at NSF"
Dr. Jim Aubert Oct 1, 1985	"Low Density Microcellular Polystyrene Foam"
Dr. Su-Moon Park Chemistry, UNM October 8, 1985	"Absorptive Stripping Voltammetry"
Dr. Chaitanya Narula Chemistry, UNM October 10, 1985	"Recent Developments in the Chemistry of Borenium Salts"
Dr. Lyle McAfee Chemistry, UNM November 14, 1985	"Cocondensation Products of Molybdenum Trioxide with Water, Carbon Disulfide, and Various Small Organic Molecules"
Dr. Mike Kelly Sandia National Lab November 19, 1985	"Electrochemical Investigation of Porous Silcon Formation"
Dr. John Curro Nov 19, 1985	"Viscoelasticity of Networks"
Dr. Celeste Rohlfing Nov 21, 1985	"A Theoretical Investigation of the Hydrides and Carbonyls of Ni, Pd, and Pt"
Dr. John Shelnutt Sandia National Lab December 3, 1985	"Raman Spectroscopy of Icosahedral Borides"
Dr. Paul J. Nigrey Sandia National Lab April 30, 1986	"Synthetic Metals: Their Design and Properties"

APPENDIX C

FACULTY AND STAFF OF THE DEPARTMENT OF CHEMISTRY

FULL PROFESSORS:

ALLEN, Fritz S., Ph.D., 1969, University of Illinois
CATON, Roy D., Ph.D., 1963, Oregon State University
HOLLSTEIN, Ulrich, Ph.D., 1956, University of Amsterdam
NIEMCZK, Thomas M., Ph.D., 1972, Michigan State Univ.
PAINE, Robert T., Ph.D., 1970, University of Michigan
PAPADOPOULOS, E. Paul, Ph.D., 1961, University of Kansas
SCHAEFFER, Riley, Ph.D., 1949, University of Illinois
VANDER JAGT, David, Ph.D., 1967, Purdue University
WALTERS, Edward A., Ph.D., 1966, University of Minnesota

ASSOCIATE PROFESSORS:

HOLDER, Richard W., Ph.D., 1972, Yale University
LITCHMAN, William M., Ph.D., 1965, University of Utah
MCLAUGHLIN, Donard R., Ph.D., 1965, University of Utah
MORROW, Cary J., Ph.D., 1970, Tulane University
PARK, Su-Moon, Ph.D., 1975, University of Texas, Austin
SATTERLEE, James D., Ph.D., 1975, University of California, Davis

ASSISTANT PROFESSORS:

BUSTAMANTE, Carlos J., Ph.D., 1981, University of California, Berkeley
MAPLE, Jon R., Ph.D., 1980, Northern Illinois University
ONDRIAS, Mark O., Ph.D., 1979, Michigan State University
OGILBY, Peter R., Ph.D., 1981, University of California-Los Angeles
ORTIZ, Joseph V., Ph.D., 1981, University of Florida

INSTRUCTORS:

DECK, Lorraine, M.S., 1968, University of New Mexico
MALM, Miriam, M.S., 1964, University of New Mexico

EMERITUS PROFESSORS:

KAHN, Milton, Ph.D., 1950, Washington University

VISITING FACULTY:

BRABSON, G. Dana, Ph.D., 1965, University of California-Berkeley
NIMITZ, Jonathan S., Ph.D., 1981, Stanford University

ADJUNCT PROFESSORS:

BEAR, David, Ph.D., 1978, Univ. of California-Santa Cruz
BIENIEWSKI, Thomas M., Ph.D., 1965, California Institute of Technology
BLAIS, Normand C., Ph.D., 1956, Yale University
BOUSEK, Ronald R., Ph.D., 1976, University of Arizona
BRUECK, S.R.J., Ph.D., 1971, Massachusetts Institute of Technology
CREMERS, David A., Ph.D., 1972, Seattle University
DAVIS, Steven J., Ph.D., 1973, Univ. of New Hampshire
FRIEDMAN, Joel M., M.D., Ph.D. 1975, Univ. of Pennsylvania
GRANT, Patrick M., Ph.D., 1973, Univ. of California-Irvine
GUENTHER, Arthur H., Ph.D., 1957, Pennsylvania State Univ.
HADLEY, Steven G., Ph.D., 1966, Univ. of California-Davis
HADLEY, William M., Ph.D., 1972, Purdue University
HILL, Ralph H., Jr, Ph.D., 1979, Texas A&M University
HUGHES, Loris W., Ph.D., 1971, New Mexico State University
HYLARIDES, Mark D., Ph.D., 1979, University of New Mexico
JOHNSTON, Roger, Ph.D., 1983, University of Colorado
KLEINSCHMIDT, Phillip D., Ph.D., 1977, Pennsylvania State University
LIGHT, Ronald W., Ph.D., 1979, University of New Mexico
MAESTRE, Marcos F., Ph.D., 1964, Yale University
MOODY, David C., III, Ph.D., 1975, Indiana University
MOROSIN, Bruno, Ph.D., 1959, University of Washington
O'NEILL, William M., M.S., 1937, University of Cincinnati
PALMER, Byron A., Ph.D., 1977, Purdue University
PARKER, Donald R., M.P.H., 1963, University of Michigan
PARSONS, Michael, Ph.D., 1966, University of Florida
PETERSON, Dean E., Ph.D., 1972, University of Kansas
PIGG, C. Joanne, Ph.D., 1965, Oregon State University
SALZMAN, Gary C., Ph.D., 1972, University of Oregon
SHELNUTT, John A., Ph.D., 1975, George Inst. of Technology
SMITH, Brian R., Ph,D., 1972, Utah State University
TAPSCOTT, Robert E., Ph.D., 1968, Univ. of Illinois-Urbana
THOMAS, Kimberly W., Ph.D., 1978, University of California-Berkeley
WHALEY, Thomas W., Ph.D., 1971, University of New Mexico
WOLF, Paul J., Ph.D., 1985, Air Force Inst. of Technology
WOODRUFF, William H., Ph.D., 1972, Purdue University

STAFF SCIENTIST:
DUESLER, Eileen, Ph.D., 1973, Univ. of Calif-Berkeley

CHEMICAL ANALYST:
JU, Ruby K.Y., B.S., 1956, Univ. of Illinois

SCIENTIFIC GLASSBLOWER (AND PART-TIME LECTURER III)
ROENSCH, Arno, B.S., 1953, Highlands Univ.

INSTRUMENTATION TECHNICIAN
HUSHER, Frederick K, B.S.E.E. 1978, Univ. of New Mexico
STENSLAND, Leonard A

OTHER STAFF
HARGIS, Barbara J, Bookkeeper
HILTON, Carl, Supervisor, Chemical Stores
KARTCHNER, Wanda, Editorial Asstistant II
ORTIZ, Leonard, Storekeeper I
OTERO, David , Storekeeper I
QUESNELL, Eva, Editorial Assistant II
RUE, Ruth, Departmental Secretary
SCHNOEBELEN, Albert, Academic Support Aide II
WILLIAMS, Beth, Storekeeper I

GRADUATE STUDENTS

		Source
ACQUAYE, J.	TA	
ALDEN, R	RA/TA	DHHS
ANGUS, Jill	TA	
ARNEBERG, D	TA	
BEACH, D	RA	MBS
BERGQUIST, W	GA	
BIZZARI, N	TA	
BLAHA, S	GA	
BOREK, T	TA/RA	NSF
BOWLAND, C	TA	
BRAZWELL, E	TA	
BROWN, K	TA	
BUILES, E	RA	NIH
CARSON, S	RA/GA	NIH
CHANG, P	GA	
CHAVEZ, M	TA	
CLAY, J	TA	
CONARY, G	RA	DOE
CONSTANTINIDIS, I	RA	NIH
COOPER, M	GA	
CORIA, J	TA	
CRAWFORD, B	TA/RA	DHHS
DECK, L	GA	
DEWHURST, K.	GA	
DUNLAP, D	TA	
ERIDON, J.	RA	MBS

FERNANDEZ, P	GA	
FINDSEN, E	RA	NM/ACS
FINZI, L	TA	
GHARAHDAGHI, F	TA	
HODGE, E	GA	
HOIER, S	GA	
HOOD, W	GA	
HSHEEN, Y	RA/TA	DHHS
HUI, E	GA	
HUMPHREY, B	GA	
ISLAM, S	TA	
ITO, K	TA	
IU, K	RA	NIH
IWATA, Y	GA	
JANIK, J	RA	ACS
JOHNSON, K	RA/TA	NIH
KIM, M.	RA	NM
LARSEN, R	TA	
LEE, H	GA	
LII, F	GA	
LIN, J.	TA	
MAGNUS-ARYITEY, G	RA	Industry
MARTINEZ, D	RA	MBS
MAUNG, F	TA/GA	
MAY, J	GA	
MC CABE, D	RA	DOE
MCFEETERS, F	GA	
MC NAMARA, W	RA	DOE
MENDOZA, P	GA	
MINTOROVITCH, J	RA	NIH
NEWMAN, C	GA	
PACE, C	TA/GA	
PALMER, M	GA	
PAULTER, N	GA	
PYUN, C	GA	
RODACY, P	GA	
RUSSELL, A	RA	NM
SACKINGER, K	TA	
SANTANDREA, C	TA	
SCURLOCK, R	RA	NIH
SHACKLETT, A	RA	PRF
STILWELL, D	TA/GA	
THOMPSON, B	GA	
UHLAND, D	GA	
USSERY, D	RA	NIH
VICKERS, M	GA	
WALLACE, S	TA	
WEED, C	TA	
WELLS, S	TA	
WIECZOREK, L	TA	
WILLARD, B	TA	
WOOD, G	RA	DOE
YANG, S	TA	
ZHANG, C	TA	
ZIETZ, P	GA	

DEPARTMENT OF COMMUNICATIVE DISORDERS
ANNUAL REPORT
July 1, 1985 - June 30, 1986
By: Richard B. Hood, Chairperson

A. Significant Achievements

1. Master's Degree Programs

a. Graduates and Their Employment (N=17)

Speech-Language Pathology

Summer 1985

Ellen Campbell	Educational Assessment Systems, Inc., Albuquerque
Kathy Peterson	Seattle, WA Public Schools
Bernadette Trujillo	Santa Fe Public Schools
Tammy Wheeler	Public Schools in Kansas

Fall 1985

Gloria Buyok	Farmington Public Schools
Ann Fleming-McMahon	Educational Assessment Systems, Inc., Albuquerque
Jolyn Luna	Educational Assessment Systems, Inc., Albuquerque
Valentine Swegle	Possibly working in California
Janet Vallese	Educational Assessment Systems and a preschool in Los Lunas

Spring 1986

Catherine Brya	Albuquerque Public Schools as of 8/86
Paul Foreman	Northern N.M. Rehabilitation Center, Las Vegas, NM
Robin Hutchins	Expecting a child and not planning on working this year.

Liz Hill-Rue	Albuquerque Public Schools as of 8/86

Audiology

Summer 1985

Linda Ettinger	Idaho Elks Rehabilitation Hospital, Boise
Trudi Gilhooly	Working as a speech-language pathologist in Dallas, TX

Spring 1986

Nique Donoghue	Unemployed
Kacee Wheeler	Sandia Hearing Aid Service, Albuquerque

b. Service by graduate students under the supervision of faculty. Statistics have not been completed for the past year, but they will be approximately what they were last year (5200 hours in speech-language pathology and 1500 hours in audiology).

c. New positions. We are extremely grateful to Dean Garcia for ranking our department top priority for new positions for the next year, and to Acting Vice President for Academic Affairs Desiderio for increasing our budget. This resulted in Marci Laurel's position being put in our budget, as well as the remaining 20% of Judy Williams' position.

d. Curriculum changes. Three graduate courses in audiology which have been taught as problems courses for the past several years were approved as new courses. The courses, taught by Lloyd Lamb, are:

Com Ds 515, Auditory Pathologies, 2 credits
Com Ds 562, Electrophysiologic Measures of Audition, 3 credits
Com Ds 567, Pediatric Audiology, 2 credits

2. Undergraduate Programs

a. Communicative Disorders

1) Number of majors. In Spring 1986 the number of "official" (on the A&S print-out) majors was 48 (not including the Sign Language Interpreting majors). I estimate that we have another 15-20 majors in Communicative Disorders who are in the B.U.S. program.

2) New dual major. On February 4 a dual major in Communicative Disorders and Linguistics was approved by the A&S faculty. It includes 27 semester hours in each department.

b. Sign Language Interpreting

1) Number of majors. During the last academic year, there were 26 majors, 11 of whom were on the "official" Spring list. Six have graduated, and nine new majors have been accepted for next fall, so there will be 29 in the fall, the beginning of the fourth year of this major.

2) Graduates and their status

Fall 1985

Becky Johnson	Part-time interpreter at T.V.I. Part-time employee of New Mexico Registry of Interpreters for the Deaf (NMRID).
Cindie Suniga	Part-time free lance interpreter for NMRID Referral Center. Employed by Albuquerque Public Library.

Spring 1986

Kim Corwin	Has two certificates from Registry of Interpreters for the Deaf. Interpreter in Albuquerque Public Schools as of 8/86.
Karen Doerfert	Summa Cum Laude, Phi Beta Kappa, Phi Kappa Phi. Recently moved to Seattle, WA.
Melissa Pfeiffer	Part-time free lance interpreter for NMRID Referral Center.
Cheryl Rasoli	Phi Beta Kappa, Golden Key Honor Society. Will begin graduate program in Speech-Language Pathology in 8/86. Part-time free lance interpreter for NMRID Referral Center.

3) Foreign language requirement.

On February 4 the faculty of A&S approved the proposal for the acceptance of American Sign Language to fulfill the foreign language requirement.

4) Service. In the past year, 682 hours of interpreting services were provided by students under the supervision of certified interpreters (mostly by Phyllis Wilcox and Jeff Davis).

5) .5 FTE additional instructor. We are extremely grateful to Dean Garcia and V.P. Desiderio for increasing the .5 FTE Lecturer II position in Sign Language Interpreting to a 1.0 FTE position effective this August. We are in process of interviewing for this position.

3. Significant Faculty and Professional Staff Achievements NOT included in Annual Supplements to Biographical Records

a. Mary Bolton is one of the two lected Legislative Councilors from NM for the American Speech-Language Hearing Association. She presented a poster session at the November, 1985 convention of the American Speech-Language-Hearing Association. Title: A teacher training-consultation model for rural Headstart programs.

b. Marci Laurel was first author or co-author of four papers at the November, 1985 convention of the American Speech-Language-Hearing Association. Titles: A phonological approach to remediation with three developmentally apraxic children. Ten week parent training program:

changes in parent and child communication behaviors. Conversations between mothers and young children: clinical implications. A time-sampling assessment for adult-child interactions and behaviors.

c. Linda Riensche was appointed Presidential Lecturer in Communicative Disorders by President Tom Farer. The honorary appointment and the award are for two years, effective this fall. To quote from President Farer's letter: "This appointment is to recognize achievement and promise in your academic development."

d. Edward Shirkey, who has been with us for 3 1/2 years, was granted a second three-year term appointment.

e. Carol Westby, Adjunct Assistant Professor, is President of the NM Speech-Language-Hearing Association and is the second Legislative Councilor from NM to the American Speech-Language Hearing Association (the other one is Mary Bolton). She presented a short course on communication disorders in multicultural populations at the 1985 ASHA convention, and is on the ASHA faculty for workshops throughout the country on the same topic.

f. Judy Williams is President of the Board of Regents of the New Mexico School for the Deaf. She presented a paper at the November, 1985 convention of the American Speech-Language-Hearing Association. Title: Diagnosis and treatment of a pragmatic language disorder in an adult.

B. Significant Plans and Recommendations for the Future

1. In November Carol Westby, or I, or both, plan to submit a grant to the U.S. Department of Education to add a bilingual component to our speech-language pathology graduate program. If funded, it will provide a part-time salary for Westby, a full salary for a bilingual supervisor, and stipends for graduate students.

2. Relocation of our department to the main campus appeared to be a possibility last fall, when we were included in the plans for the proposed Communications Center building. However, because of the financial plight of the state and the university, the proposal was not presented to the Legislature. However, relocation to the main campus continues to be an important goal of our department. Relocation and additional space were recommendations made by a Graduate Unit Review Committee in 1983 and by the site visitors of the

Educational Standards Board of the American Speech-Language-Hearing Association in 1985.

C. Appointments to Staff

1. Marci Laurel, M.A., (formerly Greenbaum), Speech-Language Pathologist II, was on a temporary appointment for the past academic year and is on our department budget effective July 1, 1986.

2. William J. Ryan, Ph.D., was appointed Adjunct Associate Professor in August, 1985. He is Chief of Audiology and Speech Pathology at the Albuquerque Veterans Administration Medical Center. He taught Com Ds 525, Voice Disorders last fall, and we plan to have him teach it each fall.

3. Carol Westby, Ph.D., Language Specialist, is one-fourth time coordinator of the Mountain Bell grant (see below), effective June 1, 1986.

4. Ramona "Janie" Gilbert, M.S. (UNM, 1981), is audiologist for the Mountain Bell grant, effective July 1, 1986.

5. Priscilla Garcia, M.A., is speech-language pathologist for the Mountain Bell grant, effective July 1, 1986.

D. Separations from staff

1. Patti Elledge, who was with us as a supervisor since 1979 on the U.S.D.E. grant, resigned on 8/9/85 and is working for Educational Assessment Systems, Inc.

2. Jeff Davis's half-time contract expired in May. He will be replaced by a full-time Lecturer II in Sign Language Interpreting in August.

E. Sponsored Projects

1. Approved and funded

a. Richard Hood and Carol Westby obtained a grant from the Mountain Bell Corporation for $75,679 from June 1 to December 30, 1986. It is very possible that the grant will be renewed next year, and hopefully for years. The grant is called New Mexico Speech-Language-Hearing Outreach Program, and its purpose is to provide screening and referral services for rural New Mexicans, particularly preschool children and senior citizens.

b. Dolores Butt obtained a $5,000 donation from the N.M. Elks Cerebral Palsy Commission to purchase equipment and materials for her research and work in non-oral communication

with children and adults with severe motor speech problems.

c. Dolores Butt obtained a $4,160 grant from the UNM Foundation to study Speech Analysis by VISIPITCH for the 1986-87 academic year.

2. Approved but not funded. Richard Hood submitted a grant to the Division of Personnel Preparation, Office of Special Education, U.S.D.E., in November. It was approved but not funded.

3. Not approved. Phyllis Wilcox submitted a grant to the same U.S.D.E. agency as above in July. It was not approved.

UNM Department of Economics Annual Report

July 1, 1985 - June 30, 1986

Alfred L. Parker, Chairman

This Report provides a general discussion of some of the major achievements of the UNM Department of Economics during the 1985-86 academic year. It also identifies the major problems that the department faces at this time.

The Appendix to this Report contains a summary of the accomplishments of the individual members of the economics faculty. The information reported therein was extracted from Biographical Supplements for calendar year 1985.

A. Significant Achievements During the Academic Year

The Department has achieved results that are worthy of note in several areas of activity.

1. Research Money Generated and Support of Graduate Students

As indicated in table 1, the dollar amount of sponsored research generated by the Department of Economics has remained well below the 1979-80 and 1980-81 levels, however the considerable efforts of members of this faculty has resulted in continued improvement. While the sponsored research that has been obtained has generated little overhead money it has provided some limited additional support (through release-time money) for graduate students and thus helped to maintain the viability of our graduate programs.

Table 1 -- UNM Department of Economics

Sponsored Research Money

Academic Year	
1979-80	$1,371,552
1980-81	997,210
1981-82	194,826
1982-83	57,591
1983-84	103,533
1984-85	522.298
1985-86	662,298

The lack of support for Economics graduate students was addressed in two department evaluations conducted by outside evaluators during the past academic year. Further discussion of the matter is deferred to a later section of this report.

2. During the 1985-86 academic year the Department of Economics awarded a total of seven (7) Ph.D. degrees. This is the largest number of PH.D. degrees ever awarded during an academic year by this department, the previous high being last year when five (5) Ph.D. degrees were awarded (See table 2). The seven Ph.D. students are listed below along with their dissertation titles, the chairman of their dissertation committee and their current place of employment.

Name	Dissertation Title	Advisor	Current Employment
Jim Cilke	A Microsimulation Model For Tax Policy Analysis	Prof. Boyle	Dept of Treasury Office of Tax Policy Washington, D.C.
Erick Erickson	The Economics of Interacting Natural Population: A Case Study in Interrelated Pest Control	Prof. Cummings	Dept of Social Science Univ. of Missouri Rolla, MO
Wade Martin	"Management of a Tributary Aquifer"	Prof. Burness	Dept of Econ Univ. of MI-Flint, MI
Li Ya Shieh	Monetary Policy Strategies of Taiwan, R.O.C.	Prof. Chung	Dept of Econ Tsing Hua U. Taiwan, ROC
Ross J. Thomas	Projecting the Demand for Wilderness Recreation: A Case Study of MM.	Prof. Horton	Coll. of Santa Fe, Santa Fe, MM.

John Tysseling	Economic Impacts of Pueblo Indian Water Rights Regulations in Upper Rio Grande Basin.	Prof. Ben-David	State Land Office, Santa Fe, NM
Rick Lotspeich	Decision Making in Subsistance Agriculture: A Framework for Analysis	Prof. Ben-David	Econ Group Los Alamos Nat. Lab Los Alamos, NM

The supervision of these dissertations represent a considerable commitment of time and effort by the members of this faculty who served as chairman and as members of the various dissertation committees.

3. The reorganization of the Econometrics and the Applied Resource Economics fields has been completed. The procedure necessary to get the course descriptions changed and the undergraduate degree requirements changed to reflect the reorganization has been initiated.

The reorganization of these fields has been designed to better meet the needs of our masters level students who would be seeking employment in government, public utilities and industry. Master's level students completing the new econometrics sequence will have the background necessary to apply basic econometric techniques to a variety of research topics.

The department has also approved a change in the degree requirements for undergraduate economics majors which will require that they receive some introduction to the techniques of econometric analysis. This change is in response to the frequent indication by potential employers that they are looking for undergraduate economics majors with some background in econometrics.

Table 2 -- Received Degrees Awarded by the UHM Department of Economics

Academic Year	Economics Majors	Economics Minors	Masters Degree	Ph.D. Degree
1980-81	45	12	6	3
1981-82	42	13	5	1
1982-83	59	16	4	3
1983-84	32	6	5	1
1984-85	47	1	1	5
1985-86	51	5	2	7

4. The Micro-Computer Lab

At least three members of this faculty (Ben-David, Goodwin and Church) have devoted a considerable amount of time developing classroom materials, revising course materials and reviewing materials available form a variety of sources for use in the new micro-computer lab that was available for our use for the first time in the fall semester of 1985. The department office staff was required to develop a system for handling the software and providing access and appropriate security for the equipment and the software used by departments throughout the campus in this new lab.

While some problems remain in the scheduling of this micro-computer lab it is providing an opportunity for our students to receive the introduction to PC's that has been badly needed. We are optimistic that the problems that were encountered during the past two semesters can be resolved with the assistance and cooperation of the UNI Computing Center.

B. Significant Plans and Recommendations

During the 1985-86 academic year the Department of Economics was evaluated by two different outside review committees. One was a review of our graduate program as a part of the continuing graduate review program of the Office of Graduate studies. The second was the review conducted by the Strategic Planning Committee. The general comments (both positive and negative) made by the two review committees is presented in summary form in this section of our Annual Report and specific recommendations are discussed briefly.

The Graduate Review Committee was chaired by David Sanchez, then Chairman of the UHM Mathematics Department. The other two members of the Graduate Review Committee were Anthony Scott, Professor of Economics, University of British Columbia and Thomas Mayer, Professor of Economics, University of California, Davis. The Strategic Planning Committee was chaired by Robert O. Kelly, Chairman of the UHM Department of Anatomy.

Review Committee Comments and Recommendations

Graduate Review Committee	Strategic Planning Committee
...the department has set itself a reasonable and clearly defined goal. It will maintain its distinct character as a specialist in energy and resources, but will attempt to become a more well-rounded department that is attractive to students interested in other fields.	The goals and the operation of the.. Department of Economics are consistent with and designed to further the stated goals of the University.
...the natural resources program... with emphasis on the management of energy, minerals, water and the environment, seems to us to be ideally suited to meet New Mexico's need.	The Economics Department at UNM advantage of early opportunities... to become..."one of the major energy and resource departments in the country...
To have developed such a strong reputation in one field of economics is a noteworthy achievement for a department that lacks both the financial support and the academic stature that accrue to departments in the Ivy League and other leading universities.	
...the Anderson Schools tries by all means fair and foul to keep economics graduate students out of its courses. ..the Anderson School and the economics department should interact much more...	...relationships between the Department of Economics and the Anderson Schools of Management have deteriorated and are now generally unsatisfactory. The problem has various ramifications, including what is claimed to be a virtual impossibility for economics students to have access to ASM courses in the field of finance.
The allocation of teaching assistantships should be doubled at least.	The department has suffered from common budgetary deficiencies in recent years, and particularly requires help for additional graduate assistantships...
...at present it does have substantial strength, and therefore deserves the additional funding that it needs to strengthen the areas outside its specialty, and to increase both the quality and the size of its Ph.D. program.	

Note : The listing provided above is not intended to be a complete listing of the significant comments and/or recommendations made by the review committees, but rather selected comments relating directly to the short-term problems facing this department.

1. High enrollment in a number of upper division courses continues to be a serious problem in the undergraduate economics program. During the 1985-86 academic year there were twelve (12) sections of upper division classes with enrollments in the range of 46 to 114 students. The upper division courses that experienced these unreasonably high enrollment figures are the following:

Fall 1985

Econ 300.001 Intermediate Micro Theory	53 students	Gisser
Econ 315.001 Money and Banking	96 students	Parker
Econ 315.002 Money and Banking	114 students	Chung
Econ 350.001 Public Finance	62 students	Boyle

Spring 1986

Econ 300.003 Intermediate Micro Theory	56 students	Gisser
Econ 300.004 Intermediate Micro Theory	46 students	Pearse
Econ 300.006 Intermediate Micro Theory	47 students	Goodwin
Econ 300.007 Intermediate Micro Theory	47 students	Brajer
Econ 315.001 Money and Banking	76 students	Chung
Econ 315.002 Money and Banking	74 students	R. Sauer
Econ 315.003 Money and Banking	74 students	Parker
Econ 350.001 Public Finance	50 students	Boyle

Classes of the size listed above do not provide an appropriate classroom environment for undergraduate students enrolled in these demanding courses. Accordingly, the department must made every effort possible to increase the number of sections of these courses offered each semester. This effort is not helped by the budget crisis that makes it necessary that we not fill the vacancy that currently exists for next year.

2. ASI Finance Courses for Economics Undergraduate and Graduate Students

Efforts by this department to gain access to ASI Finance courses have not met with success. Undergraduate and graduate students in economics

remain effectively excluded. The limitation on the number of graduate offerings in the economics department as a result of the decline in graduate enrollment makes the availability of a field in finance a more attractive option for economics Ph.D. students and a much needed supplement to our graduate offerings.

While the possibility of a member of this faculty offering a course in finance is being considered (and had been discussed with the ASM Dean), that option does not necessarily represent the best allocation of our limited teaching resources.

The resolution of this problem will have a very high priority during the 1986-87 academic year.

3. Economics Department Faculty -- A Period of Transition

It is expected that one or more senior members of the economics faculty will retire at the end of the 1986-87 academic year. In replacing these respected members of our faculty the department will have to make some difficult decisions concerning the fields and the academic rank in which to recruit. Given our demonstrated inability to retain quality young faculty, the department will carefully consider hiring at the associate and/or full professor rank.

C. Appointments to Staff

Budget constraints have made it impossible for the Department of Economics

to fill the vacancy that exists for the 1986-87 academic year.

D. Separation of Staff

Assistant Professor Thomas Goodwin has resigned his position in this department to accept a position in the University of California, Claremont, Graduate School. This is an excellent opportunity for Professor Goodwin and we know that he will be an excellent addition to their faculty.

Professor Goodwin's performance as a member of this faculty has been excellent. Within a few weeks of his receiving the offer from Claremont the UNM Economics faculty had voted unanimously that he be recommended for a second three year contract. It is regretful that budget constraints reflected in the meager salary adjustments make it virtually impossible for us to retain quality young faculty like Tom Goodwin.

E. Sponsored Research or Other Projects

Six (6) of the departments twenty (20) full time faculty were involved in submitting project proposals to outside agencies for funding during the 1985-86 academic year. This represents approximately 3% of the faulty of this department seeking funds for sponsored research.

Six (6) of the six (6) proposals submitted to outside agencies were successful in obtaining funding. A listing of projects funded during the 1985-86 academic year and the dollar amount of the budget for each project is provided in table 3.

Table 3 -- Funded Research Projects, 1985-86

Contract Assistance in the Development of Water and Environment Research Programs for John Muir Institute	John Muir Institute Napa, CA	$ 68,260	Brown
Contract Assistance in the Development of Water and Environment Research Programs for John Muir Institute	John Muir Institute Napa, CA	$ 78,600	Brown
State Appropriations of unappropriated Groundwater in New Mexico	New Mexico Water Resource Research Institute, Las Cruces	$134,438	Brown
Projecting New Mexico's Electricity Demand	New Mexico Public Service Commission, Santa Fe	$ 12,000	Parker
Land and Water Use Planning in State Lands	State Commission of Public Lands	$244,000	Cummings
State Appropriations of Unappropriated Ground Water in New Mexico	New Mexico Water Resources Research Institute	$125,000	Cummings
		$662,298	

F. Economics Graduate Program -- A Status Report

Graduate enrollment in the Department of Economics during the 1985-86 academic year averaged less than forty (40) students a semester. Graduate enrollment averaged over sixty (60) students a semester during the 1975-76 academic year and over fifty (50) students a semester in the early 1980s (See table 4). This decline in graduate enrollment is to a large extent a reflection of the lack of financial support for graduate students and the inability to make offers to strong applicants to the graduate program until late summer. The fact that about half of our support for graduate students is provided by release time monies means that we are never sure about how many students we can support until very late in July or early August. By this time the quality students who had expressed interest in our graduate program have accepted offers to attend graduate school elsewhere.

As emphasized by the two review committees, an increase in the number of TA and RA positions is critical to the maintenance of our Ph.D. program. The current level of funding for TAs plus release time money permits the department to support approximately one-half of the number of graduate students that we supported during the 1970s (See table 5). This severely limits our ability to attract quality students and this in turn limits the number of graduate courses that can be offered each semester.

Table 6 indicates that we are able to place our masters and our Ph.D. students in excellent research and academic positions upon graduation.

Table 4 -- UNM Department of Economics
Graduate Enrollment

Academic Year	Graduate Enrollment Fall Semester	Spring Semester
1974-75	50	51
1975-76	62	59
1976-77	49	42
1978-78	35	37
1978-79	37	41
1979-80	50	51
1980-81	54	53
1981-82	59	51
1982-83	53	48
1983-84	46	42
1984-85	46	40
1985-86	39	38

Table 5 -- Financial Support to Graduate Students

Academic Year	Regular TAs	Special TAs	RAs	Scholarships	Total
1979-80	7	8	16	1	32
1980-81	7	8	16	1	32
1981-82	7	6	7	1	21
1982-83	7	7	6	2	22
1983-84	7	7	1	2	17
1984-85	8	6 1/2	1	1	16 1/2
1985-86	8	5	1	1	15

Table 6 -- Employment of UNM

Economics Graduate Students
Received Graduate Degree from UNM

Name	Current Position
1982-83	
Shirley S. Wozniak (M.A.)	Senior Planner, City of Albuquerque, Planning Division, Albuquerque, NM
Melva R. Sharp, (M.A)	(Unknown)
Jacques B. Blair (Ph.D.)	Gas Company of New Mexico, Albuquerque, NM
Keith Willett (Ph.D.)	Department of Economics Oklahoma State University Stillwater, OK
1983-84	
Victor Brajer (Ph.D.)	Department of Economics Colorado College, Colorado Colorado Spring, CO
Dean Latona (M.A.)	Military Service
Douglas Kidd (M.A)	Citicorp (Financial Analysist) Denver, CO
Rafael Celis (M.A.)	Ph.D. Program, UNM
Philip Farah (M.A.)	Ph.D. Program, UNM
1984-85	
Gretchen B. Berger (Ph.D.)	College of Santa Fe Santa Fe, NM
Mark Walbert (Ph.D.)	Department of Economics Illinois State University Normal, Il
Bill Waller (Ph.D.)	Holbart & William Smith College Geneva, NY
Bob Patrick (Ph.D.)	Department of Economics Purdue University West Lafayette, IN
Nick Stergioulas (Ph.D.)	U.S. Department of Commerce Bureau of Economic Analysis Washington, DC
Jeff Repichowski (M.A.)	(Unknown)

1985-86

Jim Cilke (Ph.D.)	Department of the Treasury Office of Tax Policy Washington, D.C.
Erick Erickson (Ph.D.)	Department of Social Science University of Missouri Rolla, MO
Wade Martin (Ph.D.)	Department of Economics University of Michigan-Flint Flint, MI
Li Ya (Vic) Shieh (Ph.D.)	Department of Economics National Tsing Hua University Taiwan, ROC
Ross J. Thomas (Ph.D.)	College of Santa Fe Santa Fe, NM
John Tysseling (Ph.D.)	State Land Office Santa Fe, NM
Rick Lotspeich (Ph.D.)	Economics Group Los Alamos National Lab Los Alamos, NM
Vernon Barela (M.A.)	Director of Transit & Parking City of Albuquerque Albuquerque, NM
Keith Burris (M.A.)	Ph.D. Program University of California - LA Los Angeles, CA

APPENDIX

Composite of Information Requested on Individual Biographical Supplements

1. Teaching.

Ben-David, Shaul	Development of Econometrics software for micro computer lab in Econ 309.
Burness, Stuart	Developed a new course, Econ 547, Economics of Uncertainty.
Church, Albert	Alumni Teaching Recognition Announcement in 1984 but was not previously noted.
Cummings, Ronald	Full teaching load: Econ 303 and 200. Above-average evaluations.
Gisser, Micha	Produced special teaching materials for Econ 315 (Money and Banking. These materials cover areas such as assets and liabilities management, loan pricing, the GAP, etc., these areas are normally not covered in money and banking courses.
Jonas, Paul	Student Outstanding Teacher's Award (1983-84); "Outstanding Teacher" 1984 85; based on student evaluations.
Sauer, Christine	Development of a 2-semester sequence in International Economics (Econ 424 International Trade, Econ 429 International Finance.

2. Publications.

Boyle, Gerald, Professor

"State-Local Expenditures; Jicarilla Apache Indian Reservation and Zuni Pueblo," BBER, Oct. 1985, 5 pages.

Brown, F. Lee, Professor

"The Future of the Colorado River," with Gary Weatherford and Helen Ingram in Arizona Waterline, pp. 5-6, 17. Fall-winter 1984-85, Phoenix.

Church, Albert, Professor

Natural Resources Taxation Policy - Research Monograph No. 41 Centre for Research on Federal Financial Relations, Australian National University, Canberra, Australia, pp. 61, 1985

"Tax Effects on Materials Industries" in Encyclopedia of Materials Science, Pergamon Press, 1985

"Analyzing the Incidence of Natural Resource Taxation," in Western Tax Review, forthcoming.

Hamilton, David, Professor

"Wendell Gordon" Journal of Economics Issues, June 1985 pp. 301-304 Evolutionary Economics, Japanese edition published in fall 1985 in Tokyo by Shuppan, Ltd., contains new forward for Japanese edition.

Mineral Taxation - Favored Tax Treatment in the U.S., Monograph 27-85, Centre for Research on Federal Financial Relations, Australian National University, Canberra, Australia, pp. 41, 1985.

Cummings, Ronald, Professor

"Economic Analysis of a Technology at the Early Stage of its Development" with W.D. Schulze, Ch. 7 in Tolley, George (ed) The Economics of R&D Policy, Plenum Press, New York, 1985.

"On Valuing Acid Depositions-Induced Materials Damages: A Methodological Inquiry" with T. Crocker, in Adams, D. and W. Page (eds), Environmental Economics, Plenum Press, New York, 1985.

"Scale Economies and Reliability in the Electric Power Industry", with V. Loose and M.S. Burness, Energy Journal, 6(1), 157-167, 1985.

"Entropy and the Theory of Exhaustible Resources: Reply," with M.S. Burness, Land Economics, forthcoming.

"Efficient and Equitable Resource Use Over Time," with S.R. Pearse, in D. Bromley (ed.), Issues in Natural Resources Economics, Kluwer-Nijhoff Publishers, New York, forthcoming, 1986.

Valuing Public Goods: An Assessment of the Contingent Valuation Method, with D. Brookshire and W. Schulze and with contributions by Kenneth Arrow and others, Rowman and Allenheld Publishers (a division of Littlefield, Adams & Co.), Totowa, New Jersey, forthcoming March, 1986.

"The Contemporary Setting for Water Management in the West: An Overview," Water Resources Research, 21(11), November, 1985.

Gisser Micha, Professor

"Welfare Implications of Oligopoly in U.S. Food Manufacturing: Reply," American Journal of Agricultural Economics, Vol. 67, February 1985.

Gregory, Peter, Professor

The Myth of Market Failure: Employment and The Labor Market in Mexico (Baltimore: The Johns Hopkins University Press, in press).

"Migration of Mexicans to the United States," in The Internationalization of Labor eds. S.J. Burki, R. LePorte, and H.I. Seralgeldin (N.Y.: Oxford University Press, in press).

Book review of A.O. Hirschman, Getting Ahead Collectively: Grassroots Experience in Latin America. Hispanic-American Historical Review (forthcoming).

Hamilton, David, Professor

"Wendell Gordon" Journal of Economics Issues, June 1985 pp. 301-304 Evolutionary Economics, Japanese edition published in fall 1985 in Tokyo by Shuppan, Ltd., contains new forward for Japanese edition.

Chapter on income maintenance in Marc Tool (ed.) An Institutional Guide to Economics and Public Policy published by M.E. Sharpe (Armonk, NY) in 1985 in hardcover and paperback.

Jonas, Paul, Professor

"Policy Responses to a Changing International Environment" Chapter in War and Society in Eastern Europe, in Kiraly (9 Ed.) Columbia University Press, 1984.

"The Multinational Institutions" in International Economic Policy, Gary C. Hufbauer (Ed.) The International Law Institute, Georgetown University Law Center, Washington, D.C., 1985

Sauer, Raymond, Assistant Professor

"Exchange Rate Determination and Policy Regime Changes: Evidence From The Yen/Dollar Rate" in The Review of Economics and Statistics, November 1985, (with John Makin).

"The Impact of Debt Accumulation on Capital Formation," American Enterprise (with John Makin) Institute, 1985

"Advertising Substantiation and Information Credibility," with Keith Leffler.

3. Other research projects or or creative work in progress or completed during period

Ben-David, Shaul, Professor

"Natural Gas Price Projections 1984-2004" funded by Public Service Company of New Mexco, 1984-85.

"Utilization of Costal Waters: The Strait of Malacca" funded by East-West Center, 1983-85.

"Land Use Planning for State Land" funded by New Mexico Land Office, 1984-85.

Boyle, Gerald, Professor

Sponsored research for NM Department of Taxation and Revenue and the BBER to estimate state and local spending on Jicarilla, Navajo and Zuni reservations ($18,000).

Brown, F. Lee, Professor

Completion of New Courses for the Colorado River, edited with Gary Weatherford, Forthcoming February 1986, UNM Press.

Completion of Water & Poverty in the Southwest, book length manuscript co-authored with Helen Ingram, submitted for publication.

Co-sponsorship of Upper Rio Grande Working Group consisting of Hispanic and Indian leaders in northern New Mexico. Also, organized Symposium on same subject, all under grant from Ford Foundation through the John Muir Institute. August 1984 through July 1986 award of $460,000 of which approximately $147,000 has come to UNM.

Work on issue paper series and the development of an issue oriented Atlas for the Colorado River. This activity is also covered under the above grant.

Work on groundwater study for New Mexico legislature under contract for approximately $134,000 through the Water Resources Research Institute.

Burness, H. Stuart, Professor

Report to New Mexico State Land Office concerning business uses of state lands.

Chung, Pham, Professor

"Payment of Interest on Reserves and Its Implications for Monetary Policy."

"The 'Rise' and 'Fall' of Macroeconometric models for Policy Evaluation."

"On Some Issues in Neo-Classicism and Institutionalism."

Church, Albert, Professor

Developing course material and computer programs for course "Capital Markets and Personal Investment"

Conrad, B. Lynne, Assistant Professor

Dissertation completed "Optimal Two-Part Tariffs for a Monopoly Firm, August, 1985.

Cummings, Ronald, Professor

"Selecting Optimal Acreage on which to use Plastic Mulch: A Case Study," with V. Brajer, under review for publication with the American Journal of Agricultural Economics.

Ongoing research (with V. Brajer): "Optimal conjunctive management of water and capital resources in Mexican agriculture." Two papers in progress.

The following are Chapters which have been written (with V. Brajer) that summarize the results of our research for the grant "The State Appropriation of Unappropriated Groundwater", funded ($250,000) by the State Legislature for the period 3/1/83 through 1/15/86.

a. "Quantifying Demands for Unappropriated Groundwater in New Mexico", Chapter II.
b. "Benchmarks for Water Scarcity in New Mexico's Future", Chapter III.
c. "Costs of Interbasin Water Transfers", Chapter IV.
d. "Potential Out-Of-State Demands for New Mexico's unappropriated Groundwater Supplies", Chapter V.

Principal Investigator for Land And Water Use Planning In The State of NM, a $244,000 research project funded by the Commissioner of Public Lands (1/1985 to 3/30/86). Completed reports include:

a. "UNM Study of Land and Water Use Planning For State Lands in New Mexico, Research Task I: Research Design", May, 1985, 40 pp..
b. "UNM Study of Land Use Planning For State Lands: Interim Report to the Commissioner of Public Lands", May, 1985, 64 pp..
c. Deposition, August, 1985.

Member, Ixtapa Group, see output published as Rodgers, Ann and A.E. Utton, "The Extapa Draft Agreement Relating to the Use of Transboundary Groundwater", Natural Resource Journal, 25(3), 713-72. July, 1985.

Gisser, Micha, Professor

"Crude Oil and the Macro Economy" with Tom Goodwin. (Accepted).

"Spatial Monopoly," in progress with Tim Sass.

"Measuring Welfare losses in U.S. Manufacturing," submitted.

"Dynamic Aspects of Water in the Ogallalas," submitted.

Gregory, Peter, Professor

Prepared and delivered the centerpiece paper for an Inter-American Conference on Employment Policies sponsored by USAID in Panama, March 1985. "Policy Issues in Addressing the Employment Problem in Latin America," 160 pp. This and other papers at the conference are scheduled for publication shortly.

Hamilton, David, Professor

Doing an analysis of the "free market" concepts as sociological phenomena.

Jonas, Paul, Professor

"The Maritime Policies of Louis Kossuth, 1842-48, Presented at the meeting of the Balkan Policies of Louis Kossuth, 1842-48; presented at the meetinhg of the Balkan Institute of Greece, Thessaoniki, Greece, June 12-18, 1985.

Invited by University of Paris - Sorbonne to deliver a lecture in Bellagio, Italy, Feb. 12-16, 1986.

Parker, Alfred, Professor & Chairman

"Projecting New Mexico's Electricity Demand," project funded by the New Mexico Public Service Commission, $66,000. June 1984 through June 1985.

"Projecting New Mexico's Electricity Demand -- Update Phase II" New Mexico Public Service Commission, $12,000, January 1986 through June 1986.

"An Economic Evaluation of the Southwest Area Plan," Funded by the City of Albuquerque, $5,950, May through August 1985.

"Regulating Electric Utilities -- A Change of Perspective" research paper in process to be submitted to the Public Utility Fortrightly.

"Measuring Damages in Private Antitrust Cases" research paper in process to be submitted to the Antitrust Bulletin.

Sass, Tim, Assistant Professor

"Measurement Cost and The Choice of Contract for Information Middleman", Submitted for Publication.

"The Allocation of Resources by Voting: An Empirical Study", Submitted for Publication.

"Demand for Information Intermediaries: The Case of Residential Real Estate Brokers", Submitted for Publication.

Sauer, Christine, Lecturer II

Dissertation (in progress)

Sauer, Raymond, Assistant Professor

AEA Meeting, December 1985.

Therkildsen, Paul, Associate Professor

State Tax System Analysis; New Mexico vs. other states. In Progress Governor Toney Anaya's citizen's Tax Study Committee. (continued)

4. Activities Learned and Professional Societies.

Ben-David, Shaul, Professor

Attended the Universities Council on Water Resources (UCOWR) meeting, Amherst, MA, July 28-31, 1985.

Chung, Pham, Professor

"Read a paper at MVEA's annual conference (Memphis, TN).

Participated in a Roundtable on Monetary Policy, Federal Reserve Bank of Kansas City.

Church, Albert, Professor

President - Western Tax Association and presided over its annual meeting in July, 1985.

Cummings, Ronald, Professor

Bi-annual meeting of the American Geophysical Union, Baltimore (May, 1985) and San Francisco (December, 1985).

Annual Water Conference of the New Mexico Water Resources Research Institute, Las Cruces, October, 1985.

Offices/Professional positions held:

a. Executive Board, Section on Hydrology, American Geophysical Union.
b. Editor for Policy Sciences, Water Resources Research.
c. Editorial Board, Natural Resources Journal.
d. Editorial Board, Southwest J. Econ Management.

Member, Program Development and Review Board, New Mexico Water Resources Research Institute, Las Cruces: appointed November 27, 1985.

Gregory, Peter, Professor

"Mexican Migration to the U.S.," paper delivered at the Congress of the Latin American Studies Association, April 19, 1985.

"Mexico's Employment Experience, 1940-80," paper delivered to the Graduate Workshop in Economic Development, University of Toronto, October 31, 1985.

Hamilton, David, Professor

On the board of The Association for Evolutionary Economics.

On Editorial Board of Journal of Economic Issues.

Read paper at AFEE meeting in New York City, December, 1985, entitled "Institutions and Technology are Neither" (To be published in June in JEI).

Read paper at WSSA in Fort Worth in April, 1985.

Jonas, Paul, Professor

"End-Century Cross roads of Economic Development and Cooperation" Paper presented at the International Conference of the University of South Florida, Sarasota, April, 1985.

"New Pattern of Growth in Africa"; Brooklyn College Institute to Society in change, May, 1985.

Parker, Alfred, Professor & Chairman

Participant, 1985 Mountain Bell Academic Seminar, August 19-22, 1985, Lakewood, Colorado.

Member, Mountain Bell Fellowship Acceptance Commitee. Responsible for the Develpment of Fellowship Criteria and the Awarding of Fellowship in January 1986.

Sass, Tim, Assistant Professor

Presented paper at Social Responsibility Seminar organized by A.S.M.

5. Other professional activities.

Brown, F. Lee, Professor

Member, Program Development and Review Board, Water Resources Research Institute.

Presentation to Natural Resources Section, New Mexico Bar Association.

Presentation to Board of Western Network, Inc.

Cummings, Ronald, Professor

Consultant, State of Mississippi, Task Force on Assessments of the Impacts of Siting a Nuclear Waste Facility in Southern Mississippi.

Consultant, Nevada Office of Nuclear Waste, Assessing the Yucca Mountain Project.

Presentations before citizens groups concerned with growing water scarcity in New Mexico, Taos, New Mexico (May, 1985).

"The Case for the State's Appropriation of Unappropriated Groundwater", presentation to:

a. Legislative Finance Committee, State Legislature October 10, 1985.
b. Advisory Board, State Appropriation Study, November 2, 1985.

"Out-of-State Demands to the year 2020", presentation given for the Natural Resources Section of the State Bar of New Mexico's Continuing Legal Education of the State Bar of New Mexico Seminars, May 9-10, 1985, Albuquerque, New Mexico.

"Credits for Water-Yield Improvements: Incentives for Economic Efficiency", presentation given for the Natural Resourses Section of the State Bar of New Mexico's Continuing Legal Education of the State Bar of New Mexico Seminars, May 9-10, 1985, Albuquerque, New Mexico.

Gregory, Peter, Professor

Referee: Economic Development and Cultural Change; Latin American Reseach Review. Outside examiner for Ph.D. candidate, Jamie Tenjo, University of Toronto, October, 1985.

Consulting: USAID and The World Bank.

Lecturer-Series of six lectures on private foreign investment in Latin America delivered to the Professional Development Seminar, The Dominican Republic for the U.S. Information Service.

Jonas, Paul, Professor

Around 10 off-campus talks for civic organizations organized by UNM Speakers Bureau.

Parker, Alfred, Professor & Chairman

"Economists look at Urban Development Issues," Annual Meeting of the Soil Conservation Society of America, New Mexico Chapter, October 4, 1985.

"Tax Reform," April 25, 1985, Illustrated Daily, KUNM TV.

"Balancing the Federal Budget" October 31, 1985, Illustrated Daily, KUNM TV.

"Projecting Electricity Demand," January 31, 1985. New Mexico Public Service Commission, Santa Fe, NM.

Tailby, Donald, Associate Professor

Off-campus talk to Philosophers Anonymous - March 1985.

6. Non-teaching university service.

Ben-David, Shaul, Professor

Graduate Program Advisor

College of Arts & Sciences Graduate Program Committee.

515 v.

Boyle, Gerald, Professor

Chairman, Ph.D. Committee for Michael Hymel.

Chairman, Ph.D. Committee for David Boldt.

Chairman, MA Committee for Steve Miller.

Brown, F. Lee, Professor

Chair, Engineering Subcommittee, Strategic Planning Committee.

Member, Education Subcommittee, Strategic Planning Committee.

Co-Director, Natural Resources Center.

Burness, H. Stuart, Professor

University Promotion and Tenure Committee.

Micro - Comprehensive Exam Committee.

Dissertation Committee Chairman for five students.

Chung, Pham, Professor

Member of UHM's Library Committee and A&S Curriculum Committee (1984-85).

Chairman, MA and Ph.D. Macrocommittee.

Church, Albert, Professor

A&S Promotion Committee.

Cummings, Ronald, Professor

Principal Investigator, State Land Office project.

Gregory, Peter, Professor

A&S Dean's Advisory Committee on Latin America (ICLAS)

Chairman, Internal Evaluation Committee, L.A. Institute.

Grants and Fellowship Committee, L.A. Institute.

Budget Committees Latin American Institute.

Hamilton, David, Professor

Member of operations committee of faculty senate (Fall, 1985).

Jonas, Paul, Professor

Member: Advisor Committee, Dean, University College;

Member: Curriculum Committee: (University).

Member: Committee on Russian Studies; Committee on European Studies; Committee on Asian Studies; (A&S)

Lecturer: "The Soviet World Today," Cooperative teaching with History Political Science Languages, Fall Semester at UHM.

Parker, Alfred, Professor & Chairman

Member, A&S College Committee on the College of Science and Mathematics.

Member, President's Committee on Research and Graduate Studies.

Sponsor, Economics Student Council.

University Legislative Team Leader, Representative Stuart Hill.

Technical Consultant, BBER, FOR-UHM Economics Forecasting Service.

Volunteer, Freshmen Orientation Program.

Volunteer, Senior Day, representing economics department.

Volunteer, Parents Day, representing economics department.

Sass, Tim, Assistant Professor

Organized and ran department seminar series.

Tailby, Donald, Associate Professor

Served on several MA and Ph.D. committees in department.

Therkildsen, Paul, Associate Professor

"Committee on Educational Reform" headed by McAllister H. Hull for President Tom J. Farer.

7. Advanced study and new scholastic honors.

Jonas, Paul, Professor

Elected: Chairman, Board of Directors, Atlantic Research and Publications; A publishing company sponsored by the City University of New York.

Parker, Alfred, Professor

Consultant to the Jicarilla Apache Tribe, oil and gas royalties and taxation.

Consultant to the Blackfeet Tribe, oil and gas royalty accounting isues.

Consultant to the Araphoe and Shoshone Tribes, oil and gas royalty accounting issues.

Consultant to the New Mexico Public Service Commission Staff, PNM Acquisition of GASCO.

Consultant to the Santa Ana Pueblo, greyhound tract and tax issues.

Consultant to Republic Telecommunication, NM Corporation Commission hearing concerning completion in intralata toll service.

Sauer, Raymond, Assistant Professor

Received Ph.D. from University of Washington, December, 1985. Dissertation: Credible Information? The Impact of the FTC's Advertising Substantiation Program.

8. Sabbaticals, leaves of absence, summer teaching elsewhere, travel, etc. during the period.

Gregory, Peter, Professor

Professional travel: Panama, Mexico, Haiti, Dominican Republic, Toronto, Canada

Jonas, Paul, Professor

Travel during the summer: Greece, Austria, Germany, France in connection with Scholarly meetings and organization of future conferences.

Tailby, Donald, Associate Professor

Travel to England, Italy, Switzerland, summer 1985.

Travel to Mexico, Fall 1985.

9. Public Service

Coyle, Gerald, Professor

Member, N.M. Health Care Cost Containment Task Force, Departments of Human Services and Health and Environment.

Chairman, Subcommittee on Medicaid Expenditures.

Brown, F. Lee, Professor

Speech to American Indian Water Conference, Denver, September 1985.

Chung, Pham, Professor

Presidential Recognition Award (Outreach Program).

Gisser, Micha, Professor

Vice President, Experiment in Jewish Learning

Hamilton, David, Professor

Member of Educational Advisory Board of Consumers Union.

Member of N.M. State Labor and Industrial Commission.

Member of Albuquerque City Labor Board.

Parker, Alfred, Professor & Chairman

Member, NM Educators Federal Credit Union, re-elected to 3 year term, January, 1985.

Vice-Chairman, NM Educators Federal Credit Union, January 1985 to present.

Volunteer staffing of Blue Portal (Senior Citizen shop in old town operated by Assistance League of Albuquerque).

Tailby, Donald, Associate Professor

Active in New Mexico Mountain Club as trip leader

ANNUAL REPORT

DEPARTMENT OF ENGLISH

UNIVERSITY OF NEW MEXICO

1985-1986

Outgoing Chairman: Hamlin Hill

Acting Chairman: Robert E. Fleming (compiler of report)

Incoming Chairman: David McPherson

Policy & Personnel Committee: Hamlin Hill (Chair), James Barbour, Lynn Beene, Morris Eaves, Ivan Melada, Louis Owens, Joseph Zavadil, and graduate student members Jon Tuttle and George Hartley

The annual report for the English Department for the 1985-86 academic year necessarily reads like a litany of bad news. The department lost several of its most productive members as a result of the deteriorating support for higher education in the State of New Mexico. Leaving the department at the end of the spring 1986 semester are Hamlin Hill, Morris Eaves, William C. Dowling, and Anne Dunn. In Hamlin Hill, the department loses not only its chairman but its most well-known scholar in American literature. Morris Eaves, an internationally known scholar in the Romantic period, takes with him Blake: An Illustrated Quarterly, a journal that helped to make UNM prominent in nineteenth century British literary studies. Bill Dowling is widely

known not only for his books and articles on the eighteenth century but for his work in modern literary criticism. Anne Dunn leaves after two years as a visiting professor. Except for Professor Dunn, all of these professors had had long years of service to the University of New Mexico: their combined service totals more than forty years.

In spite of the bad news, however, the department continued to carry on its mission--from the teaching of freshman English to scholarship. Perhaps the most visible achievement of the year was the hosting of the convention of the Medieval Academy of the United States. This convention, arranged by Helen Damico and Pat Gallacher with the assistance of Joe Zavadil, brought some 400 scholars from all over the United States and Europe for four days of scholarly meetings and discussions. While the department lost one well-established journal, Blake, it gained another, American Literary Realism. Founded at the University of Texas at Arlington in 1967, ALR moved to UNM in January 1986 and will be edited by Jim Barbour and Bob Fleming, with Louis Owens as Associate Editor. It is hoped that UNM will be able to provide continued support for this newly acquired journal and for Shakespeare Studies and American Poetry. As a result of university-wide competition, Louis Owens received a Presidential Junior Professorship, a two year award providing extra compensation and money for research expenses. Both Helen Damico and Lee Bartlett were promoted to Associate Professor.

Only one new teacher will join the department in a tenure-track position in the fall of 1986 because of the financial situation in the state. Hector Torres, currently completing his degree at the University of Texas at Austin, will fill the position in Rhetoric that had been held by Anne Dunn as a visiting professor. Permanent replacements for the two full professors and the associate professor who are leaving will have to wait for better financial times although it appears at this writing that two of the positions will be filled by visiting assistant professors on one-year contracts. There will be some major changes elsewhere in the departmental roster, however. David McPherson will return from sabbatical leave to chair the department. Fred Warner will replace Mike Hogan as Director of Freshman English, while Cheryl Fresch will take over the post of Director of Graduate Studies from Barry Gaines. Louis Owens will be the new Director of Creative Writing, replacing Lee Bartlett.

Enrollment continued strong during the past year. Combined enrollment for fall and spring was 10,062, an increase of 663 students over last year. The department's responsibility for the staffing of English 100, a remedial course, has been phased out gradually over the past several years and will be absorbed by TVI. The Freshman English Committee has worked out a policy to insure a more stable staffing arrangement for Freshman English by offering more one-year contracts to Lecturers. See Michael Hogan's report

below for more details. The English major, especially in the Professional Writing Concentration, has continued to grow. In Professional Writing enrollment will soon have to be limited unless further staff can be added.

Reports from the chairs of the major standing committees of the department follow: Helen Damico and Barry Gaines for the Graduate Committee, Paul Davis for the Undergraduate Committee, Michael Hogan for the Freshman English Program, Lee Bartlett for Creative Writing, and Scott Sanders for Professional Writing.

GRADUATE PROGRAM

Acting Graduate Director:	Helen Damico (1st semester)
Graduate Director:	Barry Gaines (2nd semester)
Graduate Committee:	Barry Gaines, Chair, Lee Bartlett, Michael Fischer, Robert Fleming, Hugh Witemeyer (1st semester), and graduate student member Steve Mathewson

In 1985-86, there were 82 students enrolled in the English graduate program. Maijan H. Al-Ruwaili completed and successfully defended his Ph.D. dissertation, entitled "The Theory of Drama and the Post-Modern (deconstruction) Critical Theory," under the supervision of Michael Fischer. Erika Smilowitz also completed and successfully defended her Ph.D. dissertation, entitled "Bio-Critical Study of Expatriate Women Writers," under the supervision of Fred Warner.

George Hartley passed the doctoral comprehensives this year in the areas of Literary Criticism and Twentieth Century. Juliette Peavy passed the doctoral comprehensives in Medieval Literature and Renaissance and 17th Century British Literature. New Ph.D. students took the Ph.D. diagnostic examination to indicate the range of their background outside of their field of major concentration. The diagnostic exam was completed by David Anderson, Steve Benz, Susan Brill, Charlotte Byrd, Elaine McCullough, Marsha Napolin and Linda Simon.

There were some fine performances on the M.A. examination, and the following received degrees: Peter Goss, Valerie Leveque, William Merrick II, James Seitz, Margaret White, Paul Hadella, and Adam Meyer. In Creative Writing, Jerry Oglethorpe, Katherine Salas, Cassandra Sitterly and Ziao-Ming Chen all completed their theses and received their degrees. Graduate students also received awards this year. Chapel Petty Schmitt was awarded one of five $2000.00 Legislatively-Endowed Fellowships in campus wide competition and Rose Day received an American Association of University Women Fellowship.

UNDERGRADUATE PROGRAM

Undergraduate Director: Paul Davis

Undergraduate Committee: Paul Davis, Chair, Bill Dowling, Cheryl Fresch, David Jones, Pat Smith, and Fred Warner

Enrollment

The undergraduate major programs continue to show healthy growth, particularly the Professional Writing Concentration. Enrollment in that program has almost reached the number of students that we can handle with our present faculty. Next year we will need to consider limiting enrollment in the program or increasing the number of faculty in professional writing.

Enrollments are also growing in three- and four-hundred level literature courses, suggesting that we should gradually increase the number of such classes offered each semester, especially of 400-level period courses.

Honors

Although we had fewer students completing the departmental honors program this year than in the past, several of our honors students have done very well. Laura Mandell, graduated summa cum laude in May, received a Mellon Fellowship to study at Cornell. Sarah Kenemuth, graduated cum laude in December, will go on to graduate work in international relations. Todd Parker, a future honors candidate, received a Younger Scholars grant from the National Endowment for the Humanities to pursue research on William Blake this summer. Todd was also elected to Phi Beta Kappa as a junior.

To strengthen the departmental honors program, the Undergraduate Committee developed guidelines for the freshman course and is publicizing the course by sending a brochure describing the classes to incoming freshmen with

high ACT scores. WE hope that this freshman program will help us recruit more students with high verbal capabilities. As the honors program grows, we will need to consider a junior-level proseminar to help prospective honors students develop their capabilities for doing independent research.

General Education

The core program proposed for the College of Arts and Sciences last year, which included a two-semester Western literature requirement, was tabled by the College. The College Curriculum Committee, however, has been considering some specific changes in the present group requirements, including a proposal to add a two-semester requirement in world literature.

The Undergraduate Committee has developed a preliminary design for a course that we think would be appropriate for such a requirement. Using an innovative curriculum, the course would be team-taught and combine large lecture and small discussion sections. The committee will bring a proposal for this course to the department next Fall. We plan to offer the course for the first time in the Fall of 1987, and we are currently preparing an application for a grant to support the development and introduction of this course.

FRESHMAN ENGLISH PROGRAM

Freshman English Director: Michael Hogan

Freshman English Assistant Director: Lynn Beene

Freshman English Committee: Michael Hogan, Chair, Lynn Beene, Pat Gallacher, Tony Márquez, and Mary Bess Whidden

The Freshman English program completed its second five-year plan in the 85-86 year. Production quotas remained high and were met or exceeded: over 70 sections of English 101 and over 70 sections of English 102 each semester. The curricula and policies of the previous four years remained essentially unchanged during the year. Most important, a teacher regularly appeared to stand at the front of the classroom in each of our sections.

In its deliberations during the 85-86 year, the Freshman English Committee agreed to make several progressive changes to take effect next year. These amendments promise a great leap forward soon. First, textbooks for 101 and 102 have been changed. 101 will retain a language reader, for the coming year to be About Language; 102 will use The Dolphin Reader, a general anthology of story and essay. Second, the FEC decided to lower the initial ACT placement score for English 101 from 18-16. Third, the Committee, with the subsequent approval of the full department, voted to implement a revised policy for Lecturer appointments in FE: we will shift to offering as many year-long contracts as possible at 5 sections per year for these teachers.

CREATIVE WRITING PROGRAM

Creative Writing Director: Lee Bartlett

Creative Writing Committee: Lee Bartlett, Chair, Rudy Anaya, Gene Frumkin, David Johnson, Tom Mayer, Louis Owens, Pat Smith, and Harvena Richter

This was Lee Bartlett's final year as Director of the CW Program. As of fall semester, Louis Owens will take over the task. This was another good year for the program, which generally now seems one of the strongest in the English Department. Over the last 3 years, we've graduated 13 writers from our MA program. This is more than all the previous years combined; further, it is the largest number to be graduated in the last three years from any specialization within the English Department.

According to past reports, just a few years ago (1978-79) we had only 5 applicants for the MA program. Today we have over 20 students enrolled, and we get anough applications from new students to actually turn the less qualified down.

We are the only division of the Department which the Graduate Committee allows to rank its own new applicants for teaching assistantships. This year we offered a total of 6 new teaching assistantships, more than any other specialization in the Department. The Director also now sits permanently on the Graduate Committee.

The workshops continue to fill every semester, especially in fiction. We've got many undergraduate majors,

a number of whom this year have expressed interest in our graduate program.

This year, the Poets & Writers Reading Series continued to be popular. Funded by ASUNM & GSA, with the help of Robin Tawney, the Series brought three Pulitzer Prize winning authors to campus--John Ashbery, Galway Kinnell, and W. S. Merwin--as well as a number of others. Additionally, there was a spring student/faculty reading series, organized by the CWEGSA.

This year's D. H. Lawrence Fellowship went to Lucy Honig, a New York novelist. Delany Barbour won the Academy of American Poets Contest. David Kreuter won the Department D. H. Lawrence Short Fiction Award. Taken together, these three contests attracted over 400 entries.

While individual faculty member's achievements are outlined in the annual supplements to the biographical record of each, it is noteworthy that a number of the CW faculty were at the top of the English Department's "point rating scale." Penguin Dust, the Creative Writing newsletter, appeared three times this year. By all indications, the Creative Writing Program continues to thrive.

PROFESSIONAL WRITING PROGRAM

Professional Writing Director: Scott Sanders

Professional Writing Committee: Scott Sanders, Chair, David Dunaway, Anne Dunn, Chris

Madigan, Roy Pickett,
Mike Hogan and Lynn Beene
attending as ex officio
members

The first full academic year for the professional writing program was, predictably, a busy one. The year's major concerns were creating new courses and enrolling new students in the major and minor programs.

In each semester, faculty members offered new upper-division courses in professional writing. These courses covered such topics as language theory and editing, biography and autobiography, non-fiction writing, writing academic discourse, and advanced technical writing. More new courses scheduled for next year will treat proposal writing and writing for visual presentation.

The demand for these courses has been spurred by the new students who have entered the major and minor programs. In December 1984, when the major program was finally approved, there were two students in the minor and about ten students ready to begin the major. There are now approximately 35 students pursuing the major and 12 students working on the minor.

In December 1985, Eric Rajala completed his Senior project thesis on the problems that small computer software firms have providing effective visuals in their documentation, and he was graduated--the first to be so with an English Major, concentration in Professional Writing.

Eric is now working as a documentation writer and programmer for Software Solutions in Albuquerque. If all goes well, two to three professional writing majors will be graduated next December and another two to three the following May.

The internship program has been the most impressive success of the program to date. Our placement file has more than forty internship opportunities listed and more are added every week. Students have completed internships at Software Solutions, Lovelace Medical Center, UNM's Publication Office, the UNM Computing Center Newsletter, New Mexico Wildlife Magazine, and the First National Bank in Albuquerque. Internships are in progress this summer at the Anderson/Abruzzo Balloon Museum, The Nature Conservancy, Los Alamos National Laboratory, UNM Press, and the NASA-Goddard Space Flight Center in Greenbelt, Maryland.

The internship file and the contacts made establishing it have led to more than just these formal internship placements. Other English students, particularly graduate students and lecturers, have found part-time work as writers and editors. Last spring, Margaret White and Charles Poling accepted full-time positions at BDM Corporation and at Software Solutions, respectively.

Beyond these curricular, instructional, and vocational matters, professional writing faculty published articles in the last year in such diverse periodicals as College Composition and Communication, Journal of Technical Writing and Communication, IEEE Transactions on Professional

Communication, Rocky Mountain Review (RMMLA), UNM Computing Center Newsletter, the Sandia LAB NEWS, the New York Times, and others.

One objective of the professional writing program is to represent to the rest of the university and to the larger, non-academic professional community the English Department's concern for literacy as well as literature. The success of our first graduate and the continuing successes of our interns indicate that we are achieving that objective.

UNM Annual Report
Geography Department
July 1, 1985 to June 30, 1986

Prepared by:
Stanley A. Morain
Chairman

Annual Report for 1985/86
Geography Department

1.0 Overview

Major activities for the academic year included 1) modifying our curriculum in water resources geography, Latin American development, and remote sensing; 2) continuing our participation in the creation of a tri-state consortium in applied geography and land-use planning; 3) spearheading the design and conduct of the 2nd Southwest Institute; 4) expanding the base of opportunities for our student intern program; and 5) collaborating with the Strategic Planning Committee efforts to create a UNM "data base".

2.0 Departmental Achievemants

Major activities in the department have been recorded in the department's newsletters (Vol 2 No.'s 1,2) for the fall and spring semesters (attachment #1).

2.1 Curriculum

Three new courses have been added to the department's curriculum and one has been re-instituted after a lapse of four years. In water resources we now have Geography 459 taught by Dr. Steve Thompson. Dr. Susan Place has created Geography 401 to complement our offerings in Latin America; and Dr. Stan Morain has added Geography 484 to complete the remote sensing sequence. Dr. Robert Campbell (Emeritus Prof.) has re-kindled Geography 381, Political Geography, which we hope can regain popularity with Political Science and Sociology Majors. Descriptions for these four courses are given below.

Geography 381 Political Geography (3)
The spatial organization of political processes; political institutions as systems and hierarchies of systems; the political ecology of representative national and sub-national systems. Fall 1986 and alternate years.

Geography 401: Latin American Development (3)
Analysis of geographic aspects of the development process in Latin America, with emphasis on the interplay between the natural environment and people, and on the spatial patterns thus created.

Geography 459 Water Resources Management (3)
An examination of the problems and trends in the use of water resources in the United States, with emphasis on the physical and social aspects related to its management. Prerequisites: 101 or 102 or permission of instructor.

Geography 484 Applied Remote Sensing (3)
Reviews state-of-the-art applications of aerial and satellite sensors for natural and cultural resouces. Emphasis is placed on processing and interpreting multispectral scanner data, microwave and thermal scanner data as well as on development of Geographic Information Systems. Prerequisite Geog. 482 or consent of Instructor. Spring 1986 and alternate years.

2.2 Tri-State Consortium in Applied Geography.

There was no formal contact between the three departments (Arizona State, Nevada (Reno) and UNM) during the year, although there were several informal discussions via telephone. The Southwest Social Science meeting in Reno last April served as the site for an informal meeting between UNR and ASU to discuss travel and other funds. At UNM we have agreed that money will be committed to the consortium on an "as-need" and "if-available" basis. We suspect that the academic year 1986/87 will determine the real viability of the consortium.

2.3 Southwest Institute

In 1985/86 the Southwest Institute took on nearly departmental status. The institute now has its own budget and reporting structure, and lacks only an organizational code to be recognized as an independent program. The summer, 1986 institute was very favorably received by the instructors as well as participants. Dr. Jerry Williams is commended for his many efforts in organizing and conducting such a massive program. Attachment #2 is the program for the lecture and field series.

2.4 Intern Program

The intern program has expanded during the year to include more faculty participation and a wider variety of professional activities. In addition to interns in the land use and environmental planning fields, initiated by Dr. Williams in 1983/84, we now have students placed in remote sensing, geographic information systems and computer cartography. During the summer, fall and spring semesters eight students participated in the program.

2.5 Strategic Planning Committee

Along with all other units of UNM, Geography participated in the strategic planning committee efforts to generate a data base for future planning. The department prepared its report for the subcommittee for Social & Behavioral Sciences in October and was interviewed in early November. Subcommittee recommendations were as follows:

1. The department is limited in its potential because of budgetary support below levels elsewhere for salaries and fringe benefits; for travel, supplies, and equipment; and for graduate student support. Progress is needed in each of these areas.

2. Relationships with the Technology Application Center (TAC) in the Institute of Applied Research Services (IARS) are unsatisfactory and should be dealt with either by transferring TAC to the department, or at least by adoption of some formula for sharing overhead between TAC and the department.

3. As recommended by the 1984 external review committee, expansion plans for a doctoral program should be postponed for at least five years. Meanwhile the department should concentrate on the master's degree and should pursue vigorously the development of cooperative programs with other regional universities.

3.0 Faculty Achievements

3.1 Publications and Creative Works

Items in this category are detailed in the faculty biographical record.

3.2 Promotions

Dr. Bradley Cullen was promoted to Associate Professor with tenure.

Dr. Susan Place successfully passed her code 3 review and has been given a second three year term.

3.3 Other Faculty Recognition (see also attachment #1)

a. Dr. Brad Cullen was granted a sabbatical leave for next academic year to research aspects of the forestry products industry in California.

b. Dr. Guy King (University of Utah, 1982) is the newest of our faculty. His specialties are computer cartography and GIS development, in addition to physical geography and field methods. In the coming year Dr. King will be modernizing our cartography curriculum and expanding our training in geographic information systems.

c. Dr. Stan Morain spent half the summer in China and again in January concluding a three-year project with UNDP and UN/FAO. His work has been advisory to the Ministry of Agriculture, but he has also been involved in technical projects using aircraft and satellite remote sensing.

d. Dr. Susan Place was awarded a Fulbright-Hays Faculty Research Abroad Fellowship for field work in Costa Rica. Her work focuses on the Human Consequences of Ecological Conservation in Costa Rica, specifically Tortuguera National Park. In December she gave birth to a 9 pound baby boy (Brendan), and in January departed with spouse and child to Costa Rica. She has also been accorded the department's outstanding teacher award for 1985/86.

e. Dr. Will Swearingen, adjunct assistant professor in geography and research associate at the Technology Application Center, has had his book on Agricultural Development in Morocco: Dreams and Deceptions, 1912-1985 accepted for publication by Princeton University Press. Publication of both hardcover and paperback editions is scheduled for early 1987. This work explains the failure of Morocco's agricultural policies through analysis of political factors and misperceptions of the environment. Dr. Swearingen spent a year in Morocco and France conducting research for the work while the holder of a Fulbright doctoral dissertation fellowship. In 1986/87 his title officially changes to Research Assistant Professor of Geography.

f. Dr. Steve Thompson was accorded the honor of presenting a paper last August in Breckenridge, Colorado, on the occasion of Dr. Gilbert White's NCGE award for Master Teacher. Dr. Thompson was Dr. White's last Ph.D student and has spoken on "The Changing Environment for the Conservancy Along the Rio Grande in New Mexico."

Dr. Thompson has recently been elected as vice president of the New Mexico section of the American Water Resources Association. Primary functions for the Section are to promote interdisciplinary exchanges of ideas on water related issues through quarterly meetings and an annual symposium. Among others represented in the Section are representatives from U.S. Forest Service, private consultants, and UNM.

As an adjunct to his official duties to AWRA, Dr. Thompson attended the Western State's High Risk Flood Areas Symposium last March in Las Vegas and gave three workshop presentations: one on defining differences between arid and humid environments; one on alternative uses of arid flood plains; and one on research related to arid land development. His most recent endeavor was to run for an elected office on the Board of the Middle Rio Grande Conservancy District.

4.0 Additions Separations

There were no additions or separations from faculty or staff during the year.

5.0 Funded Research

Drs. Morain and Place were the two faculty members who had outside funded research in 1985/86. Dr. Morain's work is detailed in the annual report for the Technology Application Center, a division of the Institute for Applied Research Services (IARS)

Dr. Place's research was funded by Fulbright-Hays (see section 3.3d, above). She was on leave without pay from January through August, 1986.

6.0 Goals

In 1986/87 the department intends to undertake the following actions:

1. Review the current curriculum with an eye toward modernizing the course listings, creating meaningful course sequences, deleting courses that persist through inertia, and planning future course additions.

2. Pursuing the tri-state consortium and the question of TAC's relationship to geography.

3. Establishing contact with the Spanish Colonial Heritage program, newly funded by the National Park Service and housed in space assigned to geography.

4. Creating guidelines for merit salary increases.

538

Department of Geography
University of New Mexico
Albuquerque, NM 87131

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GEOGRAPHY

News Briefs

Volume 2 Number 1 Fall 1985 Bandelier West, UNM, Albuquerque, New Mexico 87131

Southwest Institute

Thanks to Jerry Williams, the department has led the University community in a major new interdisciplinary effort to characterize the cultures and environments of the American Southwest. This past summer a team of forty-two faculty, representing seven A&S departments and four colleges, held a month-long classroom and field course for 120 participants on environments of the Rio Arriba-Rio Abajo in New Mexico. The program met with such overwhelming success that it has been funded again for the summer '86 session. Anyone interested in participating, or in learning more about the program, should contact Jerry through the department. Tentative topic for the 1986 Institute is Urban Places of Rio Arriba-Rio Abajo.

Colloquium Series

Last spring the New Mexico Geographical Society was busy, among other activities, in sponsoring a new colloquium series for the department. Technology Application Center's Raul Campos-Marquetti led off the series with a discussion of Martian Landforms. This was followed in March with a presentation by BLM's Jim Turner on Geographic Information Systems; in April by Koogle and Pouls' Mike Wright on Geo-Based Information Systems for Land Development; and in May by one of our own former Masters, Larry Spear, on Precinct Realignment and GIS Development in New Mexico.

The series for this fall is still tentative but includes a presentation on October 28 by Dr. Chao Songqiao, who is a

visitor to Gil White's Environmental Research Institute in Boulder, Colorado. He will speak on the topic of resources development in arid lands; Dr. Louis Colombo of Southwest Land Research will speak on "Demographic Projections for Albuquerque"; and scientists from Los Alamos Laboratories are tentatively scheduled for this Fall. Announcements will be forthcoming, but for advanced information please contact Mrs. Ann Stevenson, this year's NMGS colloquium organizer.

Applied Geography Consortium

The Geography Departments at Arizona State University, Nevada Reno, and UNM have created the "Tri-State Land Resource Consortium" in an effort to maximize their common and unique capabilities in Applied Geography. By sharing and pooling these capabilities we hope to address major land-use and environmental issues facing economic and cultural developments in the desert southwest. Plans for the 1985/86 academic year include holding a First Annual Conference on identifying critical regional development and resource issues and proposing methods to address them; inviting faculty from each department as guest speakers at each of the three consortium planning meetings; and exploring inexpensive ways to conduct cooperative research and share our curricula. The entire concept of consortia among academic departments in regional institutions is a tangle of unknowns and apprehensions. 1985/86 will no doubt be a pivotal year in determining whether or not we can grow from concept to reality.

Student Profiles

Our Masters class of '85 has done well for itself! Sue Robeson and Dave McCraw have gone on to Ph.D. programs at Kansas University and LSU, and John Peterson has continued to develop his remote sensing activities at UNM's Civil Engineering Research Facility. Beth Mills has completed her sponsored research on Grenada and hopes to finish her thesis this Fall. Among our undergraduates, Denise Bleakley (ne' Egolf) has finished her National Geographic internship and has seen some of her efforts published in the May and June issues of National Geographic. Bill Campbell has designed a brochure describing our departmental intern program. It is a handy guide for interested students, in addition to suggesting sources of employment both in Albuquerque and in the region. We congratulate Bill on this mammoth and very professional effort.

Faculty Profiles

This semester the department is enjoying its full compliment of faculty since the untimely death of Dr. Murphy in October 1982. We now have nine full-time faculty and professor emeritus Campbell. Bob, by the way, has been appointed as the department's official historian to write our contribution to the University's Centennial history.

Dr. Susan Place has been awarded a Fulbright-Hays Faculty Research Abroad Fellowship for field work in Costa Rica. Her work will focus on the Human Consequences of Ecological Conservation in Costa Rica, specifically Tortuguera National Park.

Steve Thompson was accorded the honor of presenting a paper last August in Breckenridge, Colorado, on the occasion of Dr. Gilbert White's NCGE award for Master Teacher. Steve is Dr. White's last Ph.D. and spoke on "The Changing Environment for the Conservancy Along the Rio Grande in New Mexico."

Dr. Guy King (University of Utah, 1982) is the newest of our faculty. His specialties are computer cartography and GIS development, in addition to physical geography and field methods. In the coming year Guy will be modernizing our current cartography curriculum and expanding our training in geographic information systems.

Stan Morain spent half the summer in China concluding a three-year project with UNDP and UN/FAO. His work has been advisory to the Ministry of Agriculture, but he has also been involved in technical projects using aircraft and satellite remote sensing. He will present a paper in Venice this October titled "Surveying China's Resources: Patterns and Progress From Space."

Dr. Will Swearingen (University of Texas, 1984), who heads the Visiting Scientist Program at the Technology Application Center, is also serving this semester as an adjunct assistant professor, in part filling in behind Jerry Williams who is on sabbatical. Will is currently teaching introductory remote sensing and hopes to teach world regional geography next Spring.

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Department of Geography
University of New Mexico
Albuquerque, NM 87131

UNM GEOGRAPHY News Briefs

Volume 2 Number 2 Spring 1986 Bandelier West, UNM, Albuquerque, New Mexico 87131

The Geography Department has really hustled this past semester as we posture ourselves for tough financial times ahead and as we continue to plan for UNM's Centennial in 1989. For those of you not still living in New Mexico, UNM at-large will be experiencing a critical funding cycle these next few years mostly because of depressed world energy prices. Despite the bleak outlook, the faculty is eager to advance the quality and modernize the content of our instructional program and to pursue meaningful and useful research. Here are a few of the semester's highlights....

Strategic Planning

Early last fall President Farer implemented his plan for a complete review of UNM operations. In April an appraisal of each department was drafted for review and comment by the respective faculties, and we are happy to announce that geography's assessment conforms closely to our own self-image. While it is premature to discuss this assessment, we are optimistic and proud of our associations in the College of Arts and Sciences and our position at UNM. More on this in the next issue.

Geography at UNM

Many of our earlier graduates may think the department is still located in Hodgin Hall. Wrong!! We moved to Bandelier West (across the "green" from Scholes) in 1981 and have since occupied nearly all of Bandelier East (formerly the student registration building). Even more recently we have acquired space vacated by the National Park Service Chaco Center/Remote Sensing Branch. In addition to faculty offices, we have a functional cartographic laboratory, darkroom facility, photo interpretation lab, seminar room, and (at last) a computer cartography laboratory. Combined with the equipment and facilities resident at TAC (see below), the department is well on its way toward becoming a leader in applied geography programs in the Southwest.

Southwest Institute

Dr. Jerry Williams of the department is directing UNM's second Southwest Institute whose theme this year is "The Rio Grande - Heart of New Mexico." Jerry has assembled an impressive array of faculty and other academic departments to host a four-week symposium of classroom, field, and social occasions dedicated to a study of the physical environment, the history, and the cultures of the Rio Grande from ancient to modern times. The symposium is open to both undergraduate and graduate students, as well as non-degree participants, from June 9 to July 3, 1986. Interested parties should contact Jerry at 505-277-6133.

Technology Application Center (TAC)

Most of you know that TAC has close relationships with geography. This association continues to grow both in student employment and joint programs. Academically and functionally, TAC is the applied remote sensing and GIS laboratory for the geography department, though it still functions as a separately funded unit apart from the department. A direct tie exists between the department and TAC's New Mexico Geographic Information Advisory Committee. The NMGIAC is a TAC program developed out of its National Cartographic Information Center (NCIC) activities under the leadership of Mike Inglis and Amy Budge (both former students in the department). Dr. Guy King is chairman of the subcommittee on digital data and is also the department's newest faculty member in charge of our cartography and GIS curriculum and research. Guy's committee will serve as a clearinghouse for digital data and digital data sources within New Mexico and federal agencies. A synergism also exists in that TAC operates ARC/INFO, one of the most comprehensive and robust software packages available for GIS development. In 1986/87 TAC anticipates a budget of approximately $750,000 in remote sensing applications and GIS development.

Student Briefs

Mike Springfield, who is an MA candidate with Jerry Williams, has been named senior planner by the Rio Rancho City Council. Mike, 28, is a native of Phoenix but is presently completing his studies in geography and urban planning at UNM. He has also worked as a teaching assistant in the department as well as a demographer at UNM and with the Employment Development Office in Albuquerque. Congratulations Mike!

Denise Bleakley (Class of 86) continues to receive recognition for her internship with National Geographic. While pursuing her undergraduate studies in geography, Denise has also worked as a contractor to the Public Service Company of New Mexico and, at present, is helping to design geographic information systems for UNM's Division of Government Research. She is a creative, inquisitive, and talented cartographer who has a very bright future.

Mario Picazo (Class of 86) has been accepted for MS programs in meteorology at UCLA and at the University of Wisconsin, Madison. Both are prestigious programs. We understand that Mario has been offered a fellowship at one, perhaps both, institutions. His training at UNM/Geography was with Dr. Iven Bennett. Good Going Guys!

Cheryl Gage, another of Jerry Williams' advisees and former TA in the department, is newly employed by the Redevelopment Office, City of Albuquerque. Her thesis, in

addition, deals with the directly related topic of redevelopment in the Huney-Highlands subdivision of Albuquerque. Good luck Cheryl and please keep us posted.

Susan Gosnell (Class of 84) is employed at TAC as a digitizer and geographic information specialist. Among recent projects, Susan has worked on a five-country GIS for Los Alamos (LANL) focusing on energy resources of Central America; a general land use GIS for the City of Albuquerque; and a GIS for Southwest Research Institute. One of Susan's close friends, Mr. William Campbell (Class of 85), now works for the Environmental Services Division, Department of Utilities, City of Colorado Springs. Bill, as you may recall, also wrote a set of guidelines for our intern program as part of his undergraduate accomplishments. In the same vein, Mr. Garry Gilmore (Class of 85) is an environmental field technician with a Kansas City-based environmental firm.

Other notables include Doug Rizor (Class of 85) and Suzie McDuffie (MA program) both of whom are employed by Diginetics in Albuquerque. Doug is a digitizing technician and Suzie is in marketing.

Faculty Briefs

Dr. Steve Thompson has recently been elected as vice president of the New Mexico Section of the American Water Resources Association. Primary functions for the Section are to promote interdisciplinary exchanges of ideas on water related issues through quarterly meetings and an annual symposium. Among others represented in the Section are representatives from U. S. Geological Survey, the Navajo Nation, U. S. Forest Service, private consultants, and UNM. Steve invites anyone interested in participating to contact him at 505-277-4645.

As an adjunct to his official duties to AWRA, Steve attended the Western State's High Risk Flood Areas Symposium last March in Las Vegas and gave three workshop presentations: one on defining differences between arid and humid environments; one on alternative uses of arid flood plains; and one on research related to arid land development. Steve's most recent endeavor is to run for an elected office on the Board of the Middle Rio Grande Conservancy District.

Dr. Will Swearingen, adjunct assistant professor in geography and research associate at the Technology Application Center, has had his book on Agricultural Development in Morocco: Dreams and Deceptions, 1912-1985 accepted for publication by Princeton University Press. Publication of both hardcover and paperback editions is scheduled for early 1987. This work explains the failure of Morocco's agricultural policies through analysis of political factors and misperceptions of the environment. Dr. Swearingen spent a year in Morocco and France conducting research for the work while the holder of a Fulbright doctoral dissertation fellowship.

Dr. Brad Cullen has been granted a sabbatical leave for next academic year to research aspects of the forestry products industry in California. Brad has also been promoted to Associate Professor this year and has been most productive in published research.

Susan Place gave birth in December to a 9 pound baby boy (Brendan), and in January departed with spouse and child to Costa Rica. She will be working there until August on a Fulbright research award before resuming her teaching duties in the Fall. In her absence, Susan has been awarded a second three-year appointment, which we hope will lead to her tenure and promotion to Associate Professor in 1989. She has also been accorded the department's outstanding teacher award for 1985/86.

China Syndrome

1986 seems to be the year for China. Dr. Stan Morain made one last visit in January to finalize reports on his three-year United Nations project. His paper titled "Surveying China's Agricultural Resources: Patterns and Progress from Space" has been published in the premier issue of Geocarto International, a new journal headquartered in Hong Kong and for which Stan serves as a contributing editor. In October, Dr. Chao Songqalo of the Geography Branch of the Chinese Academy of Sciences spoke to the New Mexico Geographical Society on Natural Resources Management in

Arid Environments. In attendance was Dr. Gilbert White who gave the introductory comments and ....

More exciting than either of these, perhaps, is the fact that Dr. Elinore Barrett and Dr. Robert Campbell have organized a tour to China this summer. Among other participants, they will be joined by Drs. Rod Snead and Brad Cullen from the department. We understand they are headed for Shanghai to visit the Yangtze Delta region, then will proceed to Beijing (the Great Wall, Summer Palace, Ming Tombs, Forbidden City, etc.). In Xian (pronounced She-an) they will tour the Terra Cotta Army and Bronze Army before traveling to Kunming and Guilin (inspiration of the classical Chinese mountain paintings).

Despite our growing knowledge of the region, the department still does not offer a course in the geography of Asia!

Class of 1985/86

Congratulations to all of the following. We wish you the best of all possible futures and hope you will stay in touch.

1985/86 Geography Graduates

Master of Arts

Amer Althubaity
Robert Bewley
Steven Cooper

Majors

Martin P. Baca
Armando R. Groffman
Mario S. Picazo
Gary P. Roberts
William Campbell
Garry Gilmore
Michael Jacobs
Brenda G. Chandler
Leigh A. Maddox
John R. Pickering
William Jeffs
Derrick Dunlap
Howard Berg
James Nechero

Minors

Ernest Atensio
James Brett
David Griggs
Linda Fernow
Kasty Latvin
Wendy Ciesco
John Baumann

Scholastic Achievement

The department is proud to announce the following list of undergraduate majors who appeared on the deans list for scholastic achievement (GPA $\geq$ 3.0) last fall semester. We are applaud these efforts and hope the trend continues.

	GPA
Kristin A. Fishburn	4.0
Michael J. Jacobs	3.50.3.99
Robert D. Ambrose	3.00-3.49
Scott W. Faulk	3.00-3.49
Armanado R. Groffman	3.00-3.49
Michael F. Hermann	3.00-3.49
Randolph C. Hewitt	3.00-3.49
Wayne S. Jeffs	3.00-3.49
James S. Nechero	3.00-3.49

Flash

The U. S. Department of Interior National Park Service and UNM have joined to create a small group of professionals to inaugurate a "Spanish Colonial Research Center" to prepare for the 1992 Quincentennial celebration of Columbus' discovery of the Americas. The group will be housed in space provided by the geography department and their main purpose will be to stimulate research and archaeological discoveries relating to all Spanish Colonial Parks and National Monuments from Florida to California.

THE UNIVERSITY OF NEW MEXICO

SOUTHWEST INSTITUTE

June 9-July 3, 1986

The Rio Grande—Heart of New Mexico

PROGRAM • FIELD SITE SUMMARIES • FACULTY

Final Program
SOUTHWEST INSTITUTE 1986
THE RIO GRANDE:
HEART OF NEW MEXICO
June 9 - July 3

The following comprehensive program presents the final arrangements for the complete lecture series including performances, exhibits, and selected films on the Rio Grande area. The final program also provides a full listing of each field stop of the six-day field portion of the Southwest Institute. Field site summaries are provided from the field instructors to serve as a guide for the participants who have enrolled in that portion of the program. For those who were unable to register for the field course, the site descriptions are enclosed to encourage you to visit these locations on your own at a later date. Lastly, a brief biographical sketch of the faculty, which includes forty-two lecturers and field instructors who have molded their presentations into this truly interdisciplinary approach to a geographical area of the Southwest.

All students in the lecture series who are registered for college credit will be evaluated by two objective quizzes on the lectures and assigned readings. All assigned readings, including some field course handouts, have been collated and compiled into a bound booklet called the Rio Grande Reader. The reader should be available one-week prior to the opening day of the class. Please call the Southwest Institute office at (505) 277-6133 for instructions on how and when to purchase the reader if you wish to do so before the course begins. All participants in the field course who are registered for college credit will be expected to produce a short paper on an element of the Rio Grande that is unique to their field of study. Suggested topics and guidelines, as well as any additional requirements to distinguish graduate from undergraduate levels, will be established by the field faculty from the department through which the student registered.

Lecture Series - Part One
June 9 - June 17

Topics and Speakers

Lectures, performances and films are scheduled for Anthropology, room 163. Unless otherwise specified, all events scheduled for room 163 (including discussion sessions) are to be one hour in duration. Exhibits are set up from 9:00 AM until Noon and are housed in Anthropology 178, the seminar room adjoining room 163, the lecture hall. The administrative staff of the Southwest Institute will be available in room 178 each morning during the lecture series, and in room 221 of Bandelier West during the afternoons.

Monday, June 9	8:00 A.M. (room 163)	Opening Welcome and Comments General Geography of the Rio Grande by Jerry Williams
	9:30 A.M. (room 163)	General Geology of the Rio Grande by John Hawley
	11:00 A.M. (room 163)	Faults, Quakes, and Volcanism by Allan Sanford
Tuesday, June 10	8:00 A.M. (room 163)	Rio Grande Paleogeology by Barry Kues
	9:00 A.M. (room 178)	Exhibit: Paleogeology and Fossils of New Mexico by Spencer Lucas
	9:30 A.M. (room 163)	Environmental Impact of Settlement in the Rio Abajo: Albuquerque to San Marcial by Dan Scurlock
	11:00 A.M. (room 163)	Endangered Botanical Species by Paul Knight
	12:15 P.M. (room 163)	Film Series I by Jerry Williams
Wednesday, June 11	8:00 A.M. (room 163)	Archeology of the Rio Abajo by Mike Marshall
	9:00 A.M. (room 178)	Exhibit: Rio Grande Artifacts by Stewart Peckham
	9:30 A.M. (room 163)	Archeology of the Rio Arriba by David Stuart
	11:00 A.M. (room 163)	Rio Grande Ceramics and Artifacts by Stewart Peckham
Thursday, June 12	8:00 A.M. (room 163)	Rio Grande Pueblo History by Joe Sando
	9:30 A.M. (room 163)	Hispanic Settlement and Colonization by John Kessell
	11:00 A.M. (room 163)	Imprint of DeVargas on New Mexico by John Kessell
	12:15 P.M. (room 163)	Film Series II by Jerry Williams
Friday, June 13	8:00 A.M. (room 163)	Spanish Urbanization of the Rio Grande by Marc Simmons
	9:30 A.M. (room 163)	Early Anglo Impact in the Rio Grande Area by Marc Simmons
	11:00 A.M. (room 163)	Mining and Transportation: 1880-1920 by Paige Christiansen

Monday, June 16	8:00 A.M. (room 163)	Spanish-Anglo Impact on Rio Grande Pueblos by Joe Suina
	9:30 A.M. (room 163)	Pueblo Architecture-Reflection of Socio-Economic Change by Rina Swentzell
	11:00 A.M. (room 163)	Performance: Catholic Influence on the Pueblo Corn Dance by Joe Suina
	12:15 P.M. (room 163)	Film Series III by Jerry Williams
Tuesday, June 17	8:00 A.M. (room 163)	New Deal Arts Project: Selling New Mexico by Marta Weigle
	9:30 A.M. (room 163)	The Hispanic Village in a Modern Rio Grande Setting by Sylvia Rodriquez
	11:00 A.M. (room 163)	Issues of Urbanizing the Rio Grande by Rudolfo Anaya
	12:15 P.M.	Exam: Midterm Objective Examination- Covers topics of June 9 - 17. To be handed-in at room 221 of Bandelier West by 5:00 P.M.

Wednesday, June 18

Thursday, June 19

Friday, June 20

FIELD COURSE: FIRST THREE-DAY SESSION

One day in the Albuquerque Area and two days in the Socorro Area. One overnight in Socorro.

topics and instructors:

Geology-	David Love, Spencer Lucas, John Hawley
Archeology-	David Stuart, Mike Marshall, Bob Weber
Botany-	Dan Scurlock, Paul Knight
Zoology-	Scott Brown, Jack Kelly
History-	Marc Simmons, John Kessell, Bob Eveleth

Field stops and site descriptions are provided on the following pages:

FIELD PROGRAM
JUNE 18, 19, 20
FIRST THREE-DAY SESSION

One-day Trip in the Albuquerque Area (depart at 8:00 AM)
Group A: June 18
Group B: June 20

arrival time	stop #	place	topic	faculty/group
9:00 AM	1	near Placitas	Great Basin Grassland Vegetation (Botany)	Scurlock...A Knight.....B
	1	near Placitas	Grassland Wildlife Habitat (Zoology)	Kelly.....A Brown.....B
10:30 AM	2*	Coronado Monument State Park	Kuaua Pueblo (Archeology)	Marshall...A Stuart.....B
12:00	3	near San Ysidro (Loma Barbon)	Jemez Mountains (Geology)	Love.....A Lucas.....B
1:00 PM	4**	Jemez Pueblo (lunch stop)	Special Lecture: History of the Jemez People	by Joe Sando
3:00 PM	5*	Jemez State Monument	Early Spanish Mission Contact (History)	Kessell....A Simmons....B

5:30 PM Anthropology Building at UNM: End of one-day excursion.

* restrooms available

** lunch stop

Annual Report of the Department of Geology

July 1, 1985 - June 30, 1986

Barry S. Kues, Acting Chairman

TABLE OF CONTENTS

Page

GENERAL DEPARTMENTAL INFORMATION

Faculty and Staff 4
Significant Achievements. 8
Significant Plans and Recommendations. 20
Appointments to Staff 27
Separations from Staff. 27

ACTIVITIES OF THE FACULTY AND RESEARCH SCIENTISTS

Teaching Accomplishments, Recognitions, and Curriculum Development. 29
Publications 39
Research Projects or Creative Work in Progress 67
Activities in Learned and Professional Societies 91
Other Professional Activities 111
Non-Teaching University Service. 124
New Scholastic Honors and Fellowships. 133
Sabbaticals, Leaves of Absence, and Travel 136
Public Service. 150

GRADUATE PROGRAM. 155

APPENDICES

I: Research Grants and Contracts. 164
II: Professional Lectures to Geology Department and Institute of Meteoritics 170
III: Graduates for 1985-1986. 176
IV: Teaching and Research Assistantships 178
V: Student Scholarships and Awards 180
VI: Geology Alumni Fellowship Fund and Gifts. 184

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GENERAL DEPARTMENTAL INFORMATION

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FACULTY AND STAFF OF THE DEPARTMENT OF GEOLOGY

FULL PROFESSORS:

Roger Y. Anderson, Ph.D., Stanford University, 1960.

Douglas G. Brookins, Ph.D., Massachusetts Institute of Technology, 1963.

Wolfgang E. Elston, Ph.D., Columbia University, 1953.

Rodney C. Ewing, Ph.D., Stanford University, 1974.

Klaus Keil, Director, Institute of Meteoritics, Ph.D., Mainz University, 1961.

Cornelis ("Kase") Klein, Ph.D., Harvard University, 1965.

Albert M. Kudo, Ph.D., University of California-San Diego, 1967.

Lee A. Woodward, Ph.D., University of Washington, 1962.

ASSOCIATE PROFESSORS:

Jeffrey A. Grambling, Ph.D., Princeton University, 1979.

Stephen P. Huestis, Ph.D., University of California-San Diego, 1976.

Barry S. Kues, Ph.D., Indiana University, 1974.

Stephen G. Wells, Ph.D., University of Cincinnati, 1976.

Crayton J. Yapp, Ph.D., California Institute of Technology, 1980.

ASSISTANT PROFESSORS:

John Geissman, Ph.D., University of Michigan, 1980.

Christopher Mawer, Ph.D., Monash University, Australia, 1981.

Leslie D. McFadden, Ph.D., University of Arizona, 1982.

Robyn Wright, Ph.D., Rice University, 1984.

PROFESSORS EMERITI:

J. Paul Fitzsimmons, Ph.D., University of Washington, 1949.

Vincent C. Kelley, Ph.D., California Institute of Technology, 1937.

Stuart A. Northrop, Ph.D., Yale University, 1929.

Sherman A. Wengerd, Ph.D., Harvard University, 1947.

ADJUNCT PROFESSORS:

Adjunct Professor Rosemary Buden, Ph.D., Yale, 1968

Adjunct Professor Jonathan F. Callender, Ph.D., Harvard University, 1975.

Adjunct Associate Professor William F. Chambers, Ph.D., Duke University, 1967.

Adjunct Associate Professor Edward C. Beaumont, M.S., University of New Mexico, 1948.

Adjunct Associate Professor Frank D. Gorham, B.A., University of Missouri, 1943.

Adjunct Associate Professor Rodney J. Holcombe, Ph.D., Stanford University, 1973.

Adjunct Assistant Professor, Spencer G. Lucas, Ph.D., Yale University, 1983.

Adjunct Professor William C. Luth, Ph.D. Pennsylvania State University, 1963

Adjunct Associate Professor John Shomaker, M.S., University of New Mexico, 1965.

Adjunct Assistant Professor Carol L. Stein, Ph.D., Harvard University, 1977

Adjunct Associate Professor Lawrence W. Teufel, Ph.D., Texas A&M, 1979.

RESEARCH ASSOCIATES AND POST-DOCTORAL FELLOWS:

Roger Bateman, Post-Doctoral Research Associate, Ph.D., James Cook University, Australia, 1984

Bryan C. Chakoumakos, Post-Doctoral Fellow, Ph.D., Virginia Polytechnic Institute and State University, 1984.

Christopher D. Condit, Post-Doctoral Fellow, Ph.D., University of New Mexico, 1984

James Connolly, Research Scientist, Institute of Meteoritics; M.S., University of New Mexico, 1981.

John Husler, Senior Staff Chemist, M.S., University of New Mexico, 1968.

Ian D. R. Mackinnon, Research Scientist, Ph.D., James Cook University, Australia, 1979.

Takashi Murakami, Post-Doctoral Fellow, Ph.D., University of Tokyo, 1980

Horton Newsom, Research Scientist, Institute of Meteoritics, Ph.D., University of Arizona, 1981

Edward R. D. Scott, Senior Research Scientist, Institute of Meteoritics; Ph.D., University of Cambridge (U.K.), 1972.

G. Jeffrey Taylor, Senior Research Scientist, Institute of Meteoritics, Ph.D., Rice University, 1970.

STAFF:

Ruth M. Briggs, Editorial Assistant II

George Carnako, Department Preparator

Wendy Ciesco, Department Secretary

George H. Conrad, Microprobe Specialist

Rosemary A. Griego, Editorial Assistant I

Elaine F. Stewart, Drafting Technician

Sally E. Hayes, Accounting Technician

Kenneth K. Kietzke, Thin Section Preparator

Lucy F. Landis, Department Secretary

Spencer G. Lucas, Curator

Harold Poths, Research Associate

Marguerite G. Swanson, Academic Support Aide

SIGNIFICANT ACHIEVEMENTS

Introduction

This report provides a summary of the activities and accomplishments of the faculty, staff and students of the Department of Geology during the 1985-86 academic year. Because the annual report is the only readily available record of the Department's activities during the past year, we have endeavored to make it both comprehensive and detailed. Much of the information herein, especially faculty activities, covers the 1985 calendar year and is derived from individual biographical supplements. As in past years, the Department of Geology's main missions within the University and community have been: 1) scholarly research and publication of new knowledge that results from this research, 2) quality teaching at both the undergraduate and graduate level, and 3) service to the public, in applying our expertise to institutional and individual questions and problems ranging from those of schoolchildren to matters considered by State, national and international panels and agencies. The record of the Department's activities presented in the following pages will indicate the level of success we have achieved in working towards these goals.

The Department of Geology is of course a part of the College of Arts and Sciences and the University, and thus is affected directly or indirectly by many actions and events outside the confines of Northrop Hall. We share the desire of most entities

within the University that UNM be a place where excellence is valued and appropriately rewarded, and look forward to a time of stability and progress under UNM's new president. The Department particularly wishes to thank F. Chris Garcia, Dean of the College of Arts and Sciences, and Donna J. Dionne, his assistant, for their support in several significant areas during the past academic year.

One potentially important University-wide endeavor in which the Department participated this past year was the Strategic Planning Committee's review and evaluation of all University programs. At the time of this writing the final SPC reports had not been released, but the Department has supported the intent and concept of this review process, and trusts that its recommendations will be given careful consideration. One member of the Geology faculty, Rod Ewing, is a member of the Strategic Planning Committee.

The Department experienced several administrative changes during the 1985-86 academic year. Cornelis ("Kase") Klein stepped down as Chairman of the Department on February 21, 1986, remaining as a tenured professor on the faculty. Barry Kues functioned as Acting Chairman from late February through June. During that time, the Geology faculty indicated its strong support for Klaus Keil as the next Chairman. Professor Keil agreed to assume the chairmanship beginning on July 1, 1986, and will also continue as Director of the Institute of Meteoritics.

Faculty and Scientific Staff

The Department had one new addition to its faculty arrive during the report period — Dr. Chris Mawer, Assistant Professor in structural geology. Chris was hired early in 1985 and began teaching and research duties in the Department during the Spring, 1986 semester. He received his Ph.D. degree from Monash University, Victoria, Australia in 1981 and subsequently was a post-doctoral fellow at the University of Toronto and University of New Brunswick, Canada. Chris Mawer has an extensive professional background in field mapping and structural analysis in areas of considerably varied metamorphic grade, structural style and tectonic setting. The addition of Chris to the Geology faculty will provide excellent expertise in the fundamental field of structural geology, and he will complement already strong programs in field, Precambrian and metamorphic geology.

The Department was also fortunate in hiring Dr. Laura Crossey, who will begin as a faculty member during the Fall 1986 semester. Laura obtained her Ph.D. degree from the University of Wyoming in 1985 and is currently a post-doctoral fellow there. Her interests in low-temperature organic and inorganic geochemistry and rock diagenesis relate closely to problems concerning the generation and geochemistry of hydrocarbons, and provides the Department expertise in an extremely important field of economic geology that is not presently covered by any of our faculty.

559 Dr. Bruce Black (M.S. and Ph.D., UNM, and currently president of Black Oil Co., Farmington) was appointed Visiting Distinguished Professor of Petroleum Geology for the Fall 1985 semester. Dr. Black taught a popular and well-received course in petroleum geology. The funds supporting his residence in the Department were provided by Energy Exploration Education, Inc., one of the endowment accounts managed by the UNM Foundation for the Geology Department.

During 1985-86 three Geology faculty were honored with Presidential Professorships or Lectureships. Klaus Keil, Professor and Director of the Institute of Meteoritics, began a 5-year appointment as a Presidential Professor. Associate Professor Jeffrey Grambling served the second year of his Presidential Lectureship, and Associate Professor Crayton Yapp received a two-year Presidential Lectureship to begin in the 1986-87 academic year.

Both Roger Anderson and Wolf Elston were on sabbatical leave during the report period (Anderson, Spring-Fall, 1985; Elston, Fall 1985-Spring 86). Anderson was based for most of his leave at the Branch of Marine Geology, U.S. Geological Survey, Palo Alto, California. Among other things, research on marine climatic history over the past 30,000 years led to the discovery of varves documenting El Niño-like events in continental slope sediments. Elston has been conducting research with colleagues at the University of Pretoria, South Africa, and the University of Auckland, New Zealand. From March to August, 1986 he was the recipient of a Royal Society Guest Research Fellowship as Visitor

to the Open University, Milton Keynes, United Kingdom. These sabbatical leaves provide our faculty with opportunities to participate over an extended period of time in collaborative research with colleagues far from UNM, develop new research efforts, and in doing so make the University of New Mexico better known to scientists and students nationally and internationally.

There were no faculty promotions during the past academic year. Associate Professor Crayton Yapp received tenure.

The Departmental scientific and technical staff, together with four post-doctoral research scientists (listed on p. 6) continued to be an important Departmental resource. These individuals, usually with specific tasks within the Department, augment the faculty's research efforts, and in some cases (Lucas, Mackinnon, Chakoumakos) also taught classes this past academic year. Their activities significantly increase the Department's contributions and capabilities. At least two additional research scientists from other institutions are expected to join us in the 1986-87 academic year.

Research Activities and Research Funding

The Department continued its dedication to high-quality research and publication, and to the incorporation of that research into the instruction of students at the undergraduate and graduate levels. During the calendar year 1985 the 16 full-time Geology faculty published or had in press a total of 116 scholarly papers, 86 abstracts, notes and book reviews, 1 authored book, 4

edited books and 11 technical reports. A complete list of faculty publications is presented in the "Publications" section of this report.

The Department's research and publication activities are enhanced by its non-faculty research associates, post-doctoral fellows and technical staff. Spencer Lucas (Departmental Curator), John Husler (Departmental Chemist), Ian Mackinnon (Research Scientist in charge of the Analytical Electron Microscope), post-doctoral fellows Bryan Chakoumakos and Takashi Murakami, and Kenneth Kietzke (thin-section preparator) together added more than 50 publications to the total. This does not include the contributions of the non-faculty research staff of the Institute of Meteoritics, which will be summarized in the Institute's annual report. Graduate students produced about 30 published abstracts, notes and papers. These numbers reflect citations listed individually by each person; because some papers have two or more Department of Geology coauthors the total number of different publications produced by Department personnel in 1985 is lower, probably between 150 and 200.

Faculty research was supported by a large number of grants and contracts. During the 1985 calendar year 14 of the 16 Geology faculty (88%) had grants in effect that supported their research. A total of nearly 30 proposals to funding agencies were written in 1985, by 12 of the 16 faculty members. The total value of all research grants and contracts in effect in the Department of Geology and Institute of Meteoritics during 1985 was $2,921,000. Complete figures are not available for the first

half of 1986, but the total is not greatly different from the 1985 figure. Of the 1985 total, only $12,505 came from UNM, mainly from the Research Allocations Committee. A complete list of grants and contracts in effect during 1985 is presented in Appendix I, and a summary of faculty research projects appears in the "Research projects or creative work in progress" section of this report.

Student Enrollments

Student enrollments, as indicated by departmental student credit hours, dropped to their lowest point in many years during the Fall 1984 and Spring 1985 semesters, but revived significantly during the 1985-86 academic year. Student credit hours in Fall 1985 were up 5% over Fall 1984 and Spring 1986 totals were 15% above those of Spring 1985. The Department has given much attention to its enrollments over the past two years. The primary cause of lowered Geology enrollments is the severe reduction in mining and petroleum exploration and production activities over the past few years. This has resulted in far fewer employment opportunities for geologists emerging with Bachelors' and Masters' degrees. These industry slumps have typically been cyclical, but the end of the current slump cannot be predicted. If anything the situation has worsened in the petroleum industry over the first half of 1986, with abrupt drops in oil prices and further deterioration of the employment outlook. These events have affected geology departments nationwide and of course are beyond our control. The number of UNM students currently majoring in

geology stood at 97 in Fall 1985, a decrease from 113 in Fall, 1984. Seventeen students graduated with Bachelors' degrees in Geology in 1985-86 (Appendix III).

The Department has initiated several measures to blunt, to some extent, the effects of the poor employment situation on our enrollments. During the 1985-86 year two new courses at the 200 level were introduced, which in part accounted for the rise in student credit hours generated by the Department. Several other new courses are in the planning stages. One such course, to be offered initially in Spring, 1987, will be a 300-level topics course taught in the evening for public school teachers and other "non-traditional" students with an interest in geology but schedules that do not permit them to take our usual daytime courses.

The Department has also undertaken a thorough analysis of the entire undergraduate program, and has made several changes in course requirements that preserve the rigor of the Bachelors program but allow greater flexibility in the courses that a Geology major may take for the B.S. and B.A. degrees. The Geology minor has been substantially changed to better meet the needs of students from other disciplines who require or desire certain Geology courses as complements to their main areas of study. The Department has also instituted a formal program of undergraduate advising that provides better guidance at each step in a student's progress through the program.

The current relatively low number of undergraduate Geology majors has some beneficial effects on our undergraduate program.

For the first time in many years Geology courses at the 300 and 400 level typically have enrollments of between 6 and 20 — the optimum size for the highest quality instruction with considerable close instructor-student interaction in the classroom, laboratory and field. Lower numbers of Geology majors also decrease competition for limited laboratory resources (e.g. less sharing of microscopes, specimens), which also increases the quality of individual educational experiences in the program. From an instructional perspective, the current size of our undergraduate major population is optimum.

The number of graduate students remained essentially stable at 67 during the past academic year. About two-thirds of these students were pursing Masters and one-third Doctoral degrees. Thirteen new students enrolled during the past year, while 11 students completed their Masters degrees and one student his Doctoral degree (Appendix III). Preliminary figures indicate that at least 13 new graduate students will begin work in the Department during the Fall 1986 semester. Admissions standards remain high. Successful applicants had an average Grade Point Average of 3.3 to 3.4 (A = 4.0) and scored within the 75-80th percentile on all parts of the Graduate Record Exam. Details on the Graduate Program are presented in a separate section later in this report.

Building Renovations

Renovation of the Geology Department Museum, supported by a grant from the UNM Foundation and additional funds from the Dean, was completed in September, 1985, under the supervision of Spencer Lucas, Departmental Curator. This renovation, the first since the museum was established in Northrop Hall in the 1950's, included remodeling of the museum room, addition of a carpet and benches, and complete replacement of existing exhibits with four redesigned and 12 completely new exhibits. The museum was officially reopened to the public on September 13, 1985. Together with the Meteoritics Museum, the Geology Museum is a service facility that aids the Department and University in educating and informing the public. Nearly 2000 public school children visited the museum in the nine months since its reopening, and probably an equal number of other visitors toured it during that time.

Phase IV renovation of the Geology Building (Northrop Hall) was completed in December 1985. Numerous offices, laboratories and a classroom in the east wing of the basement received attention. Work included building of a low-field room for Dr. Geissman's cryogenic magnetometer, renovation of the X-Ray and sedimentology labs, and a face-lift for the thin-section preparation room. In addition, the secretarial and clerical staff rooms in the departmental office on the ground floor were completely remodeled. These changes have resulted in better efficiency of space utilization within Northrop Hall, considerable improvement in the physical surroundings in which faculty and

staff work, and some entirely new facilities as well. Completion of Phase IV renovation brought to an end a series of major projects that have modernized and improved many parts of Northrop Hall. The Department greatly appreciates the University's investment in our physical facilities.

Major additions to research instrumentation

A fully automated VG 354 Thermal Ionization Mass Spectrometer was installed in the Department during the past year. It includes a 16 sample turret, adjustable multicollector system, with a Daly collector for amplification of very small ion currents. This state-of-the-art instrument will be used for very refined isotopic measurements of elements such as strontium (for rubidium-strontium dating and strontium isotopic studies) and neodymium (samarium-neodymium dating and neodymium isotopy), and the capacity exists for lead, uranium, thorium, barium and rare-earth element work as well. Most of the funding ($300,000) for this instrument was provided by the Department of Energy to Doug Brookins, matched by $50,000 of University funds (bond money allocation). Operational funds are provided by Sandia National Laboratories. Acquisition of this mass spectrometer represents a significant addition to the Department's analytical/research capabilities.

After a hiatus of many months following Erle George's retirement in June 1985, Clarence L. Mason was hired as electronics technician. He will split his duties equally between the Departments of Geology and Biology.

Public Service

The Department continued an active program of public service in 1985. The Geology and Meteoritics Museums have already been mentioned. In addition, nearly 700 people visited the Harding pegmatite mine, an area of unusual geological interest in Taos County that was donated to the University and is administered by the Department of Geology. Faculty and staff also participated in a wide variety of University and community activities, which are listed in the sections "Non-teaching University service" and "Public service", later in this report.

Alumni Support

Alumni support continues to be a very important aspect of many departmental programs. The support of the Caswell Silver Foundation, and funds available through the Alumni Fellowship Fund and the Energy Exploration Education, Inc. program in petroleum geology have aided and enriched the endeavors of Geology faculty and students alike. This support exists through the efforts of alumni, friends, and industry, to whom the Department owes a continuing debt of gratitude. A gathering of alumni, organized by Charlie Dodge, was held in Atlanta, in June, 1986 at the annual meeting of the American Association of Petroleum Geologists. The Department maintains contact with its alumni through such functions, and also through periodic newsletters and personal contacts.

SIGNIFICANT PLANS AND RECOMMENDATIONS

1. Faculty, staff and graduate assistant salaries must be increased. Events of the past year indicate clearly that continued inattention to the question of significantly improving salary levels throughout the University will damage our institution severely. The impact on the Department of Geology is as follows:

   a) Faculty salaries continue to remain lower than those of geology faculty at most other neighboring state universities. The attractions of New Mexico climate, culture and superb geological environment partly compensate, but cannot be expected to balance the less-than-average salaries indefinitely. We understand that this is a problem that is not unique to the Department of Geology. However, there is a very real concern that some of our bright and productive younger faculty will decide to move elsewhere if the salary situation does not improve.

   b) Staff personnel are an essential and valued part of the Geology Department. We have a high turnover rate among our clerical and word-processing staff, mainly because they receive better salary offers from other divisions of the University or from outside. Increases in

staff salary levels would help to alleviate the instability and inefficiency created by frequent turnover, and would allow us greater flexibility in granting merit pay increases. In addition, an increase in staff FTE allotted to the Department, particularly raising our second word-processor position from .75 FTE to 1.0 FTE and our draftsperson from .50 FTE to 1.0 FTE, is regarded as essential. These people play an important role in the preparation of scholarly manuscripts, reports, proposals and professional talks by the faculty. Because of the faculty's heavy involvement in these activities, the staff's workload often exceeds the time they have available. Currently the Department augments the salaries of these two persons from other departmental funds. However, having them both full time in the Department's budget would be more desirable and appropriate.

We also recommend continued increases in the FTE positions of the Department's scientific and technical staff. We appreciate recent additions of .50 FTE for Ian Mackinnon's position and an increase in FTE for our electronics technician (shared with the Biology Department), and look forward to Mackinnon's position being raised eventually to 0.75 FTE in the Departmental budget. Dr. Spencer Lucas, Departmental Curator, is an

internationally recognized vertebrate paleontologist with an outstanding record of research and publication, who provides an added dimension of expertise to the Department and University. His position is currently .75 FTE and should be raised to full time.

c) Evidence over the past few years in recruiting graduate students indicates that some top students attracted to our program and location in the Southwest choose to go elsewhere because the assistantship stipends we can offer are not competitive with those of other institutions. Only with the Silver/Kelley Fellowships are we truly competitive with the best awards made by the best academic institutions nationally. Our applicant pool is typically large and of high quality, but the relatively low stipends hinders our efforts to entice more of the best applicants to UNM. Some of the effects of a high-quality graduate program are subtle, long-term, but important to the Department as well as the University. It is the best graduate students who become the top geoscientists of the future, and the reputation of their graduate institution grows as these people make their mark in the discipline. An increase in full-time teaching assistant stipends of at least $2,000 per year for each T.A. position would make us more competitive.

2. Decreases in the number of undergraduate Geology majors, discussed previously, are a natural consequence of declines in the mineral and petroleum industries, resulting in relatively few employment opportunities for recent graduates. Smaller classes and fewer students in our upper-level undergraduate courses, with the more favorable instructor-student ratios that result, will allow the faculty to improve the quality of classroom, laboratory and field instruction. Innovative changes in the departmental undergraduate program impossible during times of high enrollments are now feasible. An example is the planned conversion of our beginning field geology courses (G-319) from a semester long course with weekly field trips into an intensive 3-week field course at the beginning of Summer 1987. Other changes in the undergraduate program (mentioned earlier) are also being implemented. The Department will continue to carefully scrutinize the undergraduate program and make changes as appropriate to best serve the needs of Geology majors as well as students who enroll in our 100 and 200 level courses.

3. Lowered enrollments not only provide the faculty with the opportunity to enhance the quality of its instructional programs, but also to increase its research efforts. Greater competition for shrinking Federal and corporate research funds make it imperative to maintain the highest possible research productivity in order to successfully attract

continued funding and to advance in national and international recognition. Over the past few years, the Geology Department and Institute of Meteoritics have progressed to the point of becoming a first-class research institution within the University. Research and publication productivity is already high. Current funding for research amounts to around $3 million, and nearly all of the faculty is active in writing proposals and generating outside funding. Several state-of-the-art analytical instruments have been added recently to the Department, through funds provided by Federal agencies and by the University, making our Department one of the most modern and best-equipped of any Geology department of comparable size in the country. We are attracting an increasing number of research scientists from the U.S. and abroad who desire to work with the faculty and utilize the Department's equipment. More high-quality graduate students are entering our program, and a greater percentage of them are excellent Ph.D. students. In short, decreased teaching loads resulting from lower enrollments can allow the Department to augment our already substantial efforts to attain national prominence in our varied research programs.

4. Despite the improvements in space utilization produced by several phases of renovation, additional space will become an increasingly important concern within the next few years. The number of analytical instruments and laboratory space

required for them has increased significantly over the past few years and this trend is expected to continue. Two new faculty members requiring office and laboratory space (Mawer and Crossey) have begun or will begin in the Department in 1986. Moreover, the number of outside scholars interested in participating in the faculty's research programs as post-doctoral fellows or research scientists has grown with the Department's national and international reputation. In order to accommodate these new space requirements the Department will soon need the additional space in Northrop Hall that is currently being utilized as classrooms by the University (Rooms 219 and 221).

5. The Department will advertise during the summer, 1986, for its next Caswell Silver professor, to begin residence here in Fall 1987. With the approval of the Silver Foundation Board, the Department will seek a geoscientist no more than about six years past reception of the doctorate, with excellent potential for future accomplishments, for the position of Caswell Silver Research Professor. This is an experiment with the Silver endowed professorship that will allow the Department to evaluate the benefits a younger geoscientist will add to the program, compared to the more senior Distinguished Professors we have had in the past. The Department will also advertise for two new Silver/Kelley graduate fellows, to begin in Fall 1987.

6. The Department will continue its well-established liaison with its alumni and encourage their support for our programs. The Alumni Fellowship Fund, Distinguished Visiting Professor in Petroleum Geology, and the Caswell Silver Foundation are all efforts that rely almost entirely on the generosity of our alumni.

APPOINTMENTS TO STAFF

Takashi Murakami, Post-Doctoral Fellow, May, 1985

Clarence L. Mason, Electronics Technician, April 14, 1986

Wendy Ciesco, Department Secretary, March 6, 1986

SEPARATIONS FROM STAFF

Lucy Landis, Department Secretary, Resigned effective June 13, 1986

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ACTIVITIES OF THE FACULTY AND RESEARCH SCIENTISTS

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TEACHING ACCOMPLISHMENTS, RECOGNITIONS, AND CURRICULUM DEVELOPMENT

Roger Y. Anderson

Courses Taught

Development of Quaternary Studies Program

Douglas G. Brookins

Courses Taught

Geology 103 - Earth Resources and Man (Spring 1985, Fall 1985)

Geology 410 - Introductory Geochemistry (Spring 1985)

Geology 504 - Geochronology (Fall 1985)

Geology 552 - Problems (Spring 1985)

Geology 599 - Masters Thesis hours (Spring 1985, Fall 1985)

Recognition

Excellent teaching in Geology 410 (Spring 1985) based on ICES compilation.

Curriculum Development

Submitted official write-up for new course in Environmental Geochemistry

Bryan C. Chakoumakos

Courses Taught

Geology 547 - Crystallographic Calculations (Spring, 1985)

Guest Lecturer

Geology 301 - Mineralogy, 4 presentations.

Geology 547 - X-ray Mineralogy, 2 presentations.

Wolfgang E. Elston

Courses Taught

Prepared 12-lecture short course on "Mineralization related to extensional tectonics and siliceous volcanic centers" to be given overseas during 1985-86.

Rodney C. Ewing

Courses Taught

Geology 101 - Physical Geology (Spring and Fall, 1985)

Geology 301 - Mineralogy I (Fall, 1985)

Geology 311 - Mineralogy I Lab (Fall, 1985)

John W. Geissman

Courses Taught

Spring - 1985:

Geology 548 - Paleomagnetism and Rock Magnetism*

Geology 101 - Physical Geology

Fall - 1986:

Geology 426 - Exploration Geophysics

Geology 215 - Interior of the Earth**

*New course in the Geology Department

**Significantly revised from earlier version (Earthquakes and Man)

Jeffrey A. Grambling

Courses Taught

Geology 521, 521L - Metamorphism

Geology 302, 302L - Mineralogy II

Geology 101 - Physical Geology (completely revamped syllabus)

Geology 303, 303L - Igneous and Metamorphic Petrology (new course)

Stephen P. Huestis

Courses Taught

Geology 427 - Solid Earth Geophysics (Spring)

Geology 225 - Oceanography (Spring)

Geology 318 - Applications of Mathematics in Earth Science (Fall)

Geology 522 - Topics in Geophysics: Geophysical Inverse Theory (Fall)

Klaus Keil

Courses Taught

Geology 518 - Electron Microprobe and Scanning Electron Microscopy

Geology 265 - Lunar and Planetary Geology

Curriculum Development

Prepared new version of course on Lunar and Planetary Geology (Geology 265) in the form of "A semester-long voyage through our solar system", with the aim to have appeal to non-science majors.

Served as substitute lecturer in Geology 301 (Mineralogy I) on Oct. 23, 28 and 30, 1985.

Gave special 1 hour lectures on "An illustrated voyage through our solar system" in all Geology 101 sections to advertise my new course Lunar and Planetary Geology (Geology 265).

Together with E.R.D. Scott, organized and hosted the Institute of Meteoritics Brown Bag Seminar, with the following speakers (the names of student speakers are underlined).

- Dr. H. Newsom (IM): Did Earth's core grow through geological time? March 5, 1985.
- Dr. Cyrena A. Goodrich (IM): Ion microprobe analysis of REE in phosphates in the apatite-rich clast from ALHA81005. March 5, 1985.
- Tammy L. Dickinson (IM): A possible test of the impact theory for the origin of the Moon. March 5, 1985.
- Dr. E.R.D. Scott (IM): Nature and evolution of unmetamorphosed parent material of types 4-6 ordinary chondrites. March 5, 1985.
- D. Lusby (IM): Chemically anomalous objects in types 4-6 ordinary chondrites: Evidence for ubiquitous brecciation following metamorphism. March 5, 1985.
- Dr. Cyrena A. Goodrich (IM): Minor elements in ureilites: Evidence for reverse fractionation and interstitial silicate liquids. March 5, 1985.
- Dr. I. MacKinnon (Dept. of Geology, UNM): Auger spectroscopy of stratospheric particles: the influence of aerosols on interplanetary dust. March 5, 1985.

- Dr. T.B. McCord (Planetary Geosciences Division, Hawaii Institute of Geophysics, Honolulu, Hawaii): Asteroids: What stuff are they? March 6, 1985.
- Dr. P. Keaton (Los Alamos National Laboratory): A manned Mars mission study. Jointly with Dept. of Physics and Astronomy, UNM. March 22, 1985.
- Dr. J. Danon (Centro Barasileiro de Pesquisas Fisica, Rio de Janeiro, Brazil): Order-disorder phenomena in iron-nickel alloys of meteorites. April 8, 1985.
- Dr. B. French (NASA Headquarters, Washington, DC): Catastrophy and controversy: the Sudbury impact structure, Canada. April 9, 1985.
- D. Szuwalski (IM): Impact melt rocks from Asteroids. April 26, 1985.
- B. Epling (IM): The Kagangari meteorite. May 2, 1985.
- Dr. A. Binder (NASA Johnson Space Center, Houston, Texas): Mare basalt genesis. May 3, 1985.
- Dr. W. Elston (Dept. of Geology, UNM): Speculations about Venus. May 10, 1985.
- Dr. G.J. Taylor (IM): Breaking asteroids and putting them back together again. May 17, 1985.
- Dr. M.J. Drake (Dept. of Planetary Sciences, Univ. of Arizona, Tucson, Arizona): The origin of the earth's moon. August 26, 1985.
- Dr. Cyrena A. Goodrich (IM): The origin of carbon in ureilites. Spetember 30, 1985.

- G. Lumpkin (Dept. of Geology, UNM): High-resolution electron microscopy of carbonaceous material in meteorites. October 18, 1985.
- Dr. H.E. Newsom (IM): Geology of large impact craters and impact ejecta: evidence from Sudbury, Canada and the Ries, West-Germany. October 25, 1985.
- Dr. J.F. Bell (Planetary Geosciences Division, Hawaii Institute of Geophysics, University of Hawaii, Honolulu, Hawaii): Mineralogical mapping of the asteroid belt. November 11, 1985.

Cornelis Klein

Courses Taught

Geology 302 - Mineralogy II

Geology 401 - Colloquium (Spring)

Geology 401 - Colloquium (Fall)

Geology 486 - X-ray Mineralogy

Curriculum Development

Instituted a new course, Geology 486L - X-ray Mineralogy, for the fall of 1985; this involved considerable development of new teaching materials etc.

Developed new laboratory exerciese for the latter part of Geolgoy 303L, to be given spring 1986.

Albert M. Kudo

Courses Taught

Geology 101 - Spring

Graduate Seminar in Volcanology - Spring

Geology 101 - Summer

Geology 101 - Fall

Geology 303L - Fall

Graduate Igneous Petrology - Fall

Barry S. Kues

Courses Taught

Geology 101 - Physical Geology

Geology 104 - Life on Earth

Geology 411 - Invertebrate Paleontology

Geology 412 - Index Fossils and Biostratigraphy

Spencer G. Lucas

Courses Taught

Geology 102 - Historical Geology (Spring and Summer)

Geology 502 - Topics in Geology (Fall)

Geology 101C and Geology 102C for the Division of Continuing Education

Honors Seminar - "Hot-blooded Dinosaurs" for General Honors Program

Curriculum Development

Wrote correspondence course on Historical Geology (Geology 102C) for the Division of Continuing Education, UNM.

584

Ian D. R. Mackinnon

Courses Taught

Short Course in Electron Microscopy for faculty, staff and students, 10/1/85-10/21/85.

Personal instruction in electron microscopy for 2 faculty, 2 staff and 2 other students from Geology and Engineering Departments.

Obtained a series of audio-visual aids for the teaching of electron microscopy.

Leslie D. McFadden

Courses Taught

Geology 101 - Physical Geology

Geology 304 - Sedimentary Petrology

Geology 490 - Geological Presentations

Geology 551 - Problems in Soil-Geomorphic Research

Stephen G. Wells

Courses Taught

Geology 319L - Field Geology

Geology 483L - Quantitative Geomorphology

Geology 481L - Geomorphology and Surficial Geology

Geology 516 - Selected Topics in Geomorphology

Curriculum Development

Development of curriculum and logistics for a summer field geology camp (new course proposed: 320L Principles of Field Geology) with Dr. J. Geissman.

Rewrote and updated laboratory manual for 481L Geomorphology and Surficial Geology.

Development of curriculum for 1986 summer course (G690, Third Annual Field Seminar) offered by the Department of Geology, Indiana University; to be co-taught with D. Ritter, Southern Illinois University.

Lee A. Woodward

Courses Taught

Geology 101 - Physical Geology

Geology 105L - Physical Geology Laboratory (supervisor)

Geology 420L - Advanced Field Geology

Geology 525L - Comparative Tectonics

Curriculum Development

Geology 255L, New Mexico Field Geology.

Robyn Wright

Courses Taught

Geology 101 - Physical Geology (Spring)

Geology 441 - Stratigraphy/Sedimentology (Spring, Fall)

**Geology 490 - Presentations (Spring)

*Geology 491 - Sed. Field Methods (Summer)

*Geology 547 - Passive Margins (Fall)

*new course

**ranked excellent by student evalutations

Crayton J. Yapp

Courses Taught

Geology 101 - Physical Geology

Geology 405 - Thermodynamics and Physical Geochemistry

Geology 490 - Oral Presentations

Geology 505 - Stable Isotope Geochemistry

PUBLICATIONS

Roger Y. Anderson

Scholarly Articles

"Sedimentation in a blast-zone lake at Mount St. Helens, Washington - Implications for varve formation": Geology, v. 13, p. 348-352.
Coauthors: E. B. Nuhfer and W. E. Dean

"Meromictic lakes and varved lake sediments in North America": U.S. Geol. Survey Bull. 1607, 19 p.

"Changes in sediment composition during seasonal resuspension in small shallow dimictic inland lakes": Sedimentary Geology, v. 41, p. 131-158.
Coauthor: E. B. Nuhfer

Accepted for Publication

"Lacustrine varve formation through time: Paleogeology, Paleolimnology, and Paleoclimatology"
Coauthor: W. E. Dean

"Shallowing of the Delaware Basin - Evidence for deep-water evaporite deposition": Am. Assoc. Petroleum Geologists Bull.

Douglas G. Brookins

Books and Book Chapters

The Geological Disposal of High Level Radioactive Wastes, in press, Theophrastus Publications, Athens.

Uranium mill tailings: ore to pile and transport from the pile: NAS-NRC book on uranium mill tailings, NAS Press, in press.
Coauthor: P. A. Domenico

Coupled processes at the Oklo natural reactor: in Coupled processes affecting the performance of a high level nuclear waste repository (C-F Tsang, Ed.), Academic Press, in press.

Natural analogues for radwaste disposal: evidence from igneous contact zones: in The geological disposal of high level radioactive wastes (D. Brookins, Ed.), Theophrastus Pub., Athens, in press.

588

Natural analogues for radwaste disposal: evidence from sandstone uranium ores: in The geological disposal of high level radioactive wastes (D. Brookins, Ed.) Theophrastus Pub., Athens, in press.

Significance of geochronologic studies at the WIPP site, New Mexico: in The geological disposal of high level radioactive wastes (D. Brookins, Ed.) Theophrastus Pub., Athens, in press.

Book Review

Helium isotopes in nature (by B. A. Mamyrin and L. N. Tolstikhin), Lithos, in press.

Scholarly Articles

Rb-Sr data for the Harding pegmatite, New Mexico: Isochron/West, n. 42, p. 8-10.
Coauthor: M. E. Balestri

Rb-Sr data from miscellaneous Precambrian rocks, northern New Mexico: Isochron/West, n. 42, p. 10-12.
Coauthors: M. E. Balestri, P. D. Fullagar

More on radwaste: Environ. Geology, v. 7, p. 189-191.

Rb-Sr and K-Ar analyses of evaporite minerals from southeastern New Mexico: Isochron/West, n. 43, p. 11-13.
Coauthors: H. W. Krueger, T. M. Bills

Strontium isotope data from megacrysts and xenoliths in Quaternary basalts in the Engle Basin, southern Rio Grande Rift, New Mexico: Isochron/West, n. 43, p. 13-17.
Coauthors: B. S. Singer, J. C. Kelly, A. M. Kudo

Geochemistry and petrology of evaporites cored from a deep-sea diapir at site 546, DSDP Leg 79, Offshore Morocco: DSDP Rpt LXXIX, p. 509-540.
Coauthors: W. T. Holser, E. S. Saltzman

Trace element distribution in sedimentary type uranium deposits: Sym. primary dispersion of elements around ore deposits, (in press).
Coauthor: R. S. Della Valle

Geochronologic and geochemical study of volcanic ashes from the Kirtland Formation (Cretaceous), San Juan Basin, New Mexico: Geol. Soc. Amer. Spec. Ppr. (in press).
Coauthor: J. K. Rigby

Natural analogues for radwaste disposal: elemental migration in igneous contact zones: Chemical Geology (in press).

Rubidium-strontium geochronologic systematics in igneous contact zones: analog for 90-Sr and 137-Cs behavior in the near-field: Sci. basis nuc. wste, mngt. VII (J. A. Stone et al., eds.), p. 573-583.

Rare earth element geochemistry of fluorite-carbonate deposits in western Montana: Chemical Geology, in press.

Indoor and soil radon measurements from the Albuquerque, New Mexico area: Jour. Health Physics, in press.

Geochemical behavior of antimony, arsenic, cadmium thallium: Eh-pH diagrams for 25°C, 1 bar pressure: Chemical Geology, in press.

Geochronologic study of Precambrian rocks of the Sandia Mountains, New Mexico: Geol. Soc. Amer. Spec. Ppr., in press.
Coauthor: A. Majumdar

Geochemical constraints on underground disposal of uranium mill tailings: Jour. Applied Geochemistry, in press.
Coauthors: B. M. Thomson, P. A. Longmire

Geology and geochemistry of the Snowbird deposit, Mineral County, Montana: Econ. Geology, v. 80, p. 394-409. (SA, RJ)
Coauthors: M. C. Metz, P. E. Rosenberg, R. E. Zartman

Abstracts

K-Ar and Rb-Sr dating of evaporite minerals, Delaware Basin, New Mexico: Internat. Conf. Isotopes in the Sedimentary Cycle (Obernai, France, July 1-5, 1985), Spec. Pub. Univ. Strasbourg, p. 20.

Rb-Sr dating of Mesozoic rocks from the San Juan Basin, New Mexico: Internat. Conf. Isotopes in the Sedimentary Cycle (Obernai, France, July 1-5, 1985), Spec. Pub. Univ. Strasbourg, p. 21.

Trace element behavior within a fossil hydrothermal zone: strontium isotope data: Geol. Soc. Amer. Prog. w. Abs., v. 17, p. 258.
Coauthor: M. T. Murphy

Chronology of Grants Mineral Belt uranium mineralization based on Rb-Sr study of clay minerals: in Radiogenic isotopes and evolution of sedimentary basins; Amer. Assoc. Petrol. Geol. Res. Conf., (New Orleans, LA, March 22-24, 1985), p. 8.

590 Upper mantle and crustal rocks in north-central Kansas: evidence from kimberlites: 6th Internat. sym. on basement tectonics (Santa Fe, NM, September 16-20, 1985), p. 13.
Coauthor: W. L. Mansker

Mineralogical and Sr-isotope evidence for assimilation of crustal material by basaltic magmas in a Rio Grande Rift - marginal setting, Jemez volcanic field, New Mexico: EOS Trans. Am. Geophys. Un., v. 46, p. 1135-1136.
Coauthors: B. S. Singer, A. M. Kudo

Rb-Sr and K-Ar studies at the Waste Isolation Pilot Project (WIPP) site, southeastern New Mexico: Geol. Soc. Amer. Prog. w. Abs., v. 18, n. 2, in press.

Technical Reports

Geochemistry of sedimentary rocks relevant to high-level nuclear waste repository siting: Appendix D in Evaluation of five sedimentary rocks other than salt for high-level waste repository siting purposes, Edited by A. G. Croff et al., DOE Rpt. ORNL/CF-85/2/V2.
Coauthors: D. M. Rye, M. C. Monaghan, P. R. Dixon, S. H. Stow

Evaluation of geothermal potential of Rio Grande Rift and Basin and Range Province, New Mexico: N.M. Energy Res. Dev. Inst. Rpt., 256 p.
Coauthors: J. F. Callender, W. E. Elston, G. P. Landis, G. R. Jiracek, A. M. Kudo, C. A. Swanberg, L. A. Woodward

Coupled processes at the Oklo natural reactor: Internat. Sym. on coupled processes affecting the performance of a nuclear waste repository (Berkeley, CA, September 18-20, 1985), Lawrence Berkeley Lab. Spec. Pub., p. 65-70.

Proceedings of the workshop on geochemical data and research needs for a shale-hosted repository for high level nuclear waste: Oak Ridge Ntl. Lab. rpt (DOE Con. No. DE-AC05-840R21400), in press.
Coauthor: S. H. Stow

Bryan Chakoumakos

Scholarly Articles

"Pyrochlore": McGraw-Hill Yearbook of Science and Technology, McGraw-Hill, in press.

"Quantum Mineralogy": Encyclopedia of Science and Technology, 6th Edition, McGraw-Hill, in press.

"Mineralogy and radiation effects of microlite from the Harding pegmatite, Taos County, New Mexico. American Mineralogist, in press.
Coauthors: G. R. Lumpkin and R. C. Ewing

"Crystal chemical constraints on the formation of actinide pyrochlores": In C. M. Jantzen, J. A. Stone and R. C. Ewing, Eds., 1985, Scientific Basis for Nuclear Waste Management, VIII, Symposium Proceedings v. 44, Materials Research Society, p. 641-646.
Coauthor: R. C. Ewing

"Investigations of metamict and annealed pyrochlores by x-ray absorption spectroscopy": In C. M. Jantzen, J. A. Stone and R. C. Ewing, Eds., 1985, Scientific Basis for Nuclear Waste Management, VIII, Symposium Proceedings v. 44, Materials Research Society, p. 655-662.
Coauthors: R. B. Greegor, F. W. Lytle, G. R. Lumpkin and R. C. Ewing

Abstracts

"Anisotropic lattice expansion in crystals due to alpha-decay damage": Geological Society of America, Abstracts with Program 16, 1984, p. 467.

Wolfgang E. Elston

Scholarly Articles

"Volcanism of Colorado Plateau-Basin and Range transition - implication for crustal processes," in Reports of Planetary Geology and Geophysics Program - 1984 (H. E. Holt and T. R. Watters, eds.): National Aeronautics and Space Administration Technical Memorandum 87563, 1985, p. 266-268.
Coauthor: C. D. Condit

"Inter-eruption geologic map from X-band radar image during the May 18, 1980 eruption of Mount St. Helens, Washington," in Reports of Planetary Geology and Geophysics Program, 1984 (H. E. Holt and T. R. Watters, eds.):
National Aeronautics and Space Administration Technical Memorandum 87563, 1985, p. 467-469.
Coauthor: C. W. Criswell

"Paleogene stratigraphy, sedimentation, and volcanism in New Mexico," in Flores, R. and Kaplan, S. (eds.), Cenozoic Paleogeography of the West-Central United States: Society of Economic Paleontologists and Mineralogists, Rocky Mountain Section, Denver, in press.
Coauthors: L. N. Smith, S. G. Lucas

"The Emory resurgent ash-flow tuff (ignimbrite) cauldron of Oligocene age, New Mexico: Geological Society of America Centennial Field Guide - Rocky Mountain Section, in press.
Coauthor: W. R. Seager

"Quaternary basalt fields of west-central New Mexico: McCartys pahoehoe flow, Zuni Canyon aa flow, Zuni Ice Cave, Bandera Crater, and Zuni Salt Lake maar: Geological Society of America Centennial Field Guide - Rocky Mountain Section.
Coauthor: K. H. Wohletz

Abstracts

"'Informed speculation' regarding thin-skin tectonics, back-arc extension, and volcanism on Venus": Abstracts, 16th Lunar and Planetary Science Conference.

"Paleogene paleogeography of New Mexico": American Association of Petroleum Geologists Bulletin, in press.
Coauthors: L. N. Smith, S. G. Lucas

Newsletter 4-8: International Association for Volcanology and Chemistry of the Earth's Interior, Working Group on Explosive Volcanism.
Coauthor: G. Heiken

Rodney C. Ewing

Scholarly Articles
"Alteration of basalt glasses: Implications for modelling the long-term stability of nuclear waste glasses": Nature, v. 314, p. p. 252-255, 1985. (RJ)
Coauthors: W. Lutze, G. Malow, M. J. Jercinovic and K. Keil

"Long-term release from high level waste glass Part IV: The effect of leaching mechanism": Scientific Basis for Nuclear Waste Management VIII, v. 44, Materials Research Society Proceedings Volumes, p. 99-106,1985.
Coauthors: E. Freude, B. Grambow, W. Lutze, and H. Rabe

"Basalt glass: An analogue for the evaluation of the long-term stability of nuclear waste form borosilicate glasses": Scientific Basis for Nuclear Waste Management VIII, v. 44, Materials Research Society Proceedings Volumes, p. 585-590, 1985.
Coauthors: C. E. Byers, M. J. Jercinovic and K. Keil

"Crystal chemical constraints on the formation of actinide pyrochlores": Scientific Basis for Nuclear Waste Management VIII, v. 44, Materials Research Society Proceedings Volumes, p. 641-646, 1985.
Coauthor: B. C. Chakoumakos

"Natural pyrochlores: Analogues for actinide host phases in radioactive waste forms": Scientific Basis for Nuclear Waste Management VIII, v. 44, Materials Research Society Proceedings Volumes, p. 647-654, 1985.
Coauthor: G. R. Lumpkin

"An investigation of metamict and annealed natural pyrochlores by x-ray absorption spectroscopy": "Scientific Basis for Nuclear Waste Management VIII, v. 44, Materials Research Society Proceedings Volumes, p. 655-662, 1985.
Coauthors: R. B. Greegor, F. W. Lytle, B. C. Chakoumakos and G. R. Lumpkin

"An investigation of uranium L-edges of metamict and annealed pyrochlore": Scientific Basis for Nuclear Waste Management IX, Materials Research Society Proceedings Volumes, in press.
Coauthors: R. B. Greegor, F. W. Lytle, B. C. Chakoumakos, and G. R. Lumpkin

"Weathered basalt hyaloclastites: A natural analogue for the effects of saturation on nuclear waste glass durability": Scientific Basis for Nuclear Waste Management IX, Materials Research Society Proceedings Volumes, in press.
Coauthors: B. Grambow, M. J. Jercinovic and C. D. Byers

"Alpha recoil effect on the dissolution of betafite: Rapid natural annealing of radiation damage within a metamict phase": Scientific Basis for Nuclear Waste Management IX, Materials Research Society Proceedings Volumes, in press.
Coauthors: Y. Eyal and G. R. Lumpkin

"Mineralogy and radiation effects of microlite from the Harding Pegmatite, Taos County, New Mexico": American Mineralogist , in press.
Coauthors: G. R. Lumpkin and B. C. Chakoumakos.

Edited Volumes

Scientific Basis for Nuclear Waste Management VIII, Materials Research Society Proceedings Volumes, v. 44 (Materials Research Society, Pittsburgh, 1985).
Co-editors: C. M. Jantzen and J. A. Stone

Scientific Basis for Nuclear Waste Management IX, Materials Research Society Proceedings Volumes (Materials Research Society, Pittsburgh, in press)
Co-associate editors: Others

The Mineralogy, Petrology, and Geochemistry of Granitic Pegmatites and Related Granitic Rocks a special issue of the American Mineralogist in honor of R. H. Jahns, in press.
Co-associate editor: G. E. Brown

Book Reviews

Preferred Orientation in Deformed Metals and Rocks: An Introduction to Modern Texture Analysis, edited by Hans-Rudolf Wenk. Reviewed for the Materials Research Society Bulletin, in press.

Abstracts

"EXAFS investigation of actinides in natural pyrochlore and synthetic zirconolite": Stanford Synchrotron Radiation Laboratory Users Group Meeting, Stanford, California, p. 23.
Coauthors: R. B. Greegor, F. W. Lytle, B. C. Chakoumakos, G. R. Lumpkin, R. J. Livak and F. W. Clinard, Jr.

"Anisotropic lattice deformation in crystals due to alpha-decay damage": Annual meeting of the Geological Society of America, Orlando, Florida.
Coauthor: B. C. Chakoumakos

Reports

"A Study of Natural Glass Analogues as Applied to Nuclear Waste Glass Alteration": Submitted to the Nuclear Regulatory Commission (FIN NO.2254)
Coauthors: C. D. Byers and M. J. Jercinovic

John W. Geissman

Abstracts

"Paleomagnetism and rock magnetism of the Mississippian Leadville Formation and associated sulfide ores and implication for the age of sub-regional dolomitization," 1985 Annual Meeting, Soc. Mining Eng., A.I.M.E.
Coauthors: R. A. Horton and R. J. Tschauder

"Late Archean tectonic emplacement of the Stillwater Complex and reactivated structures, northern Beartooth Mountains, Montana", 6th Intl. Conf. Basement Tectonics.
Coauthor: D. W. Mogk

"Middle Miocene counterclockwise rotation of rocks from west-central Nevada: Implications for Basin and Range extension", Geol. Soc. Amer. Abstr. with Progs., v. 17, p. 615.
Coauthor: M. R. Hudson

"Tectonic implications of paleomagnetic data from Early Jurassic Dunlap Formation, west-central Nevada", Geol. Soc. Amer. Abstr. with Progs., v. 17, p. 537.
Coauthors: J. T. Callian and J. S. Oldow

"Reconnaissance paleomagnetic study of the Mineral Mountains, eastern Great Basin, Utah, and tectonic implications", EOS, Trans. Amer. Geophys. Union, v. 66, p. 876.
Coauthor: R. L. Bruhn

"Preliminary paleomagnetic and rock magnetic data from corehole VC-1, Valles Caldera, New Mexico", EOS, Trans. Amer. Geophys. Union, v, 66, p. 1082.

"Paleomagnetic microanalytical techniques for evaluating the source and origin of stable magnetization components", EOS, Trans. Amer. Geophys. Union, v. 66, p. 861.

"Paleomagnetic dating of deformation along the eastern margin of the Disturbed Belt, Northern Crazy Mountains Basin, Montana", EOS, Trans. Amer. Geophys. Union, v. 66, p. 876.
Coauthors: S. S. Harlan and D. R. Lageson

"Timing of deformation along the eastern margin of the Disturbed Belt, Northern Crazy Mountains, Montana", 1985 Tobacco Root Geol. Soc. Meeting, Bozeman, Mt.
Coauthor: S. S. Harlan

"Dolomitization and diagenesis of the Leadville Formation (Mississippian), central Colorado", 1985 Soc. Econ. Paleon. Mineral. Annual Meeting, Golden, Co.
Coauthors: R. A. Horton, R. H. De Voto and J. M. Budai

"Curious remanent magnetic directions from the Late Quaternary Albuquerque Volcanoes, New Mexico, EOS, Trans. Amer. Geophys. Union, v. 66, p. 260.
Coauthors: L. Brown, C. Menges, T. Richardson and T. Seward

Jeffrey A. Grambling

Scholarly Articles

"The effects of Fe^{3+} and Mn^{3+} on aluminum silicate phase relations in north-central New Mexico, U.S.A.: Journal of Petrology, v. 26, p. 324-354, 1985.

"Crustal thickening during Proterozoic metamorphism and deformation in New Mexico": Geology, v. 14, in press.

"A regional gradient in the composition of metamorphic fluids in pelitic schist": Contributions to Mineralogy and Petrology, in press.

"A summary of Proterozoic metamorphism in northern and central New Mexico: the regional development of 520°C, 4 kb rocks": in Ernst, W. G., ed., Rubey Colloquium VII: Metamorphism and Tectonics of the western conterminous U.S.: Prentice-Hall, in press

"Proterozoic metamorphism, crustal thickening, and the regional development of 520°C, 4 kb rocks in northern and central New Mexico": Geological Society of America Special Paper, Ogden Tweto Memorial Symposium, in review.

Abstracts

"Correlation of Proterozoic stratigraphy across northern New Mexico": 6th International Conference on Basement Tectonics, Proceedings, in press.
Coauthor: M. L. Williams (student)

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Coauthor: D. B. Ward (student)

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602

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608

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Co-authors: J. A. Nuth, J. E. Allen, L. U. Lilleleht, F. J. M. Rietmeijer and J. R. Stephens

"Condensation kinetics in a turbulent nebula cloud": in Report on a Workshop on Experimental Cosmochemistry in the Space Station, 15-16, 1985.
Co-author: F. J. M. Rietmeijer

"High resolution imaging of boron carbide microstructures": in Intnl. Conf. on Physics and Chemistry of Boron and Boron-rich Borides, 18, 1985.
Co-authors: T. Aselage and S. B. van Deusen

Leslie D. McFadden

Scholarly Articles

"Changes in the content and composition of pedogenic iron oxyhydroxides in a chronosequence of soils in southern California": Quaternary Research, v. 23, p. 189-204.
Coauthor: D. M. Hendricks

"The rate and depth of accumulation of pedogenic carbonate accumulation in soils: Formulation and testing of a compartment model": in D. L. Weide and M. L. Faber (eds.), Soils and Quaternary geology of the Southwestern United States, Geological Society of America Special Paper 203, p. 23-42.
Coauthor: J. C. Tinsley

"Geomorphic surfaces in the Tucson Basin, Arizona - A field guidebook, Field Guidebook for the NASA - International Union of the Geological Sciences Workshop - Global Megageomorphology, p. 1-149.
Coauthors: L. L. Ely, V. R. Baker, S. C. Fouty, S. S. Calvo, K. L. Katzer, P. A. Pearthree, and J. H. Schuster.

"Late Cenozoic landscape evolution on lava flow surfaces of the Cima volcanic field, Mojave Desert, California": Bulletin of the Geological Society of America, v. 96, p. 1518-1529.
Coauthors: S. G. Wells, J. C. Dohrenwend, B. D. Turrin and K. D. Mahrer

"Pediment dome evolution in the eastern Mojave Desert, California": Proceedings of the First International Geomorphology Conference-Earth Surface Processes, John Wiley and Sons, (in press).
Coauthors: J. C. Dohrenwend, S. G. Wells, and B. D. Turrin

Book Chapters

"Quaternary geology, geomorphology and soils of the Tpotla and Cottonwood drainage basins, UII Lease, northwestern New Mexico": in P. Hogan and J. C. Winter (eds.), The economy and interaction along the lower Chaco River, Office of Contract Archeology and the Maxwell Museum of Anthropology, p. 15-36.
Coauthors: S. G. Wells and T. F. Bullard

"Quaternary soil development in the Mojave Desert, California": in D. S. Whitley (ed.), Late Pleistocene Archeology and Environment in California, University of Utah Press (in press).
Coauthor: W. B. Bull

Abstracts

"The influence of eolian influx rates and climatic change on the development of stone pavements and associated soils in the Cima volcanic field, Mojave Desert, California": Abstracts with Programs, Geological Society of America Cordilleran Section Meetings, v. 17, no. 6, p. 368.
Coauthors: S. G. Wells and J. C. Dohrenwend

"Computer simulation of calcic soils development for paleoclimatic reconstructions using an iterative forward method structured on the compartment model": Abstracts with Programs, Geological Society of America Meetings, v. 17, no. 7, p. 656.
Coauthors: L. Mayer, J. W. Harden, E. T. Taylor, M. C. Reheis, and R. J. Arkley

"Soil formation on basalt flows in the Mojave Desert, southwestern USA": Abstracts of papers for the First International Conference on Geomorphology, T. Spencer (ed.), p. 397.
Coauthors: S. G. Wells and J. C. Dohrenwend

"Late Cenozoic geomorphic processes on volcanic landforms in the Cima volcanic field, Mojave Desert, California, USA": ibid., p. 639.
Coauthors: S. G. Wells, J. C. Dohrenwend and B. D. Turrin

"Pediment dome evolution in the eastern Mojave Desert, California": ibid., p. 145.
Coauthors: J. C. Dohrenwend, S. G. Wells and B. D. Turrin

"Rates of pedogenesis and influences of climatic change on soil development during the Quaternary": Abstracts with Programs, Geological Society of America Annual Meetings, v. 17, no. 7, p. 658.

Takashi Murakami

Scholarly Articles

"The leaching behavior of a glass waste form. II: The leaching mechanisms": Nuclear Technology, v. 70, p. 243-248, 1985.
Coauthor: T. Banba

"Moving boundary model for leaching of nuclear waste glass": Scientific Basis for Nuclear Waste Management VIII, v. 44, Materials Research Society Proceedings Volumes, p. 113-120, 1985.
Coauthors: T. Banba and H. Kimura

"Microstructure of SYNROC": Nuclear and Chemical Waste Management, v. 136, p. 104-116, 1985.

"Crystalline product on surface of SYNROC after long leaching": Journal of Nuclear Materials, v. 135, p. 288-291, 1985.

"Crystalline phases in a devitrified simulated high-level waste glass containing the elements of the platinum group": Journal of Nuclear Materials, v. 136, p. 104-116, 1985.
Coauthors: H. Mitamura and T. Banba

"High-temperature crystallography of a protopyroxene": Zeitschrift für Kristallographie, in press, 1985.
Coauthors: Y. Takeuchi and T. Yamanaka

Stephen G. Wells

Scholarly Articles

"Relict sheetflood bedforms on late Quaternary alluvial-fan surfaces in the southwestern United States": GEOLOGY, v. 13, p. 512-516, 1985.
Co-author: J. Dohrenwend

"Late Cenozoic landscape evolution on lava flow surfaces of the Cima volcanic field, Mojave Desert, California": Geological Society of America Bulletin, v. 96, p. 1518-1529, 1985.
Co-authors: J. Dohrenwend, L. McFadden, B. Turrin and K. Mahrer

"Degradation of Quaternary cinder cones in the Cima volcanic field, Mojave Desert, California": Geological Society of America Bulletin (in press).
Co-authors: J. Dohrenwend and B. Turrin

"Penrose conference report: Geomorphic and stratigraphic indicators of Neogene-Quaternary climatic change in arid and semiarid environments": GEOLOGY (in press)
Co-authors: J. Dohrenwend and L. McFadden

"Pediment dome evolution in the eastern Mojave Desert, California": in Proceedings of the First International Geomorphology Conference: Earth Surface Processes (in press).
Co-authors: J. Dohrenwend, L. McFadden and B. Turrin

"Variations in morphometry of tectonic landscapes along a convergent plate boundary, Pacific coast of Costa Rica": Geological Society of America, Decade of North American Geology Volume - Geomorphic Processes (in press).
Co-authors: C. Menges and T. Bullard

612 Book Chapter

"Applications of geomorphology to reclamation" in Methods in Reclamation Science, University of New Mexico Press, C. Reith and L. Potter (eds.), (in press).
Co-author: L. Potter

Abstracts

"A Quantitative Assessment of the Geomorphic Stability of Uranium Mill Tailings Disposal Sites in Northwestern New Mexico", Geol. Soc. Am. Abstracts with Programs, v. 17, p. 417-418.

"Sedimentology of Debris Flow and Flood Deposits, Howgill Fells, Northwest England", Abstracts Volume of 3rd International Fluvial Sedimentology Conference, p. 37.
Co-author: A. Harvey

"The Influence of Eolian Flux Rates and Climatic Change on the Development of Stone Pavements and Associated Soils in the Cima Volcanic Field, Mojave Desert, CA", Geol. Soc. Am. Abstracts with Programs, v. 17, p. 368.
Co-authors: L. McFadden and J. Dohrenwend

"Landscape Stability and Uranium Tailings Disposal in Semiarid Environments of Southwestern USA", Abstracts of papers for the First International Conference on Geomorphology, T. Spencer (ed.), p. 640, with T. Gardner

"Late Cenozoic Geomorphic Processes on Volcanic Landforms in the Cima Volcanic Field, Mojave Desert, California, USA", ibid., p. p. 639.
Co-authors: J. Dohrenwend, L. McFadden and B. Turrin

"Long-Term Watershed Evolution in the Southeastern Colorado Plateau: Adjustment of the Fluvial System to Bedrock Geology", ibid., p. 638.
Co-authors: T. Bullard and L. Smith

"Soil Formation on Basalt Flows in the Mojave Desert, Southwestern USA", ibid., p. 397.
Co-authors: L. McFadden and J. Dohrenwend

"Pediment Dome Evolution in the Eastern Mojave Desert, California", ibid., p. 145.
Co-authors: J. Dohrenwend, L. McFadden and B. Turrin

Technical Report

"Geomorphic Criteria for Selecting Stable Uranium Tailings Disposal Sites in New Mexico", New Mexico Energy Research and Development Institute Technical Report, v. I and II, p. 442.
Co-author: T. Gardner

Lee A. Woodward

Scholarly Articles

"Growth faults bounding Albuquerque basin may have created hydrocarbon traps": Oil and Gas Journal, July 22, 1985, p. 131-134.

"Tectonic origin of fractures for fissure vein emplacement in the Boulder batholith and adjacent rocks, Montana": Economic Geology, in press.

"Tectonics of Rocky Mountain Region": Geological Society of America, DNAG volume, in press.

Books

"Geology of Sierra Nacimiento, New Mexico": New Mexico Bureau of Mines and Mineral Resources, Memoir 43, in press.

"Stratigraphy of the Hagan Basin, New Mexico": New Mexico Bureau of Mines and Mineral Resources, in press.

Maps

"Geologic map of French Mesa quadrangle, New Mexico": New Mexico Bureau of Mines and Mineral Resources, in press.

"Tectonic map of the Rocky Mountain region of the United States": Geological Society of America, DNAG volume.

Abstract

"Potential hydrocarbon traps along growth faults of Rio Grande rift, New Mexico": American Association of Petroleum Geologists Bulletin, v. 69, p. 317-318.

Robyn Wright

Scholarly Articles

"Cycle stratigraphy as a paleogeographic tool: Point Lookout Sandstone, southeastern San Juan Basin, New Mexico": Geological Society America Bulletin, in press.

"Sedimentology of the Mesa Rica Sandstone: a preliminary report": New Mexico Geological Society Guidebook, 36th Field Conference, p. 38-40, 1985.
Coauthor: M. J. Kisucky

"Sediment textural characteristics of fluvial sandstones in Mesaverde strata at the Multi-Well Experiment (MWX) site, northwestern Colorado": Contract Report, Award #21-0245, Sandia National Laboratories, 57 p., 1985.
Coauthor: R. W. North

614 Abstracts

"Morphology and sediment distribution patterns of the Weddell Fan, Antarctica": International Association Sedimentologists, 12th International Congress, in press.
Coauthor: J. B. Anderson

"The coastal record-preservation potential and distribution of facies along the Point Lookout shoreline, northwest New Mexico": American Association Petroleum Geologists, in press.
Coauthor: R. S. Zech

"Facies relationships in the Mesa Rica Sandstone (Lower Cretaceous), Tucumcari Basin, east-central New Mexico": American Association Petroleum Geologists, Southwest Section, in press.
Coauthor: M. J. Kisucky

"Sediment textural characteristics of the Point Lookout Formation, southeastern San Juan Basin: relation to depositional processes": New Mexico Geology, v. 7, p. 66, 1985.

Crayton J. Yapp

Scholarly Articles

"D/H variations of meteoric waters in Albuquerque, New Mexico, USA": Journal of Hydrology, v. 76, p. 63-84, 1985.

"Seasonal contributions to the climatic variations recorded in tree ring D/H data": Journal of Geophysical Research, v. 90, D2, p. 3747-3752, 1985.
Coauthor: S. Epstein

"Stable hydrogen isotopes in iron oxides-II. D/H variations among natural goethites": Geochimica et Cosmochimica Acta, v. 49, p. 487-495, 1985.
Coauthor: M. Pedley

Abstracts

"Carbon in natural goethites": EOS, v. 66, p. 423, 1985.
Coauthor: H. Poths

"Oxygen isotope variations in goethite": Geological Society of America, Abstracts With Programs, v. 17, p. 756, 1985.

"Carbon abundance and stable isotope ratios in goethite (¶-FeOOH)": EOS, v. 66, p. 1118, 1985.
Coauthor: H. Poths

RESEARCH PROJECTS OR CREATIVE WORK IN PROGRESS

Roger Y. Anderson

Sponsored Research

"Effects of Mount St. Helens tephra on lakes in Washington": National Science Foundation grant NSF EAR 81-13072, $64,805.

Proposal Submitted

"Variability of precipitation in the mid-continent of North America in the Holocene", NSF grant proposal.

Member: U.S. Geological Survey Walker Lake Paleoclimate Project.

Member: U.S. Geological Survey Elk Lake Paleoclimate Project.

Research on Pacific continental margin sedimentation, U.S. Geological Survey (see sabbatical description).

Douglas G. Brookins

Sponsored Research

"New thermal ionization mass spectrometer", 1984-85, U.S. Department of Energy, $300,000 (matched by $80,000 UNM).

"Geochemical studies at the WIPP Site, New Mexico", March 85-March 86, Sandia National Laboratories, $40,000.

"Shale Geochemistry Workshop, UNM", April 85-September 85, Martin Marietta, Oak Ridge Ntl. Lab., $22,000.

"Radwaste Natural Analog Catalog", May 85-January 86, Martin Marietta, Oak Ridge Ntl. Lab., $19,800.

Proposals Submitted

"Geochemical studies of the Oklo natural reactor, Gabon", one year, U.S. Department of Energy, $67,000.

"Rubidium-strontium dating of sedimentary rocks", two years, National Science Foundation, $86,195.

"Geochemical studies of WIPP site materials", one year, Sandia National Laboratory, $40,000.

"Radon survey of dwellings in the Albuquerque, NM area", one year, The Frost Foundation, $17,726.

Unsponsored Research

M.S. Thesis completed in 1985:

M. T. Murphy, "Strontium isotope and trace element geochemistry of the Platoro Caldera Complex, Colorado".

M.S. Theses in progress in 1985:

S. A. Whiteley, "Geology and trace element studies in the San Pedro Mountains, New Mexico".

R. A. Beard, "Geology and geochemistry of the Gold Hill area, New Mexico".

J. T. Persico, "Selenium contamination study in the Four Corners area, New Mexico".

M.S. Studies just started:

B. Pataky, geological and geochemical studies of Pajarito Mountain area.

C. Amindyas, geochemical study of Cerrillos porphyry copper.

Ph.D. Dissertation in progress in 1985:

P. A. Longmire "Actinide adsorption studies: application to uranium mill tailings".

Other Studies

Provenance of the Morrison formation and related studies (with R. T. Hicks, R. M. Lowy, C. Turner-Peterson-USGS).

World evaporites (with W. T. Holser, U. Oregon).

Geochemistry and tectonics of Sinai Peninsula (with A. Shimron, Israel Geol. Surv.).

Strontium isotope studies of basalts and related rocks (with A. Laughlin, LANL).

Geochronologic and geochemical studies of NM Precambrian (with D. B. Ward).

Studies of the Florida Mountains (with R. K. Matheney, ASU).

Radon emission in NM soils and dwellings (see proposals pending).

Bryan C. Chakoumakos

Unsponsored Research

Petrology of the Metasomatic aureole of the Harding pegmatite, Taos County, New Mexico.

Wolfgang E. Elston

Sponsored Research

"Pyroclastic eruptions, Mount St. Helens, May 18, 1980", March 1, 1985 to August 31, 1985, NSF Grant EAR 8417143, $10,000.00.

"Pyroclastic eruptions, Mount St. Helens, May 18, 1980", September 1, 1985 to August 31, 1987, NSF Grant EAR 8507028, $43,000.00.

"Application of volcanology to lunar and planetary geology", May 15, 1985 to May 14, 1986, NASA Grant NGR-32-004-062, Supplement 20, $32,000.00.

"Cenozoic volcanism and extensional orogeny in the New Mexico segment of the Basin and Range province", November 1, 1983 to October 31, 1986, NSF Grant EAR 8306397, $120,000.00.

Proposals Submitted

"U.S.-New Zealand cooperative research on ignimbrite calderas and geothermal systems of the Taupo, N.Z., volcanic zone", NSF Proposal INT 8514701, under review.

"The transition from calc-alkaline to alkaline magmatism - its tectonic significance", Royal Society (Great Britain) Proposal (with I.G. Gass),
under review.

Rodney C. Ewing

Sponsored Research

"Radiation Effects and Annealing Kinetics in Crystalline Complex Nb-Ta-Ti Oxides" by the Office of Basic Energy Sciences, Department of Energy.
August 1, 1984 to July 30, 1987. $225,800.

"Characterization of Glass and Ceramic Materials" with Ian Mackinnon by Sandia National Laboratories. February 11, 1985 to September 30, 1986. $69,880.

"Isotopic Fractionation Due to Alpha Recoil Damage in Crystalline Materials" with Y. Eyal by the Binational Science Foundation (U.S. & Israel). The support is provided through the Technion University in Haifa, Israel. October 1, 1984 to September 30, 1986. $50,900.

"Long-Term Stability of Borosilicate Nuclear Waste Forms: Application of Natural Analogues: by Argonne National Laboratory. October 1, 1983 to September 30, 1986. $130,500.

"Alteration and Long-Term Durability of Nuclear Waste Borosilicate Glasses" graduate student award (to R. Cowan) by Argonne National Laboratory. May 1, 1985 to June 30, 1986. $12,000.

Renewal of participatory agreement with Oak Ridge Associated Universities to support travel to Oak Ridge National Laboratory as part of the collaboration with L. Boatner of the Solid State Division.

Proposals Submitted

"Study of the Long-Term Alteration of Basaltic Glasses: Applications to the Long-Term Durability of Borosilicate Nuclear Waste Glasses" submitted to the JSS (Japan-Switzerland-Sweden) Research Consortium. July 30, 1986 to December 30, 1987. $55,000.

620

Unsponsored Research

Continued research on the genesis and mineralogy of pegmatites, particularly the Harding Pegmatite.

Graduate Students

Ph.D. Candidates:	M. J. Jercinovic (with K. Keil)
	G. R. Lumpkin
M.S. Candidates:	R. Cowan
	J. Warner
B.S. Honors Candidate:	Paula Stout

John W. Geissman

Sponsored Research

"Paleomagnetic Investigations of the Stillwater Complex and Associated Units, Stillwater County, Montana", two years, NSF EAR8116427. $56,015 (transferred from CSM)

"Paleomagnetic Evaluation of Mesozoic-Cenozoic Deformation in the Walker Lane Region, West-Central Basin and Range Province", two years, NSF EAR 830661. $54,000.

"Paleomagnetic Investigations of Basal Series Rocks, Stillwater Complex, Montana", Anaconda Minerals Company. $6,500.

"Paleomagnetism and Rock magnetism of clinker deposits, San Juan and Powder River Basins, western United States", UNM Research Allocations Committee, 11/1/84-6/15/85. $2,496.

"Acquisition of Magnetic Susceptibility/Anisotropy of Magnetic Susceptibility Measurement Instrumentation and Associated Hardware/Software", NSF EAR, 12/84 - 12/85. $5,427.99

"Paleomagnetic and Structural Investigation of the Tectonic History of the Early Jurassic Humboldt Lopolith and associated Units, Fencemaker Allochthon, West-Central Nevada", American Chemical Society PRF, 11/84 - 8/87 $32,000.

"Acquisition of Cryogenic Magnetometer Systems (Standard Access), and Related Equipment, Paleomagnetism Laboratory", NSF - EAR, 8/1/85 - 7/31/87. $50,000.

"Paleomagnetic and structural study of the Mineral Mountains, central Utah" (with R. L. Bruhn and R. Smith, University of Utah), Research Allocations Committee, UNM, 11/1/85 - 6/15/86. $1,860.

"Paleomagnetic and rock magnetic investigations", Sandia National Laboratories, Albuquerque, 10/1/85 - 9/31/86. $29,995.

"Paleomagnetic studies of lower Paleozoic intrusive and sedimentary rocks, Florida Mountains, southern New Mexico" (with M. Jackson and R. Van der Voo, Univ. of Michigan), New Mexico Bureau of Mines and Mineral Resources, 8/1/85 - 4/1/86. $950.

Unsponsored Research

Paleomagnetic study of clinker deposits, Powder River and San Juan Basins, Wyoming and New Mexico.

Paleomagnetic study of Lower Paleozoic miogeoclinal strata, east-central Nevada (with S. R. Gillett).

Paleomagnetic study and structural deformation of Miocene and Pliocene volcanic rocks, Lake Mead/Hoover Dam Region.

Paleomagnetic and rock magnetic studies of recent basalts, Albuquerque volcanoes, New Mexico (with L. Brown, Univ. of Massachusetts).

Paleomagnetic and anisotropy of magnetic susceptibility studies of Proterozoic intrusives, central and southern Rocky Mountains.

Paleomagnetic and carbonate petrology studies of Mississippian limestones, central Colorado.

Paleomagnetic studies of Lower Paleozoic intrusives, central New Mexico.

Paleomagnetic and rock magnetic mineral microanalysis, miscellaneous intrusive rocks.

Paleomagnetic and structural studies of Laramide intrusives, northern Crazy Mountains Basin, central Montana (with S. Harlan, Montana State University).

Proposals Submitted

"Construction of a temperature-, magnetic field-, and atmosphere-controlled furnace for paleointensity studies", UNM Foundation, $14,000, February 13, 1985.

"Paleomagnetic and rock magnetic microanalytical investigations of the source and origin of remanence in crustal rocks", U.S. Dept. of Defense University Research Instrumentation Program, $66,000, November 14, 1985.

"Paleointensity during the time represented by the Jurassic through Cretaceous Quiet Zones": Collaborative Research, National Science Foundation, $51,645, August 15, 1985.

"Mesozoic geomagnetic paleointensities and their significance for the origin of the Cretaceous and Jurassic quiet zones and the nature of Mesozoic ocean crustal processes", U.S. Office of Naval Research, $163,889, August 28, 1985.

"Paleomagnetic and rock magnetic investigations of cooling histories of igneous bodies and their wall rocks", Sandia National Laboratory (Sandia-University Research Program), $29,995, May 15, 1985.

"Acquisition of a standard access cryogenic magnetometer and related equipment, paleomagnetism and rock magnetism laboratory", National Science Foundation, $58,000, Fegruary 12, 1985.

"Application for a Summer Research Fellowship", American Chemical Society-Petroleum Research Fund, $2,000, September 23, 1985.

Paleomagnetism and rock magnetism of the Inyo Intrusion" (portion of "Drilling investigation of a young magmatic intrusion beneath Inyo Domes, Long Valley Caldera, California", by Inyo Scientific Drilling Group), U.S. Department of Energy, Office of Basic Energy Sciences, $31,700, April 1, 1985.

"Preliminary paleomagnetic studies of Cambro-Ordovician intrusives of the Florida Mountains and Late Precambrian metasedimentary rocks and intrusives of the southern Sacramento Mountains, New Mexico", New Mexico Bureau of Mines and Mineral Resources, $950, June 1, 1985.

"Paleomagnetic and structural study of the Mineral Mountains, central Utah", UNM Research Allocations Committee, $1,860, October 1, 1985.

"Faculty proposal for the use of microcomputers", University of New Mexico, Provost's Office, ~$2,000, July 15, 1985.

M.S. Theses in Progress

"Paleomagnetism and rock magnetism of serpentinized units of the Banded Series, Stillwater Complex, Montana": J. Saxton

"Paleomagnetism and tectonic history of the Jamestown mining district, Colorado Front Range": E. K. Sheldon (at Colorado School of Mines)

"Laramide and younger paleomagnetism and structural geology of the central Mosquito Range, central Colorado": Wm. Oppenheimer (at Colorado School of Mines)

Ph.D. Dissertations in Progress

"Mesozoic and Cenozoic paleomagnetism and tectonics of the central Walker Lane region, west-central Nevada": J. T. Callian

"Paleomagnetism and tectonics of the Mesozoic Humboldt Lopolith and associated units, central Nevada": M. R. Hudson (at Colorado School of Mines)

"Structural geology, tectonics, and paleomagnetism of the Central and Southern Black Mountains, northern Arizona": J. Faulds

Undergraduate "Honors" Theses or Special Projects in Progress

"Paleomagnetism and rock magnetism of Banded Series units and cross-cutting mafic dikes, West Fork, Stillwater River area, Stillwater Complex, Montana": R. James

"Paleomagnetism of the Albuquerque volcanoes, New Mexico": T. Richardson

Jeffrey A. Grambling

Sponsored Research

"The effects of minor elements on metamorphic phase relations:" Nov. 1, 1983 - April 30, 1987, National Science Foundation. $98,521.

"Geologic, economic potential and structural features associated with stratabound and discordant precious-metal mineralization, northern New Mexico": June 1, 1984 - May 31, 1985, Anaconda Minerals Inc., $8,000.

"Foliation development, porphyroblast nucleation and growth, and deformational history": July 1, 1984 - Dec. 31, 1986, National Science Foundation. $67,440. (Co PI: T. H. Bell)

"Initiation of mapping in the Taos and Rincon Ranges, New Mexico": May 15, 1985 - August 15, 1985, New Mexico Bureau of Mines and Mineral Resources. $5,430.

"Metamorphic and geochemical studies of Proterozoic granites and migmatites, Santa Fe range, New Mexico": June 1, 1985 - May 30, 1986, Los Alamos National Laboratories. $11,000.

"Use of a microcomputer as a teaching aid in metamorphic petrology": December 1, 1985, UNM Faculty Microcomputer Program. $1,299.

626

Unsponsored Research

"A regional gradient in the composition of metamorphic fluids in pelitic schist, Pecos Baldy, New Mexico".

"Discrepancies between predicted and observed mineral reactions in pelitic schist, Pecos Baldy, New Mexico".

Ph.D. Completed

B. L. Dutrow, "A staurolite trilogy: 1. Lithium in staurolite and its petrologic significance; 2. An experimental determination of the upper stability limit of staurolite + quartz; 3. Evidence for multiple metamorphic episodes in the Farmington quadrangle, Maine" (B. L. Dutrow completed a Ph.D. at SMU; I was a member of her thesis committee)

Stephen P. Huestis

Proposal Submitted

"The inverse problem of continental crustal heat production", National Science Foundation, $44,742. (12 mos.)

Unsponsored Research

Inverse problem of continental crustal heat production.

Application of rank-sum statistics to earthquake location (with R. P. Buland, U.S. Geological Survey).

Three-dimensional gravity anomaly analysis (with M.E. Ander, LANL): "Recent intrusion beneath the Lucero Uplift, Central Rio Grande Rift", submitted to Geology.

Ph.D. Dissertation Completed

Maria Jorge: Perturbation solution of a non-linear boundary value problem arising in connection with the Earth's Gravitational field (Mathematics Department - Reuben Hersh, advisor).

Ph.D. Dissertation in Progress

Terence Sewards: Current density distribution in the Earth's Core - an inverse theory approach.

John Husler

Participant, Geostandards International Working Group (IWG) - Chemical analysis of international rock standards.

New Mexico Energy Research Institute (NMERI): Asphalt recycling study.

Klaus Keil

Sponsored Research

"Origin and evolution of meteorite parent bodies and the Moon." National Aeronautics and Space Administration, February 1, 1984 - January 31, 1985. $ 235,000.

"Halite mineralogy of the Solado Formation." Sandia National Laboratories. October 1, 1984 - September 30, 1985. $50,801.

"Geological support work of Nevada Nuclear Waste Storage Investigations." Sandia National Laboratories. October 1, 1984 - September 30, 1985. $78,939.

"Physical and chemical conditions of the lower crust as deduced from xenoliths in lavas of the Leucite Hills, Wyoming." National Science Foundation, via the University of Northern Iowa. January 1, 1985 - December 31, 1985. $7,429.

"Origin and evolution of meteorite parent bodies and the Moon." National Aeronautics and Space Administration. February 1, 1985 - January 31,1986. $246,500.

"Ge abundances in lunar rocks: did the Moon form totally molten? NASA Graduate Student Researchers Fellowship, NASA Headquarters (to Tammy Dickinson). May 15, 1985 - May 15, 1986. $17,966.

"Geological support work of Nevada Nuclear Waste Storage Investigations." Sandia National Laboratories. October 1, 1985 - September 30, 1986. $86,163.

"Mineralogy of the Rustler Formation." Sandia National Laboratories. October 1, 1985 - September 30, 1986. $51,365.

Proposals Submitted and Funded

"Origin and evolution of meteorite parent bodies and the Moon." National Aeronautics and Space Administration. February 1, 1986 - January 31, 1987. $ 252,998.

Proposals Submitted and Pending.

"Mineralogy, petrology and chemistry of Spanish meteorites: Origin and evolution of meteorite parent bodies." National Science Foundation. June 1, 1986 - May 31, 1989. $59,678.

Post-doctoral Fellow Supported by my Grants

Dr. Cyrena A. Goodrich (Ph.D., Cornell University, Ithaca, NY.)

Graduate Students Supported as Research Assistants by my Grants and Contracts

M.G. Bersch, B. Epling, Tammy L. Dickinson, Rosemary Glenn, M.J. Jercinovic, D. Lusby, S.I. Recca, D. Szuwalski, G. Sarkar, T. Sewards.

Undergraduate Students Supported as Research Assistants by my Grants and Contracts

Ann Tomasi, M. Gabriel, S. Hayden.

Cornelis Klein

Sponsored Research

NSF grant No. EAR-8419161 - Nov. 1, 1984 to April 30, 1986, entitled "Comparative studies of several Precambrian iron-formations and some manganese deposits", award $29,200.

NSF grant No. EAR-8415681 - April 1, 1985 to March 31, 1987, entitled "Geochemistry and Sedimentology of some essentially unmetamorphosed Precambrian iron-formation sequences" award $153,603.

National Geographic Society Research Grant, entitled "The earliest history of life", co-investigator with 14 other scientists, awarded for 1985 and 1986 summer field research by group of about twenty scientists (administered at UCLA), award $153,450.

NSF grant entitled "Paleobiology of the Proterozoic" co-investigator with J. W. Schopf et al. (UCLA), with subcontract to UNM for $8,254; proposal in review.

Advisor (with John M. Hayes, Indiana University) on M.S. thesis project by A. J. Kaufman entitled "Covariance of ^{213}C and ^{218}O in banded iron-formations and its genetic implications".

Albert M. Kudo

Sponsored Research

"Origin of volcanic rocks composing Orizaba, Popocatepetl, and Iztaccihuatl, Mexico", September, 1984-June, 1985, UNM Research Allocations Committee, $1,200.

Proposal Submitted

"Petrogenesis of Quaternary andesites, Costa Rica: 1. Mapping, petrology, mineral chemistry, major- and trace-element geochemistry", two years, submitted in January 1985, $129,438: *Unsuccessful.*

Unsponsored Research

Bradley S. Singer, M.S. Thesis, "Petrology and geochemistry of Polvadera Group Rocks of La Grulla Plateau, northwest Jemez Volcanic Field, New Mexico: Evidence favoring evolution by assimilation-fractional crystallization (AFC)".

Michael E. Jackson, B.S. Honors Thesis, "The geology and petrology of extrusive rocks and pedogenic carbonate deposition at Tetilla Peak, New Mexico".

Continued research on volcanic rocks from northeastern Japan, Mexico, and Costa Rica.

Working on proposal for funding of research in Costa Rica to be submitted to NSF.

Working on two manuscripts: one on research in Costa Rica and the other on research in the Jemez Volcanic Field.

Barry S. Kues

Unsponsored Research; Manuscripts in Review or in Preparation

"Paleontology and correlation of a Lower Cretaceous outlier in Roosevelt County, southeastern New Mexico": Geological Society of America Abstracts with Programs, Rocky Mountain Section, IN REVIEW.

"Albian-Cenomanian (Cretaceous) stratigraphy and biostratigraphy, east-central New Mexico", Geological Society of America Abstracts with Programs, Rocky Mountain Section, IN REVIEW.

Coauthors: L. C. Payne, S. G. Lucas, M. J. Kisucky, K. K. Kietzke, and R. Wright

"Geology of the Ima NW quadrangle, Guadalupe County, New Mexico", IN PREPARATION (for N.M. Bureau of Mines and Mineral Resources), several coauthors.

"Albian and Cenomanian stratigraphy of east-central New Mexico", IN PREPARATION (for Cretaceous Research), several coauthors.

"Eurypterids from the Wild Cow Formation (Upper Pennsylvanian), Manzano Mountains, New Mexico", IN PREPARATION (for Journal of Paleontology).

632 "Biostratigraphy of a Lower Cretaceous outlier in Roosevelt County, New Mexico", IN PREPARATION (for New Mexico Geology).

"A large new species of Bellerophon (Bellerophon) from the Pennsylvanian of the Mud Springs Mountains, New Mexico", IN PREPARATION (for Journal of Paleontology).

"The gastropods of the Flechado Formation (Middle Pennsylvanian), near Taos, New Mexico, Part I. Bellerophontacea", IN PREPARATION, (for Journal of Paleontology).

"The gastropods of the Flechado Formation (Middle Pennsylvanian), near Taos, New Mexico, Part II. Pleurotomariacea", IN PREPARATION (for Journal of Paleontology).

"Gastropods and scaphopods from the Red Tanks Member, Madera Formation (Upper Pennsylvanian-Lower Permian), central New Mexico", IN PREPARATION (for Journal of Paleontology).

"The Mississippian Lake Valley fauna at Lake Valley, New Mexico", IN PREPARATION (for N.M. Geological Society Guidebook 37).

"Annotated catalogue of New Mexico fossils [BOOK]", with coauthor S. A. Northrop, IN PREPARATION.

Other Studies in Progress

Pennsylvanian bivalves of the Flechado Formation near Taos, N.M.

Pennsylvanian bivalves and gastropods, Madera Formation, Jemez Springs area, N.M.

Fauna of the Tucumcari Formation (Lower Cretaceous), east-central N.M.

Fauna of a Lower Cretaceous outlier, Lea County, N.M.

Spencer G. Lucas

Unsponsored Research

Writing book, "The Age of Mammals in New Mexico" for UNM Press.

Ongoing research on Mesozoic and Cenozoic paleontology and stratigraphy.

Ian D. R. Mackinnon

Sponsored Research

"Analytical Electron Microscopy of fine-grained extraterrestrial materials", 1982-1985, (3 year grant) NASA Planetary Materials Program, Co-investigator with D. S. McKay. $225,000.

"Characterization of glass and ceramic materials", with R. C. Ewing; sponsored by Sandia National Laboratories. February 11th, 1985 to September 30th, 1986; $69,880.

Unsponsored Research

Determination of the quasi-crystalline state in boron compounds.

Effectiveness of plasma-etching techniques for TEM sample preparation.

Proposal Submitted

"Analytical Electron Microscopy of fine-grained phases in primitive interplanetary dust particles and carbonaceous chondrites" submitted to NASA Planetary Materials Program, January 1986 to January 1987, $96,000.

634

Leslie D. McFadden

Sponsored Research

"Analysis of Soils from Chronosequences in the Western United States": Sept. 30, 1984 - Sept. 30, 1985, U.S. Geological Survey. $28,500.

"Analyses of Soils from Chronosequences in the Kyle Canyon, Nevada, and Cima Volcanic Field, California": Sept. 30, 1985 - Sept. 30, 1986, U.S. Geological Survey. $30,665.

"Soils - Geomorphic Relations in the San Gorgonio Pass Region, Eastern Transverse Ranges, Southern California": Sept. 30, 1985 - Sept. 30, 1986, U.S. Geological Survey. $9,592.

"Analysis of the Cation Exchange Capacity and Exchangeable Bases of Asphalt Aggregate": June - July, 1985, New Mexico Engineering Research Institute. $1,000.

Proposals Submitted

"Geomorphological and Tectonic Geomorphological Studies in the San Agustin Plains, New Mexico", submitted to the National Science Foundation, June 1986 - June, 1987. $31,150.

Stuart Northrop (Retired 1969)

Short paper on New Mexico earthquakes for chapter entitled Geology, Mineralogy, and Paleontology, in "From Sun Dagger to Space Exploration," a special edition of NEW MEXICO JOURNAL OF SCIENCE, to be published jointly by the Academy and the Society of Sigma Xi in January 1986.

Stephen G. Wells

Sponsored Research

"Tectonic geomorphology of the southwestern coast of Costa Rica: a comparison of different plate tectonic settings", Jan.-Dec., 1985, UNM-RAC, $2,150.

Proposals Submitted

"Collaborative research on seismic ridge subduction in Costa Rica: mechanisms and geomorphic evidence for crustal uplift", National Science Foundation, $57,620.

Unsponsored Research

M.S. Completed:

Jerry R. Miller, "Sediment storage, transport, and geochemistry in semiarid fluvial and eolian systems: applications to long-term stability and potential dispersal patterns of uranium tailings in the Grants mineral belt, New Mexico."

John D. Pickle, "Dynamics of clastic sedimentation and watershed evolution within a low-relief karst drainage basin, Mammoth Cave region, Kentucky."

Joel P. Grimm, "The late Cenozoic geomorphic history of the Lobo Canyon area of the Mount Taylor volcanic field, Cibola County, New Mexico."

Thomas F. Bullard, "Influence of bedrock geology on complex geomorphic responses and late Quaternary geomorphic evolution of Kim-me-ni-oli Wash drainage basin, northwestern New Mexico.

636 Lee A. Woodward

Sponsored Research

Geology of French Mesa 7.5 minute quadrangle, Rio Arriba County, New Mexico. Duration, 1985. Sponsor, New Mexico Bureau of Mines and Mineral Resources, $2,000.

Unsponsored Research

Tectonic origin of fractures for fissure vein emplacement in Boulder batholith, Montana.

Tectonic setting of submarine exhalative deposits in Belt Supergroup, Montana.

Constraints on Laramide (Late Cretaceous-early Tertiary) movement of the Colorado Plateau.

M.S. Theses

B. W. Coxe, "Geology and mineralization of the Revenue Virginius ore body, San Juan Mountains, Colorado".

S. Maynard, "Precambrian geology and mineralization of the southern New River Mountains, Arizona".

D. L. Crouse, "Structure and stratigraphy of part of the French Mesa quadrangle, New Mexico".

Robyn Wright

Sponsored Research

"Vertical Progressions in Settling Velocity (SETVEL) Data as an Indicator of Depositional Process and Environment: Mesaverde Group Strata, Piceance Creek Basin, Northwestern Colorado", Sandia National Laboratories Award #21-0245, $30,000, October, 1984 to September, 1985.

"Cyclic Event Stratigraphy in Cretaceous Marine Sandstones of Northern New Mexico", University of New Mexico Research Allocation, $2,500, January to June, 1985.

"Vertical Progressions in Settling Velocity (SETVEL) Data as an Indicator of Depositional Process and Environment: Fluvio-Deltaic Mesa Rica Sandstone, East-Central New Mexico", Sandia National Laboratories Renewal Award #95-2929, $30,000, October 1985 to September 1986.

Proposals Submitted

Presidential Young Investigator Award, EAR-8552460, National Science Foundation.

Unsponsored Research

Study of paleogeography of the Mesa Rica delta system, east-central New Mexico. Includes supervision of 1 M.S. student.

Inter-laboratory calibration of particle size analysis instrumentation. Manuscript in preparation for Journal Sedimentary Petrology.

Development of computer software for automation of settling tube and Sedi-Graph. Manuscript in preparation for Computers in Geoscience.

Study of Tertiary fore-arc sedimentation in coastal basins of Peru.

Crayton J. Yapp

Sponsored Research

"Stable isotope and chemical study of the mineral system goethite-hematite with applications to iron-rich sedimentary rocks": National Science Foundation, February 1, 1984 to July 31, 1986. $66,200.

"Acquisition of a gas source, light element, isotope ratio mass spectrometer": National Science Foundation, March 1, 1984 to August 31, 1985. $70,000.

Proposal Submitted

"A study of the stable isotope geochemistry of iron-rich rocks and minerals", National Science Foundation, May 1, 1986 to April 30, 1989. $191,687.

ACTIVITIES IN LEARNED AND PROFESSIONAL SOCIETIES

Roger Y. Anderson

Geological Society of America Penrose Conference: Geomorphic and stratigraphic indicators of climatic change in arid and semiarid environments, April, 1985, Havasu City, Arizona.

Speaker: Session Va; Title: "Climatic sensitivity of the Paleolimnologic record".

Chairperson: Workshop on Paleolimnology.

National Symposium on Surface Mining, Hydrology, Sedimentology, and Reclamation, December, 1985, Lexington, KY.

Presentation title: "Some applications of time-marking sediment traps and their implications for monitoring of sediment discharge from disturbed areas".

Coauthor: E. B. Nuhfer

Douglas G. Brookins

Professional Papers Read

"Chronology of Grants Mineral Belt uranium mineralization based on Rb-Sr study of clay minerals" (AAPG Research Conference on Radiogenic Isotopes and Evolution of Sedimentary Basins, New Orleans, LA, Mar. 22-24, 1985).

"Trace element behavior within a fossil hydrothermal zone" (Geol. Soc. America - Rocky Mountain Section annual meeting, Boise, Idaho, March 12-14, 1985), paper presented by M. T. Murphy.

"K-Ar and Rb-Sr dating of evaporite minerals, Delaware Basin, New Mexico" (Internat. sym. on Isotopes in the Sedimentary Cycle; Obernai, France, July 1-5, 1985).

"Rb-Sr dating of Mesozoic rocks from the San Juan Basin, New Mexico" (Internat. sym. on Isotopes in the Sedimentary Cycle; Obernai, France, July 1-5, 1985).

"Coupled processes at the Oklo natural reactor" (Internat. sym. on coupled processes affecting the performance of a high level nuclear waste repository; Berkeley, CA, Sept. 18-20, 1985).

"Upper mantle and crustal rocks in north-central Kansas: evidence from kimberlites: (6th Internat. Conf. Basement Tectonics; Santa Fe, NM September 16-20, 1985).

"The use of natural analogs for radwaste studies" (Workshop on natural analogs for radwaste uses; Silver Springs, MD, November 13-14, 1985).

"The Oklo natural reactor in Gabon: relevance to geochemical studies to problems of nuclear waste disposal" (Oak Ridge National Lab. Environmental Sciences Series, Oak Ridge, TN, November 18, 1985).

"Mineralogical and Sr-isotope evidence for assimilation of crustal material by basaltic magmas in a Rio Grande Rift - marginal setting, Jemez volcanic field, New Mexico" (Annual western meeting, Am. Geophys. Union, December 9-12, 1985, San Francisco, CA), paper presented by B. S. Singer.

Society Activities

Materials Research Society, Membership Committee.

Materials Research Society, Chairman, Steering Committee for Long Range Planning.

Americans for Rational Energy Alternatives, Board of Directors.

Field Trips

Ortiz Gold Mine, Cerrillos, NM; leader for 103,107 classes and other students, April 1985.

Bryan C. Chakoumakos

Professional Papers Read and Posters Presented

"Silanol-H_2O modeling": Seminar for ad hoc quantum chemistry group, Dept. Chemistry, UNM, April 19, 1985.

"Anisotropic lattice expansion in crystals due to alpha-decay damage": Geological Society of America and Mineralogical Society of America Annual Meeting, Orlando, October 22-31 (Poster).

Coauthor: R. C. Ewing

Meetings Attended

May 14-16, Fredericton, New Brunswick: Mineralogical Association of Canada annual meeting.

May 23-26, Washington College, Maryland: Mineralogical Society of America short course "Microscopic to Macroscopic".

May 26-29, Baltimore, Maryland: American Geophysical Union annual spring meeting.

July 29-30, Los Alamos, New Mexico: DOE, Office of Basic Energy Sciences review of materials science programs at Los Alamos National Laboratories.

July 31, Albuquerque, New Mexico: DOE, Office of Basic Energy Sciences review of materials science programs at Sandia National Laboratories.

August 5-8, Snowmass, Colorado: Annual Denver X-ray Conference.

October 22-31, Orlando, Florida: Annual meeting of the Geological Society of America and the Mineralogical Society of America.

Wolfgang E. Elston

Professional Papers Read

"'Informed speculation' regarding thin-skin tectonics, back-arc extension, and volcanism on Venus." 16th Lunar and Planetary Science Conference, Houston, Texas, March 18-22, 1985.

Meetings attended

Galilean Satellites Mapping Conference, Houston, Texas, March 17, 1985.

Offices held:

Secretary and Co-Editor Newsletter, Working Group on Explosive Volcanism, International Association for Volcanology and Chemistry of the Earth's Interior.

Member, Working Group on Volcanic Data Files, International Association for Volcanology and Chemistry of the Earth's Interior.

Member, Steering Committee, International Volcanological Congress, Santa Fe, New Mexico, June, 1989.

Rodney C. Ewing

Professional Papers Read and Poster Presentations

"An investigation of uranium L-edges of metamict and annealed pyrochlore": Scientific Basis for Nuclear Waste Management IX, meeting of the Materials Research Society, Stockholm, Sweden. (poster)

Coauthors: R. B. Greegor, F. W. Lytle, B. C. Chakoumakos, G. R. Lumpkin

"Weathered basalt hyaloclastites: A natural analogue for the effects of saturation on nuclear waste glass durability": Scientific Basis for Nuclear Waste Management IX, meeting of the Materials Research Society, Stockholm Sweden. (poster)

Coauthors: B. Grambow, M. J. Jercinovic and C. D. Byers

"Alpha recoil effect on the dissolution of betafite: Rapid natural annealing of radiation damage within a metamict phase": Scientific Basis for Nuclear Waste Management IX, meeting of the Materials Research Society, Stockholm, Sweden. (poster)

Coauthors: Y. Eyal and G. R. Lumpkin

"Anisotropic lattice deformation in crystals due to alpha-decay damage": Annual meeting of the Geological Society of America, Orlando, Florida. (poster)

Coauthor: B. C. Chakoumakos

Offices Held in Professional Societies

Materials Research Society:

Councillor, 1983-1985

Secretary, 1985-1986

Chairman, Membership Committee, 1985-1986

Nominating Committee, 1985-1986

Member of the program committee for the Ninth International Symposium on the Scientific Basis for Nuclear Waste Management, Stockholm, Sweden.

Member of the committee to select the recipient of the Von Hippel Award

Mineralogical Society of America:

Associate editor (with G. E. Brown) for the special volume honoring R. H. Jahns.

International Mineralogical Association:

Member of the program committee for the International Mineralogical Association meeting at Stanford in July of 1986.

Member of the field trip committee (for Northern New Mexico) for the IMA meeting.

New Mexico Geological Society:

Nominating committee (member)

American Geophysical Union:

Accepted as a member

John W. Geissman

Professional Papers Read

"Paleomagnetism and rock magnetism of the Mississippian Leadville Formation and associated sulfide ores and implication for the age of sub-regional dolomitization," Annual Meeting, Society

of Economic Geologists, American Institute of Mining, February 26, New York.

Coauthors: R.A. Horton and R. J. Tschauder

"Late Archean tectonic emplacement of the Stillwater Complex and reactivated structures, northern Beartooth Mountains, Montana", 6th International Basement Tectonics Conference, September 26, Santa Fe.

Coauthor:. D. W. Mogk

"Middle Miocene counterclockwise rotation of rocks from west-central Nevada: Implications for Basin and Range extension", Geological Society of America Annual Meeting, October 27-31, Orlando, Florida.

Coauthor: M. R. Hudson

"Tectonic implications of paleomagnetic data from Early Jurassic Dunlap Formation, west-central Nevada", Geological Society of America Annual Meeting, October 27-31, Orlando, Florida.

Coauthors: J. T. Callian and J. S. Oldow

"Reconnaissance paleomagnetic study of the Mineral Mountains, eastern Great Basin, Utah, and tectonic implications", Fall Meeting, American Geophysical Union, San Francisco, Dec. 8-12.

Coauthor: R. L. Bruhn

"Preliminary paleomagnetic and rock magnetic data from corehole VC-1, Valles Caldera, New Mexico", invited. Fall Meeting, American Geophysical Union, San Francisco, Dec. 8-12.

"Paleomagnetic microanalytical techniques for evaluating the source and origin of stable magnetization components", invited. Fall Meeting, American Geophysical Union, San Francisco, Dec. 8-12.

"Paleomagnetic dating of deformation along the eastern margin of the Disturbed Belt, Northern Crazy Mountains Basin, Montana", invited. Fall Meeting, American Geophysical Union, San Francisco, Dec. 8-12.

Coauthors: S. S. Harlan and D. R. Lageson

"Timing of deformation along the eastern margin of the Disturbed Belt, Northern Crazy Mountains, Montana", Tobacco Root Geological Society Meeting, September, 1985, Bozeman, Montana.

Coauthor: S. S. Harlan

"Dolomitization and diagenesis of the Leadville Formation (Mississippian), central Colorado", Annual Meeting, Society of Economic Paleontologists and Mineralogists, August, 1985, Golden, Colorado.

Coauthors: R. A. Horton, R. H. De Voto and J. M. Budai

"Curious remanent magnetic directions from the Late Quaternary Albuquerque Volcanoes, New Mexico", Spring Meeting, American Geophysical Union, May, 1985, Baltimore, Maryland.

Coauthors: L. Brown, C. Menges, T. Richardson and T. Seward

Jeffrey A. Grambling

Professional Papers Read

"Crustal thickening during Proterozoic metamorphism and deformation in northern New Mexico, U.S.A.": 6th International Conference on Basement Tectonics, Santa Fe, NM, September 19, 1985.

"Discrepancies between predicted and observed mineral reactions in staurolite schist, Pecos Baldy, New Mexico": Geological Society of America Annual Meeting, Orlando, Florida, October 29, 1985.

Field Trip Leader

"Structure and Precambrian rocks of the northern Rio Grande Rift": 6th International Conference on Basement Tectonics, September 21-23, 1985.

Office Held

Past-president, New Mexico Geological Society, 1985

Stephen P. Huestis

Professional Paper Read

"Three-dimensional gravity ideal body studies in rough terrain", International Meeting on Potential Fields in Rugged Topography - Lausanne, Switzerland, July 30-August 1, 1985.

Coauthor: M. E. Ander

Klaus Keil

648 Professional Papers Read

"Meteoritic breccias": 10th Symp. on Antarctic Meteorites, Nat'l. Inst. of Polar Res., Tokyo, Japan. March 25-29, 1985.

"Lunar meteorite ALHA81005: a review": 10th Symp. on Antarctic Meteorites, Nat'l. Inst. of Polar Res., Tokyo, Japan. March 25-26, 1985.

"Meteoritic breccias: Origin and implications": Department of Chemistry, Univeristy of California, La Jolla, California. June 5, 1986.

"Roosevelt County 027-a low-shock ureilite with primary interstitial silicate liquid": Meteoritical Society Meeting, Bordeaux, France, July 16-19, 1985.

Coauthors: C.A. Goodrich, J.L. Berkley, J.C. Laul, M.R. Smith, R.N. Clayton, T.K. Mayeda and J.F. Wacker.

"The electron microprobe in meteorite research: unravelling the origin of primitive matter in the solar system": Electron Microbeam Analysis Society Meeting, Louisville, Kentucky, August 5-9, 1985.

"Origin of meteorites: From asteroids, comets, Moon and Mars": Subcritical Reactivity Measurements Workshop, University of New Mexico, Albuquerque, N.M., August 28, 1985.

"Sources of meteorites: From asteroids, comets, Moon and Mars": Department of Physics and Astronomy, Univ. of New Mexico, Albuquerque, N.M., November 15, 1985.

"An illustrated voyage through our solar system": Four Corners Geological Society, Farmington, N.M., December 6, 1985.

Professional Papers Co-authored

"Ion microprobe analysis of REE in phosphates in the apatite-rich clast from ALHA81005": 16th Lunar and Planetary Sci. Conf., Houston, Texas. March 11-15, 1985.

Coauthors: C.A. Goodrich, G.J. Taylor, S.J.B. Reed, W.V. Boynton and D.H. Hill.

"Chemically anomalous objects in types 4-6 ordinary chondrites: evidence for ubiquitous brecciation following metamorphism": ibid.

Coauthors: D. Lusby and E.R.D. Scott.

"Nature and evolution of unmetamorphosed parent material of types 4-6 ordinary chondrites": ibid.

Coauthors: E.R.D. Scott and G.J. Taylor.

"The Norton County enstatite achondrite and its lithic fragments": 10th Symp. on Antarctic Meteorites, Nat'l. Inst. of Polar Res., Tokyo, Japan. March 25-29, 1985.

Coauthors: A. Okada and G.J. Taylor.

"Enstatite achondrites did not form from enstatite chondrites": Meteoritical Society Meeting, Bordeaux, France, July 16-19, 1985.

Coauthor: R. Brett.

Offices Held

Member, Advisory Committee on Comparative Planetology, International Union of Geological Sciences.

Associate Editor, Journal of Geophysical Research, American Geophysical Union.

Acting Associate Editor, Geochimica et Cosmochimica Acta.

650

Meetings Attended

Lunar and Planetary Science Conference, NASA Johnson Space Center, Houston, Texas. March 10-15, 1985.

10th Symposium on Antarctic Meteorites, National Institute of Polar Research, Tokyo, Japan. March 24 - April 2, 1985.

Workshop on Antarctic Meteorites, Max-Planck Institute of Chemistry, Mainz, West-Germany. July 10-13, 1985.

Meteoritical Society Meeting, Bordeaux, France. July 16-20, 1985.

Electron Microbeam Analysis Society Meeting, Louisville, Kentucky. August 5-9, 1985.

Cornelis Klein

Offices Held

Associate editor of Precambrian Research, a journal of Elsevier Science Publishers, Amsterdam, The Netherlands.

Council Member of the Mineralogical Society of America, and attended two council meetings of the society in Orlando, Florida, Oct. 27 and 29, 1985, respectively.

Chair, MSA Award Committee, for Mineralogical Society of America Award for 1985.

MSA representative to the International Mineralogical Commission on History and Teaching.

Member, New Mexico Museum of Natural History, Advisory Committee on Geology.

Member, Board of Directors (1985-88), New Mexico Mining Association.

Member, Precambrian Paleobiology Research Group (PPRG), located at UCLA, Los Angeles, under the direction of J. W. Schopf.

Field Trip Coordinator, for the Precambrian Paleobiology Research field trip to Alaska, and the Northwest Territories, Canada - June, 1986.

Albert M. Kudo

Professional Paper Read

At Annual Meeting of the American Geophysical Union, December 9-13, 1985, San Francisco.

Barry S. Kues

Professional Papers Read

"Gigantic bellerophontid gastropods from the Pennsylvanian of the Mud Springs Mountains, New Mexico" - paper presented to annual Spring meeting of New Mexico Geological Society, Socorro, April 26, 1985.

"Fossils from the Mesa Rica Sandstone(?) of Cuervo Hill, Guadalupe County, New Mexico" - paper presented to a symposium on the geology of east-central New Mexico, New Mexico Academy of Science Annual Meeting, Albuquerque, August 17, 1985.

Spoke at several stops during the New Mexico Geological Society Annual Field Conference 36, east-central New Mexico, September 26-28.

652

Offices Held

Editorial Board, New Mexico Journal of Science.

Road-log Chairman, New Mexico Geological Society Annual Field Conference.

Spencer G. Lucas

Meetings Attended

Feb. 15-16 Western Association of Vertebrate Paleontologists Annual Meeting, San Bernadino, California; paper read: "Middle Jurassic dinosaurs from the Sichuan Basin, China"

April 26 New Mexico Geological Society Spring Meeting, Socorro, New Mexico; paper read: "Should the term Santa Fe Group be abandoned."

April 26 New Mexico Geological Society Executive Committee Meeting, Socorro.

August 16 New Mexico Academy of Science Annual Meeting, Albuquerque; organized and chaired symposium "Geology of east-central New Mexico"; paper read: "Correlation of Triassic strata, east-central New Mexico".

Sept. 20-22 Symposium on the Triassic of the American Southwest, Flagstaff, Arizona: paper read: "Triassic stratigraphy and biostratigraphy of east-central New Mexico".

Sept. 25-28 New Mexico Geological Society, Fall Field Conference, Santa Rosa, New Mexico; organized and led the field conference.

Ian D. R. Mackinnon

Professional Papers Read and Poster Presentations

"Auger spectroscopy of stratospheric particles: the influence of aerosols on interplanetary dust" at the XVI Lunar and Planetary Science Conference, Houston, Texas.

Co-authors: D. W. Mogk and F. J. M. Rietmeijer

"High resolution imaging of boron carbide microstructures" at the International Conf. on Physics and Chemistry of Boron and Boron-rich Borides, UNM, Albuquerque, New Mexico (Poster).

Co-authors: T. Aselage and S. B. van Deusen

"Microbeam analyses of stratospheric particles" at a Symposium on Microbeam Analysis Techniques in the Study of Lunar, Meteorite and Cosmic Dust Samples at the annual meeting of the Microbeam Analysis Society, Louisville, Kentucky.

Co-authors: F. J. M. Rietmeijer, D. S. McKay and M. E. Zolensky

"Solar Nebula Transport and Turbulence Studies in Zero-G" at a Workshop on a Microgravity Particle Research Facility, NASA Ames Research Center, California.

"Processes in a Turbulent Solar Nebula: Microgravity Experimental Verification" at a Workshop on Petrological and Geochemical Experiments in Microgravity and High Vacuum, Lunar and Planetary Institute, Houston, Texas.

"Applications of transmission electron microscopy to geologic problems", Geology 401 Seminar, UNM, Albuquerque, New Mexico.

654 "Stratospheric dust collections: Valuable resources for space and atmospheric scientists" at a Workshop on Micrometeorite Capture Experiments, Lunar and Planetary Institute, Houston, Texas.

"Targeted flight opportunities with large area collectors" at a Workshop on Micrometeorite Capture Experiments, Lunar and Planetary Institute, Houston, Texas.

Meetings Attended

March 11-15, Houston, Texas: Annual Meeting - Lunar and Planetary Science Conference XVI.

April 15-18, San Francisco, California: Spring Meeting of the Materials Research Society.

June 20-22, Flagstaff, Arizona: Workshop on Space Station Planetology Experiments.

July 29-31, Albuquerque, New Mexico: International Conference on the Physics and Chemistry of Boron and Boron-rich Borides.

August 5-9, Louisville, Kentucky: Joint Annual Meeting of Electron Microscopy Society of America and the Microbeam Analysis Society.

August 22-24, San Francisco, California: Workshop on Microgravity Particle Research Facility for Space Station.

September 12-13, Houston, Texas: Workshop on Petrological and Geochemical Experiments in Microgravity and High Vacuum.

December 16-18, Houston, Texas: Workshop on Micrometeorite Capture Experiments for the Space Station.

Offices Held

Chairman: Workshop on Electron Microscopy and Microprobe Techniques in Clay Analysis for 1986 Meeting of Clay Minerals Society.

Treasurer: 1986 Joint Annual Meeting of Electron Microscopy Society of America and the Microbeam Analysis Society (Local Area).

Member of Cosmic Dust Subcommittee for Sample Allocations.

Leslie D. McFadden

Professional Papers Read

"Sensitivity of Arid/Semiarid Soils Systems to Climatic Change," Geological Society of America Penrose Conference, Lake Havasu, Arizona, April 16.

"The Influence of Eolian Influx Rates and Climatic Change on the Development of Stone Pavements and Associated Soils in the Cima Volcanic Field, Mojave Desert, California," Geological Society of America Meeting, Cordilleran Section, Vancouver, British Columbia, May 9.

"Soil Formation on Basalt Flows in the Mojave Desert, Southwestern USA," and "Eolian Processes and Pavement Development in the Cima Volcanic Field, Mojave Desert, USA," First International Conference on Geomorphology, Manchester, England, April 18.

"Studies of Cation Exchange Capacity and Exchangeable Bases in Asphalt Aggregate," Presentation given to New Mexico Engineering Research Institute group, Albuquerque, NM, July 24.

656

Takashi Murakami

Professional Papers Read and Poster Presentations

"SYNROC by hydroxide-route: Fabrication and leachability": Fall meeting of the Japan Atomic Energy Society, Japan. Coauthors: T. Amaya and H. Mitamura

Stephen G. Wells

Professional Papers Read

"Late Cenozoic geomorphic processes on volcanic landforms in the Cima volcanic field, Mojave Desert, California, USA" at First International Geomorphology Conference, Manchester, England.

"Long-term watershed evolution in the southeastern Colorado Plateau: Adjustment of the fluvial system to bedrock geology" at The First International Geomorphology Conference, Manchester, England.

Professional Meetings Attended

1985 Penrose Conference on Geomorphic and Stratigraphic Indicators of Neogene-Quaternary Climatic Change in Arid and Semiarid Environments, Lake Havasu, Arizona.

1985 First International Geomorphology Conference, Manchester, England.

1985 Third International Fluvial Sedimentology Conference, Ft. Collins, Colorado.

Offices Held

Editorial Board for Geological Society of America GEOLOGY.

Editorial Board for Geomorphology, Elsevier Science Publishers.

Co-covener for 1985 Geological Society of America Penrose Conference.

Panel Member, Quaternary Geology and Geomorphology Division, Geological Society of America.

Lee A. Woodward

Professional Paper Read

"Potential hydrocarbon traps along growth faults of Rio Grande rift, New Mexico" at annual meeting of American Association of Petroleum Geologists in New Orleans, Louisiana, March, 1985.

Reviewed Papers for the Following Journals

Journal of Geophysical Research

Geological Society of America Bulletin

American Association of Petroleum Geologists Bulletin

Geology

Field Trip Leader

"Basement tectonics international symposium", Santa Fe, N.M., September 21, 1985.

Robyn Wright

Professional Papers Read

New Mexico Geological Society, Spring Meeting, April 26, 1985. Socorro, New Mexico; "Sediment textural characteristics of the Point Lookout Sandstone, southeastern San Juan Basin: relation to depositional processes".

658

Crayton Yapp

Professional Papers Read

"Carbon in natural goethites": Spring meeting, American Geophysical Union, Balitimore, Maryland, May 31, 1985.

"Oxygen isotope variations in goethite": Annual meeting, Geological Society of America, Orlando, Florida, October 31, 1985.

OTHER PROFESSIONAL ACTIVITIES

Roger Y. Anderson

Argonne National Laboratory; member technical review panel for radioactive waste disposal. Review of technical reports and publicatons, Palo Duro Basin, Texas. Conferences at Argonne Labs.

Member: Geological Society of America.

Review of Manuscripts for Geological Society of America; review of research proposals for National Science Foundation, Petroleum Research Fund.

Douglas G. Brookins

Editor for the international journal, Uranium.

Editorial Board for the International Journal of Applied Geochemistry.

Reviewed proposals for the National Science Foundation, American Chemical Society.

Reviewed scholarly papers for Science, Geology, Materials Research Society (Scientific Basis for Nuclear Waste Management VIII), Uranium.

Off campus talk: March 28, 1985, "WIPP: A Geologist's View", to the Westside Exchange Club.

Consultant to Oak Ridge National Laboratory for SERP (Sedimentary Rock Program).

660

Panelist on uranium mill tailings to the National Academy of Science - National Research Council.

Participated in the Workshop on Hydrology of Shale for Radwaste Disposal, Berkeley, CA, August 12-14, 1985.

Bryan C. Chakoumakos

Reviewed manuscripts or proposals for the following

D.O.E., Office of Basic Energy Sciences (one).

U.S.G.S. (one).

American Mineralogist (four).

Volunteer Abstractor for Mineralogical Abstracts.

Wolfgang E. Elston

Lectures on the eruption of Mount St. Helens, May 18, 1980, at Senior Day Care Centers and Santa Fe-Los Alamos German Club.

Reviewed manuscripts for:

Bulletin of Geological Society of America

Journal of Geophysical Research

Journal of Volcanology

Reviewed research proposals for:

National Science Foundation

Department of Energy

Rodney C. Ewing

Reviewed manuscripts, texts and proposals for the following

EOS

American Chemical Society, Petroleum Research Fund

Geochimica et Cosmochimica Acta

Physics and Chemistry of Minerals

American Mineralogist

National Science Foundation

Office of Basic Energy Sciences, Department of Energy

Harper and Row Publishers (physical geology text)

Consultant for

Los Alamos National Laboratory

Sandia National Laboratories

Served as a panel member for

National Academy of Sciences and National Research Council panel on the Waste Isolation Pilot Plant (Professor K. B. Krauskopf, chairman).

Department of Energy panel for Second-Generation Waste Form Selection and Evaluation.

John W. Geissman

Reviewed scholarly papers for

Geology

Economic Geology

Tectonics

Tectonophysics

Geological Society of America Bulletin

Journal of Geophysical Research

Reviewed proposals for

National Science Foundation

American Chemical Society-Petroleum Research Fund

Talks to off-campus groups

Geochemistry Division, Sandia National Laboratory, March 1, 1985.

Geosciences Department, New Mexico Institute of Mining and Technology, March 28, 1985.

Inyo Domes Scientific Working Group, American Geophysical Union Annual Meeting, December 8, 1985.

Jeffrey A. Grambling

Off-campus talks

"Precambrian metamorphism and deformation in north-central New Mexico": Department of Geology, New Mexico State University, Las Cruces, NM, April 11, 1985 (invited talk).

"Solid solution of Fe^{3+} and Mn^{3+} in aluminum silicate minerals from north-central New Mexico": Department of Geological Sciences, Southern Methodist University, Dallas, Texas, April 29, 1985 (invited talk).

"An overview of Proterozoic stratigraphy, deformation and metamorphism in northern New Mexico": Department of Geology, Northern Arizona University, Flagstaff, Arizona, November 18, 1985 (invited talk).

"The distribution, equilibrium, and metamorphic conditions of aluminum silicate minerals in northern New Mexico": Department of Geology, Northern Arizona University, Flagstaff, Arizona, November 18, 1985 (invited talk).

Meetings Chaired

6th International Basement Tectonics Conference, Santa Fe, NM, September 19, 1985 (Symposium: Basement tectonics and chronology of Precambrian rocks, Mid-Continent Region, USA).

98th Annual Meeting, Geological Society of America, Orlando, Florida, October 29, 1985 (Symposium: Metamorphic petrology I: geothermometry and geobarometry).

Reviewed Manuscripts, Proposals

National Science Foundation

American Chemical Society Petroleum Research Fund

Journal of Geology

Canadian Mineralogist

Sixth International Conference on Basement Tectonics

New Mexico Bureau of Mines and Mineral Resources

American Mineralogist

Geological Society of America

W. H. Freeman and Company

New Mexico Geology

Journal of Metamorphic Geology

Stephen P. Huestis

Reviewed proposal for National Science Foundation

Off-campus talk: "Some properties of the inverse problem for continental crustal heat production", Scripps Institution of Oceanography, May 17, 1985.

Instructor: Geophysics section of Sandia Labs INTEC course PH702: "Fundamentals of Geoscience".

Klaus Keil

Member, Advisory Committee on Comparative Planetology, International Union of Geological Sciences. 1982-1985.

Associate Editor, Journal of Geophysical Research, American Geophysical Union. 1982-1985.

Associate Editor, Journal "Chemie der Erde."

Consultant, Sandia National Laboratories, Albuquerque, New Mexico.

Reviewed several proposals submitted to NASA and NSF for funding.

Reviewed scientific papers submitted for publication in Geochimica et Cosmochimica Acta, Meteoritics, Science, Nature, Chemical Geology, Chemie der Erde, and Materials Research Society Symposium.

Member, Editorial Board, Journal "Chemical Geology."

Member, Editorial Board, Tschermak's Mineralogisch-Petrographische Mitteilungen, Vienna, Austria.

Member, Advisory Committee for the Institute of Geophysics and Planetary Physics, University of California, Los Alamos National Laboratory, Los Alamos, New Mexico (since 1984).

Several interviews with Frank Martinez, UNM Public Information, on activities in Institute of Meteoritics.

Chairman, Review Panel on Space Station Planetology Experiments (SSPEX), NASA Headquarters, Washington, D.C.

Chairman, Mars Observer Review Panel, NASA Headquarters, Washington, D.C.

Participated as a speaker at a briefing on "Geoscience Research at UNM" for Sandia National Laboratories Geosciences Division 1540 personnel. Topic of presentation "Electron microbeam and INAA Research in the Department of Geology and Institute of Meteoritics". March 1, 1985.

Hosted the visits to the Institute of Meteoritics of the following scholars, several of which stayed for longer time periods for the purpose of research and advanced training:

Dr. J. Berkley, Department of Geology, State University of New York, Fredonia, New York. January 2-16, 1985.

Dr. K. DeNault, Dept. of Geology, University of Northern Iowa, Cedar Falls, Iowa. January 7 - May 30, 1985.

Dr. L. Cabri, Canadian Geological Survey, Ottowa, Ontario, Canada.

Dr. Tom McCord, Planetary Geosciences Division, Hawaii Institute of Geophysics, Honolulu, Hawaii. March 6-8, 1985.

Dr. Jacques Danon, Centro Brasileiro de Pesquisas Fisica, Rio de Janeiro, Brazil. April 8-11, 1985.

Dr. Bevan French, NASA, Washington, D.C. April 9-10, 1985.

Dr. Lee Radziemsky, Department of Astronomy, New Mexico State University, Las Cruces, New Mexico. April 26, 1985.

Dr. Alfredo San Miguel, Department of Geology, University of Barcelona, Barcelona, Spain. April 30 - May 25, 1985.

666

Dr. Alan Binder, NASA Johnson Space Center, Houston, Texas. May 3-5, 1985.

Dr. E.A. King, Department of Geology, University of Houston, Houston, Texas. May 13-16, 1985.

G. Huss, American Meteorite Laboratory, Denver, Colorado. June 26, 1985.

Dr. J. Berkley, Dept. of Geology, State University of New York, Fredonia, N.Y. June 24 - July 3, 1985.

Dr. M. Drake, Dept. of Planetary Sciences, University of Arizona, Tucson, Arizona. August 26, 1985.

Dr. J. Bell, Planetary Geosciences Division, Hawaii Institute of Geophysics, University of Hawaii, Honolulu, Hawaii. November 10-13, 1985.

Interview with Dennis Heard, UNM Journalism student, on research in the Institute of Meteoritics. October 10, 1985.

Hosted Dr. Zeilick's Astronomy class in the Institute of Meteoritics. Gave lecture on significance of meteorites and showed Moon rocks in the microscope. December 12, 1985.

Cornelis Klein

"Recent advances in Mineralogy", lecture at the Colorado College, Colorado Springs, Colorado, February 6, 1985.

"Some geological and other impressions of the Ukrainian Shield", to the VIP series in Geology Department, February 27, 1985.

"Precambrian Iron Formations", for the Albuquerque Geological Society, April 16, 1985.

"Precambrian banded iron-formations: facts and questions", in Department of Geology G401 Colloquium Series, September 5, 1985.

"Precambrian Iron Formations: Facts and Questions", lecture at New Mexico Institute of Mining and Technology, October 24, 1985.

"Precambrian Iron Formations worldwide", lecture by C. Klein, Department of Geology, University of South Florida, November 1, 1985.

Reviewed scholarly papers and proposals for

Precambrian Research

The American Mineralogist

The National Science Foundation

The American Chemical Society

Represented Department of Geology at: Los Alamos, N.M. Geology Departments workshop, in Los Alamos, February 25 and 26, 1985; similarly at research presentations by Geology faculty at Sandia National Laboratories, March 1, 1985.

Albert M. Kudo

Presented a paper at New Mexico Tech, February 28, 1985.

Reviewed a grant proposal for NSF, Proposal #EAR-8518797.

Reviewed a paper for Journal of Geophysical Research.

Reviewed a paper for American Mineralogist.

Taught a Geochemistry section at Sandia National Laboratory for a Fundamentals of Geoscience course.

Some consulting for some mining companies.

Master Chairman of Physical Sciences Judges, NW Regional NM Science Fair.

Barry S. Kues

Consultations

Member of New Mexico Museum of Natural History paleontology advisory committee.

Advised Bureau of Land Management on paleontological resources of Carlsbad Resource area.

Reviewed manuscripts and/or proposals for

Geological Society of America Special Paper

New Mexico Geological Society Guidebook 36

New Mexico Journal of Science

American Chemical Society Petroleum Research Fund.

Media

Quoted in an article on the Bisti Badlands, February 1985 issue of New Mexico Magazine.

Appeared on "War in the West", a PBS documentary aired nationally (and on KNME-TV, Albuquerque, October 20), speaking on San Juan Basin paleontology.

Miscellaneous Lectures

Presented two lectures, "Geologic history of north-central New Mexico" and "Paleontology of north-central New Mexico" to UNM Southwest Studies Institute Class, June 3, 1985.

Spencer G. Lucas

Off-campus Talk

Feb. 20 University of California, Riverside, Dept. of Earth Sciences; invited lecture on the Cretaceous - Tertiary boundary, San Juan Basin, New Mexico.

Jan. - Sept. 13 Supervised renovation of the Geology Museum, Northrop Hall.

Head of Geology Department Curatorial Committee

Ian Mackinnon

Reviewed manuscripts and proposals for the following

Int. Clay Minerals Conf. Proceedings, Jour. Geophys. Research American Mineralogist, NASA Lunar and Planetary Geoscience Review Panel.

Consultant to Reservoir Diagenesis Section, Exxon Production and Research Co., Houston, Texas.

Presented sales pitch on suitability of Albuquerque and environs for next joint conference of Microbeam Analysis Society and the Electron Microscopy Society of America at 1985 General Meetings.

Leslie D. McFadden

Reviewed scholarly articles in

Annals of the Association of American Geographers

Decade of North American Geology Volume

870 Reviewed proposed book: Soils of the Past for George Allen and Urwin, publishers.

Reviewed proposed abstracts for the Geological Society of America Annual Meeting, 1985, (Geomorphology Section).

Reviewed National Science Foundation proposals

Co-organizer of Geological Society of America Penrose Conference

Lee A. Woodward

Taught "Fundamentals of Geoscience" for Sandia Laboratories personnel, January and February, 1985 (in-house course at Sandia Laboratories facilities).

Reviewed research proposals for National Science Foundation.

Robyn Wright

Reviewed manuscripts for:

The Journal of Sedimentary Petrology and New Mexico Geology.

November 11, Presented talk to Sandia National Laboratories entitled "Sediment textural characteristics of fluvial sandstones in Mesaverde strata at the Multi-Well Experiment Site, northwestern Colorado".

Designed earth science test units for American College Testing (ACT) exams.

Advised S. Landregan, New Mexico Museum of Natural History, on development of petroleum maturation exhibit.

Crayton J. Yapp

Reviewed proposals for

American Chemical Society - Petroleum Research Fund

National Science Foundation

Reviewed manuscripts for

American Mineralogist

Geochimica et Cosmochimica Acta

Nature

Off-campus talks

"Stable isotope research at UNM", presented at Sandia National Laboratories, March 1, 1985.

"D/H variations in Albuquerque groundwaters", presented at the Environmental Improvement Division, Santa Fe, NM, March 29, 1985.

672

NON-TEACHING UNIVERSITY SERVICE

Roger Y. Anderson

Chairperson, UNM Quaternary Studies Program

Douglas G. Brookins

UNM Research Allocations Committee (1983-86).

UNM Promotion Advisory Committee for Natural Sciences and Mathematics, College of Arts and Sciences (1983-86, Chairman 84-85).

UNM Tenure Advisory Committee for Arts and Sciences (1984-85).

UNM Science Education Advisory Committee.

UNM-APS Science Advisement Committee.

UNM Geology Department, (a) Graduate Committee, (b) Geochemist search committee, (c) Rb-Sr laboratory use committee, (d) INAA laboratory use committee.

Bryan C. Chakoumakos

Supervisor of X-ray diffraction laboratory (Geology).

Assisted in the design of mineralogy/petrology exhibits for the Geology Department museum renovation.

Liaison between the Geology and Radiation Safety Departments, for monitoring x-ray equipment users.

Wolfgang E. Elston

Chairman, Department Search Committee for Organic Geochemist

Chairman, 3 Ph.D. committees (S. Seaman, F. Abitz, G. Sarkar)

Co-Chairman, 4 M.S. committees (W. Criswell, C. Bryan, F. Smith, R. Albright)

Rodney C. Ewing

President's Committee for Strategic Planning (subcommittee for review of the Medical Center).

President's Faculty Advisory Council.

Undergraduate Advisement Committee & Advisor, Department of Geology

Continued responsibility for the supervision of the Harding Pegmatite and the Electron Microscopy Laboratory (with Ian Mackinnon).

John W. Geissman

Undergraduate Committee, Geology Department

Undergraduate Honors Advisor, Geology Department

Jeffrey A. Grambling

Departmental:

Petrology Committee

Supervisor, thin-section laboratory

Undergraduate Financial Aid Committee

UNM:

Selection committee, Annual Research Lectureship

Research Policy Committee

Speakers Bureau

Stephen P. Huestis

Geology Department Undergraduate Committee

Member: A & S Graduate Committee

Klaus Keil

Administration of the Institute of Meteoritics and its collections.

Chairman and member of several thesis and dissertation committees in the Department of Geology.

Service on UNM-University of Sao Paulo, Brazil, joint research and exchange program committee.

Served as Director of the Caswell Silver Foundation, Department of Geology, UNM.

Served on several M.S. and Ph.D. comprehensive examinations committees.

Served on UNM Honorary Degree Committee.

Hosted the visits of several prospective geology graduate students to UNM.

Hosted 21 Club, University of New Mexico. October 15, 1984.

Served on President's Committee on Research and Graduate Affairs, University of New Mexico.

Hosted the visit of Dr. Gustavson of the National Science Foundation in the Electron Microbeam Analysis Facilities of the Department of Geology and Institute of Meteoritics, on behalf of the Center for High Technology Materials. October 25, 1985.

Provided optical microscope facilities of Institute of Meteoritics to Dr. Larry Strauss and his post-doctoral fellow, Dr. Akashi of UNM's Anthropology Department.

Hosted tour of the Electron Microbeam Analysis Facilities by the Board Members of UNM's Center for High Techonolgy Materials. December 10, 1985.

Cornelis Klein

Chair, Geology Department

Member, Council of Chairs, College of Arts and Sciences

Secretary, Caswell Silver Foundation, Geology Department

Member, President's Advisory Committee on Science and Technology

Member, President's Faculty Advisory Council

Member of two M.S. student committees

Member of two Ph.D. student committees

Albert M. Kudo

Chairman of UNM-Science Colloquium Committee.

Chairman of UNM-Sandia Colloquium Committee.

Chairman of Departmental Undergraduate Committee.

Faculty advisor of Geology Honorary Society, Sigma Gamma Epsilon.

Faculty representative on Leisure Services Advisory Council.

Faculty in charge of Departmental Microscopes.

Chairman of four M.S. Thesis committees.

Co-chairman of one B.S. Honors Thesis committee.

676

Member of several M.S. and Ph.D. Thesis and dissertation committees.

Member of many graduate comprehensive examination committees.

Barry S. Kues

Assistant Chairman, Geology Department.

UNM Graduate Committee.

UNM Southwest Studies Committee.

Geology Department Graduate Student Advisor; Chairman, Graduate Committee.

Revised departmental handbook for graduate students.

Helped create two new exhibits in Geology Department renovated museum.

Graduate Student Committees:

Geology Department: Chairman, 1 M.S. and 1 Ph.D. Committee; Reader, 3 M.S. thesis committees.

Other: Reader on 1 Biology Department Ph.D. Committee and on 1 Anthropology Department M.S. committee.

Participated in Albuquerque Public Schools Summer Science Research Assistantship Program by supervising a high school science student in projects done within the Geology Department (summer, 1985).

Spencer G. Lucas

Jan. - Sept. 13 Supervised renovation of the Geology Museum, Northrop Hall.

Head of Geology Department Curatorial Committee

Ian D. R. Mackinnon

Supervised installation and certification of research and teaching transmission electron microscopes; assisted in the selection and purchase of all equipment for the transmission electron microscopy laboratories (1984) and supervised installation, operation and instruction in the use of all equipment.

Trained one laboratory technician; supervisor of same (Stuart van Deusen) whilst awaiting security clearance for employment at Sandia National Laboratory.

Assisted in the design and implementation of exhibits for the Geology Department Museum and the New Mexico Museum of Natural History.

Presented guest lectures on analytical electron microscopy in Geol. 518L for Dr. K. Keil, UNM.

Hosted the following international visitors:

Dr. J. Thompson, Research School of Chemistry, Australian National University, Canberra, ACT Australia.

Dr. C. Cuff, Department of Geology, James Cook University, Townsville, QLD Australia.

Dr. T. White, Lucas Heights Research Establishment, Australian Atomic Energy Commission, Sydney, NSW Australia.

Leslie D. McFadden

Chairman of the UNM Geology Department Scholarship Committee

Prepared nominations for Geology undergraduates and graduates for:

Who's Who Among Students in American Universities (Awardee: Michael E. Jackson)

Society of Sigma Xi Award

Albuquerque Gem and Mineral Club Award

New Mexico Geological Society Undergraduate Scholar Award (Awardee: Michael E. Jackson)

Undergraduate Committee Member, Department of Geology

Member of Ad Hoc Committee considering Geoscience Employment and Undergraduate Program

Co-director, Quaternary Studies Laboratory

Thesis Committee Member/Reader - 2 M.S. theses

Volunteer Participant in Class (Non-Sexist Counseling, Assistant Professor Vonda Long).

Stephen G. Wells

Geology Department Committees:

Graduate Admissions

Field Equipment

Photogeology/Map Library

Ad-Hoc Committee for Geology Employment Trends

Search-Committee member for Low-Temperature Geochemist

Lee A. Woodward

Chairman of 7 M.S. thesis committees; 3 theses completed during 1985.

Member of serveral other thesis and dissertation committees.

Robyn Wright

Member of Graduate Admissions Committee.

Member of Undergraduate Committee.

Member of Energy Exploration Education Committee.

Director of Jon F. Callender Reading Room.

Departmental chairperson of American Association Petroleum Geologists Distinguished Lecture Series.

Invited and hosted:

February 7, Dr. E. G. Kauffman, American Association Petroleum Geologists Distinguished Lecturer.

April 12-14, Dr. R. A. Davis, Caswell Silver Lecturer; I lead a field trip in conjunction with visit.

October 16-17, Dr. A. W. Bally, Energy Exploration Education Lecturer.

October 17-18, Dr. D. R. Kingston, American Association Petroleum Geologists Distinguished Lecturer.

Undergraduate Advisor - met with 10 advisees.

Primary Graduate Advisor - (5 M.S., 2 Ph.D. students).

Reader on 15 M.S. Committees (3 defended) and 4 Ph.D. committees.

Served on 8 M.S. examinations.

Served on 4 Ph.D. examinations.

Organized and co-led (with Spencer Lucas) the Sedimentology Brown Bag seminars.

Crayton J. Yapp

Member of Geology Department's scholarship committee

Member of Geology Department's graduate committee

Member of Geology Department's ad hoc committee to review undergraduate employment opportunities and relevant training

Served on three Ph.D. and one M.S. comprehensive exam committee

Served on one M.S. thesis committee

Responsible for operation of Geology Department's stable isotope laboratory

Provided "tours" and explanations of stable isotope laboratory operations at various times for Dr. Tom Farer, President of UNM; Dr. John Hayes, Indiana University; Dr. Douglas Rumble, National Science Foundation

NEW SCHOLASTIC HONORS AND FELLOWSHIPS

Douglas G. Brookins

Biographical statement included in Marquis's Who's Who in the World (7 Ed.).

Biographical statement included in Marquis's Who's Who in America (43 Ed.).

Biographical statement published in Who's Who in Frontier Science and Technology.

Research Conference on Radiogenic Isotopes and Evolution of Sedimentary Basins, sponsored by Amer. Assoc. Petro. Geol., March 22-24, 1985, New Orleans, LA.

International symposium on Isotopes in the Sedimentary Cycle, Obernai, France, July 1-5, 1985.

Sixth International Symposium on Basement tectonics: Santa Fe, NM, September 16-20, 1985.

International symposium on Coupled processes affecting the performance of a high level nuclear waste facility, Berkeley, CA, September 18-20, 1985.

National Academy of Science - National Research Council, panel on uranium mill tailings, meetings in Washington, D.C. April 22-23, July 30 - August 1, September 10-11.

Geochemistry of shale workshop, May 23-25, Albuquerque, NM.

Wolfgang E. Elston

Awarded University Foundation Fellowship, University of Auckland, New Zealand, for 1985-86 sabbatical leave.

Awarded Royal Society (Great Britain) Guest Research Fellowship for 1985-86 sabbatical leave.

Sabbatical leave for 1985-86 academic year approved by UNM Board of Regents.

Rodney C. Ewing

Selected for Who's Who in the West, and nominated for inclusion in the 1985 Esquire Register.

Jeffrey A. Grambling

UNM Presidential Lecturer

Who's Who in Frontiers of Science and Technology

Personalities of America

The International Directory of Distinguished Leadership

American Men and Women of Science

Klaus Keil

Listed in "International Men of Achievement".

Listed in "Who's Who in America".

Appointed Presidential Professor of Geology, University of New Mexico.

Albert M. Kudo

Promotion to full professor.

Leslie D. McFadden

Selected for inclusion in Who's Who in Frontiers of Science and Technology (2nd Edition, 1985).

Co-convenor of Geological Society at America Penrose Conference

Stephen G. Wells

Biographical statement included in Marquis' Who's Who in Frontiers of Science and Technology (2nd Edition)

Lee A. Woodward

Elected to membership in Society of Economic Geologists.

Robyn Wright

UNM Nominee: American Association of University Women Recognition Award

SABBATICALS, LEAVES OF ABSENCE AND TRAVEL

Roger Y. Anderson

Sabbatical leave, January, 1985 to January, 1986.

U.S. Geological Survey, staff scientist, Branch of Pacific Marine Geology, Menlo Park, CA, February to August. Independent research in Arizona and manuscript preparation, September to December.

Activities:

Research on continental slope sedimentation off central and northern California. Preparation of manuscripts and reports as follows:

Manuscripts:

Persistent seasonal upwelling and varves off the coast of central California: 9 ms p.

Coauthors: E. Hemphill and J. V. Gardner.

Microscale bioturbation - Oxygen indicator for nearly anaerobic marine environments: 9 ms p.

Coauthors: J. V. Gardner and E. Hemphill.

Reports:

Lamination-bioturbation index for continental slope sediments: U.S. Geological Survey, Pacific Marine Branch Internal Report, July, 1985, 12 p.

Turbidites and silt laminations on the continental slope off California: U.S. Geological Survey, Pacific Marine Branch Internal Report, July, 20 p.

Seminar Presentations:

"Climatic change: how fast? How much? - Evidence from varves", May, 1985.

"Varves and bioturbation cycles in slope sediments off California", July, 1985.

Douglas G. Brookins

Winsford, United Kingdom, for work on new thermal ionization mass spectrometer, July 7-12, 1985.

August, 1985, Field work in the Carlsbad, NM area.

June-July, 1985, field work in the San Pedro Mountains, NM.

July 1985, field work in the Prescott, Arizona area.

Feb. 1985, delegate to Pacific Southwest Region - UAHC Biennial, Newport Beach, CA.

Nov. 1985, delegate to National UAHC Biennial, Los Angeles, CA.

Bryan C. Chakoumakos

February 7-11, Tucson, Arizona: Attended the Tucson Gem and Mineral Show, Friends of Mineralogy symposium lectures, the Tucson Planetarium, the Sonora Desert Museum, and collected ultramafic nodules at Kilbourne Hole, New Mexico.

March 29, Los Alamos, New Mexico: Visited Frank Clinard with Rodney Ewing to discuss joint research.

May 14-16, Fredericton, New Brunswick: Attended the Mineralogical Association of Canada annual meeting.

May 23-26, Washington College, Maryland: Attended the Mineralogical Society of America short course "Microscopic to Macroscopic".

686 May 26-29, Baltimore, Maryland: Attended the American Geophysical Union annual spring meeting.

May 29-June 4, Blacksburg, Virginia: Visited with G. V. Gibbs and made theoretical molecular modeling calculations for joint research.

June 22, Picuris Range, New Mexico: Toured the Harding pegmatite and collecting research samples.

June 29, Picuris Range, New Mexico: Toured the Harding Pegmatite to collect research samples.

July 2-6, Gila Wilderness, New Mexico: Field research of Zeolite occurrences.

July 29-30, Los Alamos, New Mexico: Attended the DOE, Office of Basic Energy Sciences review of materials science programs at Los Alamos National Laboratories.

July 31, Albuquerque, New Mexico: Attended the DOE, Office of Basic Energy Sciences review of materials science programs at Sandia National Laboratories.

August 5-8, Snowmass, Colorado: Attended the annual Denver X-ray Conference.

August 20-23, Bryson City, North Carolina: Met with the Collaborative Working Group on Radiation Effects in Crystalline Nuclear Waste Forms.

August 31-September 1: Picuris Range, New Mexico: shot a field video with Kathleen Affholter and did field research on pegmatites.

September 7, Picuris Range, New Mexico: Assisted with a New Mexico Museum of Natural History field trip to the Harding pegmatite led by Kathleen Affholter.

September 21, Pecos and Picuris Ranges, New Mexico: Basement Tectonics field trip.

September 27-29, San Juan Mountains, Colorado: New Mexico Museum of Natural History field trip to Durango-Silverton.

October 19, Picuris Range, New Mexico: Accompanied Mineralogy class field trip to the Harding Pegmatite, and surveyed corner marker with Bernabe and Gilbert Griego.

October 22-31, Orlando, Florida: Attended the annual meeting of the Geological Society of America and the Mineralogical Society of America.

November 16, Picuris Range, New Mexico: Toured the Harding pegmatite and visited adjoining claims with Ted Glass of Tri-State Metals Corporation.

November 22, Picuris Range, New Mexico: Visited the Harding pegmatite to collect research samples.

Rodney C. Ewing

January 10-25, Haifa, Israel: To conduct work in collaboration with Professor Yehuda Eyal of the Technion University (supported by the Binational Science Foundation).

February 9-11, Tuscon, Arizona: To attend the Tuscon Gem and Mineral Show and Friends of Mineralogy Symposium.

March 9-10, Chicago, Illinois: To attend the Materials Research Society meeting for the creation of a new journal, the Journal of Materials Research.

March 12-16, Sweden: To attend the program committee meeting for the Ninth International Symposium on the Scientific Basis for Nuclear Waste Management held in Stockholm.

March 29, Los Alamos, New Mexico: To meet with Frank Clinard concerning collaborative work on radiation effects.

April 12-18, San Francisco, California: To attend the Council meeting of the Materials Research Society.

May 19-21, Washington, D.C.: To attend the NAS/NRC panel meeting on the WIPP.

June 22-July 6, Honolulu, Hawaii: To do field work (with R. Cowan) on the alteration of basalt glasses (supported by Argonne National Laboratory).

July 30, Los Alamos, New Mexico: To attend the annual BES review for LANL.

August 11-14, Washington, D.C.: To attend the NAS/NRC panel review of the WIPP.

August 20-23, Bryson City, North Carolina: To attend the Radiation Effects Collaborative Working Group Meeting.

September 4-17, Berlin-Stockholm: To visit the Hahn-Meitner Institute in Berlin, W. Germany, to present papers at the Ninth International Symposium on the Scientific Basis for Nuclear Waste Management, and to attend the technical advisory group meeting of the JSS research consortium.

October 23-30, Orlando, Florida: To attend the MSA short course and present a paper at the annual meeting of the Geological Society of America.

November 1-2, Cloudcroft, New Mexico: To attend the President's retreat for research universities in New Mexico (represented the Geology Department).

December 1-6, Boston, Massachusetts: To attend the Council meeting of the Materials Research Society.

John W. Geissman

January 1-4, West-Central Nevada, field work

February 19, Los Alamos, discussion of potential research on Valles Caldera drill core

May 5, western New Mexico, field work

May 12, west-central New Mexico, field work

May 23-June 17, southern Nevada, west-central Nevada, and central Utah, field work

June 29-July 9, Rapid City, South Dakota to Jackson, Wyoming, teaching portion of University of Michigan's summer field camp.

July 10-July 19, Beartooth Mountains, Montana, field work

August 18, Albuquerque volcanoes, field work

Jeffrey A. Grambling

January 26, 1985: Field trip to Trigo Canyon, Manzano Mountains, NM

February 25-26, 1985: Meetings with staff at Los Alamos National Laboratories, Los Alamos, NM

April 26, 1985: Attended Spring Meeting of the New Mexico Geological Society, Socorro, NM

May 6, 1985: Field trip to Mora, New Mexico

May 19 - August 17, 1985: Geologic field research, northern New Mexico

November 10, 1985: Field trip to Picuris Range (near Taos), NM

December 4, 1985: Field trip to Picuris Range (near Taos), NM with Dr. D. Rumble, NSF Petrogenesis Program Director

Stephen P. Huestis

January 15, 1985, Los Alamos National Laboratories: Collaboration with M.E. Ander.

August 16-21, 1985, U.S. Geological Survey, Golden Colorado: Collaboration with R. P. Buland.

Klaus Keil

Santa Fe, New Mexico. Presented talk at Los Alamos-Santa Fe German Club. January 20, 1985.

Houston, Texas. Attended Lunar and Planetary Science Conference, Johnson Space Center, chaired session, co-authored three talks, and attended meeting of the Lunar Science Council. March 10-15, 1985.

Tokyo, Japan. Attended 10th Symposium on Antarctic Meteorites, National Institute of Polar Research, and presented two invited talks. March 24 - April 2, 1985.

La Jolla, California. Presented invited talk at Chemistry Department, University of California. June 3-9, 1985.

Washington, D.C. Chaired review panel on Space Station Planetary Science Experiments, NASA Headquarters. June 12-14, 1985.

Los Alamos, New Mexico. Attended review panel of Institute of Geophysics and Planetary Physics, Los Alamos National Laboratory. June 19-21, 1985.

Mainz, West-Germany. Attended Workshop on Antarctic Meteorites, Max Planck Institute of Chemistry. July 10-13, 1985.

Bordeaux, France. Attended Meteoritical Society Meeting, chaired session on "Achondrites and mesosiderites", presented one talk, and co-authored two talks. July 16-20, 1985.

Louisville, Kentucky. Attended Electron Microbeam Analysis Society Meeting and presented one invited plenary talk. August 5-9, 1985.

Greenbelt, Maryland. Chaired Mars Observer Review Panel at NASA Goddard Space Flight Center, Greenbelt, Maryland. September 29 - October 6, 1985.

Farmington, New Mexico. Presented invited talk at Four Corners Geological Society Meeting. December 6 - 7, 1985.

Cornelis Klein

Attended Precambrian Paleobiology Research Group Meeting, UCLA, February 15-21, 1985.

NSF sponsored field research in the Kuruman area of South Africa, with N. J. Beukes, March 4-19, 1985.

692

Participated in the 1985 New Mexico Geological Society Field Conference, September 25-28, 1985.

Participated in New Mexico Mining Association meetings, Carlsbad, N.M., October 10-12, 1985.

Attended Geological Society of America Annual Meeting, Orlando, Florida, October 28-31, 1985.

Invited lectures off-campus and/or at other institutions, are listed under "Other Professional Activities", this report.

Albert M. Kudo

September 15-22, Travel to Toronto, Ontario, Canada, visited the Geology Department at the University of Toronto.

Numerous trips to Jemez Volcanic Field, Tetilla Peak (southwest of Santa Fe), Truth or Consequences area, for research by myself and students.

November 18, 19, Elephant Butte Reservoir, Boat trip around the lake to prepare a geological field trip log for the next annual N.M. Geological Society Field Conference in Fall of 1986.

Barry S. Kues

Travel - Field Research

January 4	Tucumcari area.
January 19	Manzano Mountains.
March 14-15	Tucumcari-Santa Rosa area.
March 31	Truth or Consequences area.
April 4	Santa Rosa area.
April 7	Manzano Mountains.

May 16-17	Tucumcari area.
May 23	Cuervo Hill (east of Santa Rosa).
May 29-30	Tucumcari-Portales area.
June 6	Jemez Springs area.
June 14-July 3	California, Washington and Oregon (examined Pacific Coast landslide deposits, Mt. St. Helens, John Day Fossil Beds, etc.).
July 11	Manzano Mountains.
July 16	Jemez Springs.
July 17-19	Clovis area and west-central Texas Cretaceous localities.
November 3	Jemez Springs.
Dec. 20-22	Lake Valley and Deming areas.

Ian D. R. Mackinnon

January 5-12: Houston - discussions with colleagues at Johnson Space Center; consulting at Exxon Production and Research Co.

February 2-5: Houston - discussions with colleagues at Johnson Space Center; consulting at Exxon Production and Research Co.

April 28-30: Houston - discussion with colleagues at Johnson Space Center.

June 3-6: Houston - discussion with colleagues at Johnson Space Center.

July 31-August 2: Houston - discussion with colleagues at Johnson Space Center.

August 9-11: Houston - discussion with colleagues at Johnson Space Center.

August 28-30: Houston - discussion with colleagues at Johnson Space Center.

September 11: Houston - discussion with colleagues at Exxon Production and Research Co.

October 27-30: Houston - discussion with colleagues at Johnson Space Center.

November 17-27: Department of Metallurgy and Materials Science, University of New South Wales, Sydney and Research School of Earth Sciences, Australian National University, Canberra, Australia - discussion and consultation on electron microscopy topics.

Leslie D. McFadden

January 3-5, Menlo Park, California: Participation in meeting with U.S. Geological Survey and other University colleagues discussing research accomplishments, field activities of 1984 and to discuss research and field plans for spring, summer, 1985.

January 31, Albuquerque, New Mexico: Meeting with John Bezy, Pecos National Monument Supervisor to discuss research collaboration with the Quaternary Studies Program at the University of New Mexico.

March 11-19, Mojave Desert, California: Conducted grant-supported field studies of soils on alluvial fans.

April 26-28, Barstow, California: Consulting on soil-geomorphic project at Fort Irwin, California.

August 7-9, Golden, Colorado: Participation in meeting of Soil Analysis and Research Project group members to discuss research and field results, activities and future plans.

Stephen G. Wells

Taught Summer Field Class (G429, Geologic Field Study of Northern Rocky Mountains) for Department of Geology, Indiana University in Montana

Professional travels for research, meetings, and teaching to: Costa Rica, Montana, Colorado, Southern California

Lee A. Woodward

Geological field work:

March 9-16

May 9-15

September 25-October 3

October 14-15

October 17-18

October 28-November 4

November 12-14

November 29-30

December 27-30

696

Robyn Wright

Travel-Field Research:

Jan. - Dec., Numerous trips to east-central New Mexico to conduct research in Cretaceous strata.

Jan. 16-17, Travel to east-central New Mexico to advise M.S. student in field.

Feb. 26, Field excursion to Gallup area with D. Nummedal (Louisiana State Univ.) and D. J. P. Swift (Arco) to study Cretaceous shelf sandstones.

Mar. 18, Travel to Hagan Basin to evaluate field trip sites for Geol. 441.

Mar. 22-24, Travel to east-central New Mexico to advise M.S. student in field.

Mar. 29-31, Travel to San Juan Basin to study Point Lookout Sandstone.

Apr. 13-14, Led informal field trip with R. A. Davis (Univ. South Florida) and Geol. 441 students to San Juan Basin.

May 13-19, Travel to San Juan Basin to teach sedimentology field camp with J. B. Anderson (Rice University).

June 15 - July 13, Travel to conduct initial field reconnaissance in Peruvian coastal basins.

Aug. 11-14, Attended Annual Midyear Meeting of Society Economic Paleontologists and Mineralogists, Golden, Colorado.

Sept. 12-15, Travel to Grand Junction and Rifle, Colorado to conduct final field study for Sandia contract.

Sept. 16-17, Travel to Gallup area with R. Zech (U.S.G.S.) to evaluate field aspects of joint research in Point Lookout Sandstone.

Sept. 26-27, Attended New Mexico Geological Society Fall Field Conference near Santa Rosa, New Mexico.

Nov. 25-26, Aerial photography and reconnaissance in east-central New Mexico.

PUBLIC SERVICE

Douglas G. Brookins

Elected President, Congregation Albert (495 families), 1985-87 (served as Vice President through 30 June 85)

Listed as energy lecturer for Society of Gifted and Talented Students, Albuquerque

Elected to Board of Directors, AREA (Americans for rational energy alternatives)

Answered numerous question by public on radioactive waste disposal, WIPP site, indoor radon, etc.

Identified rocks/minerals for public.

Bryan C. Chakoumakos

Mineral exhibit judge: Albuquerque Gem and Mineral Show.

Jeffrey A. Grambling

Identification of rocks and minerals for the public.

Participant, Career Guidance Institute, Albuquerque Chamber of Commerce.

Presented talk, "The Geology of Albuquerque", to Annual Meeting, American Society of Building and Construction Inspectors, September 25, 1985.

Presented talk, "The Geology of Albuquerque", to Volunteers for the Outdoors, November 26, 1985.

Klaus Keil

Many private showings of Moon rocks to interested citizens, school classes, civic groups, etc., many of which were after working hours and on weekends.

Investigated without charge, many rocks suspected to be meteorites and brought to the Institute by citizens.

Presented talk on "A Voyage through Our Solar System" to Los Alamos - Santa Fe German Club (in German), Santa Fe, New Mexico. January 20, 1985.

Presented talk on "A Voyage through Our Solar System", for the benefit of the New Mexico Museum of Natural History, Kimo Theater, Albuquerque, New Mexico. January 30, 1985.

Presented talk to Senior Citizens Rock Hound Club on "A Voyage through Our Solar System", Palo Duro Senior Center, Albuquerque, New Mexico. May 23, 1985.

Presented talk on "Origin of meteorites: From asteroids, comets, Moon and Mars", Rio Rancho Senior Citizens Rock Hound Club, Rio Rancho, New Mexico. September 3, 1985.

Guided tour through Meteorite Museum, Electron Microbeam Analysis Facilities, and Optical Microscopy Laboratories for Rio Rancho Senior Citizens Rockhound Club members. October 18, 1985.

Provided exhibit material to New Mexico Museum of Natural History "Changing Exhibit Program" on "Microspace".

Participated in New Mexico Museum of Natural History docent training videotape series. September 25, 1985.

Gave workshop on "An illustrated voyage through our solar system", including viewing of Moon rocks in the microscope,

for the German classes at the Albuquerque Academy (in German). October 17, 1985.

Made available to the following scientists and institutions, the electron microprobe and scanning electron microscope facilities in the Department of Geology and Institute of Meteoritics and instructed their personnel in the use of the equipment.

Dr. A. Ehlmann, Department of Geology, Texas Christian University, Fort Worth, Texas.

Institute for Explosive Research, New Mexico Institute of Mining and Technology, Socorro, New Mexico.

Dr. P. Kyle and students, Dept. of Geology, New Mexico Institute of Mining and Technology, Socorro, New Mexico.

Dr. K.J. DeNault, Dept. of Earth Sciences, University of Northern Iowa, Cedar Falls, Iowa.

Dr. J.L. Berkley, Dept. of Geology, State Univerity of New York, Fredonia, New York.

Dr. W.A. Gross, College of Engineering, University of New Mexico, Albuquerque, New Mexico.

Signetics Corporation, Albuquerque, New Mexico.

Sperry Corporation, Albuquerque, New Mexico.

Mr. J. Evans, College of Business Administration, University of New Mexico, Albuquerque, New Mexico.

Albert M. Kudo

Identification of rocks and minerals for public.

Assisting Dr. K. Affholter, Curator of Geology, NM Museum of Natural History on many aspects of volcanology. Provided

photos, rock samples, and answered many questions.

Answering many questions posed by public when they phone the Department.

Barry S. Kues

April 11 - Two talks on dinosaurs to Mesa Vista Elementary School classes.

Identified fossils and rocks for the public.

Spencer G. Lucas

March 16-17 Prepared UNM Geology exhibit for New Mexico Gem & Mineral Show, State Fair grounds, Albuquerque.

May 1 Public lecture for New Mexico Museum of Natural History, Kimo Theatre, Albuquerque; title: "Dinosuars from the Bisti badlands, New Mexico".

Nov. 13 Two lectures at Hayes Middle School, Albuquerque on the Geology of New Mexico.

Nov. 23 Talk to Masonic Order, Albuquerque, on Bisti Badlands.

Dec. 30 Tour of Geology Museum for Weblos Pack 8, Albuquerque.

Leslie D. McFadden

Answered questions for several members of general public regarding garden soil, subsidence and damage to residences, etc.

Active participation in U.S. Volleyball Association, Sun Country region

Stephen G. Wells

Presentation on "Landscape stability" to staff members of the New Mexico Environmental Improvement Division, Santa Fe.

UNM Speaker's Bureau presentation on "Environmental Geology in New Mexico" to employees of Jacobs Engineering, Albuquerque.

Robyn Wright

Volunteer - Girl Scouts of America, Chapparal Council

Crayton J. Yapp

Provided informal consultation to the New Mexico Environmental Evaluation Group

703

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GRADUATE PROGRAM

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Summary

The Geology Department regards the education and training of graduate students as an important function, for it is through this process that graduate students acquire the expertise and skills to become successful professional geologists. During the Fall 1985 semester 67 students were working toward the M.S. and Ph.D. degrees in the department. Of these, 46 were M.S. students and 21 were Ph.D. students. The male/female ratio was 54/13. The number of full-time students was 53; the number of part-time students (course-work finished and in final stages of completing theses and dissertations) was 14. There were no significant changes in these numbers during the Spring 1986 semester, except that the number of Ph.D. students increased to 23. A total of 11 Master's and one Ph.D. degree were awarded by the Department in the 1985-86 year (Appendix III).

Most graduate students in residence during the Fall 1985 semester were supported financially. Of the 53 full-time students, 19 were supported by half-time or full-time teaching assistantships, 14 by Research Assistantships, 3 by Silver/Kelley or NSF fellowships, and one foreign student was supported by his government. A list of all graduate students supported by assistantships on major fellowships is presented in Appendix V. Many graduate students also received smaller scholarships and fellowships from funds donated by alumni and other individuals, geological organizations such as the New Mexico Geological Society, and by private companies (Appendix V). Travel by

some students to scientific meetings was also supported by the Department. Many of the part-time students were working as geologists outside the university while completing their graduate work.

Several graduate students received special recognition during the report period. Keith Taylor was selected as one of two outstanding teaching assistants at UNM in 1985. A doctoral student, Chris Menges, received a J. Hoover Mackin award for an outstanding Ph.D. dissertation proposal in the field of geomorphology. He is the second UNM student in 5 years to receive this prestigious award. Keith Kelson was given an award for Best Student Paper presented at the New Mexico Geological Society Spring meeting. Several graduate students published papers and presented talks at professional meetings based on their research.

The Geology Department revised some aspects of its M.S. and Ph.D. programs in an effort to instill greater flexibility into the program, streamline student progress, and provide more efficient and useful advisement of students in all stages of their graduate careers. A significant change in the M.S. exam is a reduction of committee members from five to four. Two of the four members are now chosen by the student in consultation with his advisor; the other two are assigned by the departmental chairman. Graduate student input played an important role in the discussions of these changes.

Admissions

The number of applicants to the graduate program continued to decline from the high of 355 during 1983. A total of 284 applications were received for Spring-Fall, 1985, and this decreased to 162 for Spring-Fall, 1986. This is an expected consequence of the current slump in the mineral and petroleum industries, traditionally the largest employers of geology graduates, as well as budget cutbacks in Federal hiring (e.g., U.S. Geological Survey, Bureau of Land Management). The rather bleak employment conditions have now been in effect for about five years. This has substantially cut the number of undergraduate geology majors nationwide, producing fewer potential graduate students. Tables 1-3 summarize the characteristics of applicants for the Fall 1985 through Fall 1986 semesters.

The Department continues to be very selective in admitting applicants to the graduate program. Applicants admitted for the Fall 1986 semester had an average undergraduate GPA of about 3.3, and on average scored at about the 75th percentile in all categories of the Graduate Record Exam. The number of new students enrolling in our program for the first time during the Fall 1985 and Spring 1986 semesters was 13, less than the expected number. Increased competition for dwindling numbers of good new graduate students, coupled with relatively low salaries for teaching assistants offered by UNM compared with competing schools are likely explanations. The department has responded

with more aggressive recruitment, including offers of $750 fellowships to augment teaching assistantship offers to the best applicants. The results are encouraging; at least 13 new students have indicated they will be starting graduate programs at UNM in Fall 1986. The total graduate population is expected to increase slightly over the present 67.

Table 1: DEPARTMENT OF GEOLOGY - SUMMARY OF GRADUATE APPLICANT DATA FOR: FALL, 1985

A. Applicants to Graduate Program	Male	Female	TOTAL	Minority	Foreign	Total PhD	Total MS
Accepted	31	14	45	--	--	9	36
Not Accepted	73	31	104	3	9	18	86
TOTALS	104	45	149	3	9	27	122
Additional Incomplete Applications	78	25	103				
TOTAL APPLICANTS	182	70	252				
Total Enrolled	6	1	7	0	0	2	5

B. Financial Aid Data (Assistantships and Fellowships)			
Aid Offered	11	6	17
Aid Accepted	2	1	3
% Accepting our offer	18%		

C. Graduate Record Exam Data

	Verbal	Quantitative	Analytical	Advanced: Geology	GPA
a) Accepted applicants					
Average raw score	585	651	610	667	BS=3.44
Average percentile	78	74	---	79	MS=3.67
b) Applicants not accepted					
Average raw score	500	601	551	584	BS=3.04
Average percentile	56	63	---	52	MS=3.48

203

Table 2: DEPARTMENT OF GEOLOGY - SUMMARY OF GRADUATE APPLICANT DATA FOR: SPRING, 1986

A. Applicants to Graduate Program	Male	Female	TOTAL	Minority	Foreign	Total PhD	Total MS
Accepted	7	2	9	---	2	5	4
Not Accepted	10	0	10	---	1	---	10
TOTALS	17	2	19	---	3	5	14
Additional Incomplete Applications			4	---			
TOTAL APPLICANTS			23				
Total Enrolled			6				

B. Financial Aid Data (Assistantships and Fellowships)

Aid Offered	1 ½T TA-ship
Aid Accepted	1 ½T TA-ship
% Accepting our offer	100%

C. Graduate Record Exam Data and Grades

	Verbal	Quantitative	Analytical	Advanced: Geology	GPA
a) Accepted applicants					
Average raw score	554	599	577	642	BS=3.23
Average percentile	70	63	---	74	MS=3.58
b) Applicants not accepted					
Average raw score	not calculated				
Average percentile					

Table 3: DEPARTMENT OF GEOLOGY - SUMMARY OF GRADUATE APPLICANT DATA FOR: FALL, 1986

A. Applicants to Graduate Program	Male	Female	TOTAL	Minority	Foreign	Total PhD	Total MS
Accepted	32	12	44	---	3	10	34
Not Accepted	39	5	44	1	5	9	35
TOTALS	71	17	88	1	8	19	69
Additional Incomplete Applications			51				
TOTAL APPLICANTS			139				
Total Enrolled	Data available, August, 1986						

B. Financial Aid Data (Assistantships and Fellowships)			
Aid Offered	8	4	12
Aid Accepted	4	2	6
% Accepting our offer			50%

C. Graduate Record Exam Data and Grades

	Verbal	Quantitative	Analytical	Advanced: Geology	GPA
a) Accepted applicants					
Average raw score	588	657	624	660	BS=3.27
Average percentile	76	75	75	76	MS=3.69
b) Applicants not accepted					
Average raw score	502	557	539	556	BS=2.78
Average percentile	56	52	59	42	MS=3.61

040

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APPENDICES

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I. RESEARCH GRANTS AND CONTRACTS IN THE DEPARTMENT OF GEOLOGY AND THE INSTITUTE OF METEORITICS ACTIVE IN 1985

ROGER Y. ANDERSON

NSF (ended 5/85) $ 64,805
"Effects of Mt. St. Helens tephra on lakes in Washington."

DOUGLAS G. BROOKINS

Sandia National Laboratories (3/85 - 3/86) $ 40,000
"Geochemical studies at the WIPP site, New Mexico."

U.S. Department of Energy (9/84 - 3/85) $300,000
"New thermal ionization mass spectrometer."

Oak Ridge National Labs (Martin Marietta) (4/85 - 9/85) "Shale Geochemistry Workshop, UNM." $ 22,000

Oak Ridge National Labs (Martin Marietta) (5/85 - 1/86) "Radwaste Natural Analog Catalog." $ 19,800

JONATHAN F. CALLENDER

NSF (ended 2/85) $ 84,083
"Structural petrology, metamorphism and tectonic history of Precambrian rocks in the Picuris Range, New Mexico."

WOLFGANG E. ELSTON

NSF (11/83 - 10/86) $120,000
"Cenozoic extensional orogeny of the New Mexico segment of the Basin and Range province."

NASA (5/84 - 4/85) $ 34,490
"Application of volcanology to lunar and planetary geology."

NSF (3/85 - 8/86) $ 10,000
"Pyroclastic eruptions of Mt. St. Helens, May 18, 1980."

NSF (9/85 - 8/87) $ 43,000
"Pyroclastic eruptions, Mt. St. Helens, May 18, 1980."

NASA (5/85 - 5/86) $ 32,000
"Application of volcanology to lunar and planetary geology."

RODNEY C. EWING

Department of Energy/OBES (8/1/84 - 7/30/87) $225,800
"Radiation affects and annealing kinetics in crystalline complex Nb-Ta-Ti oxides."

Sandia National Laboratories (2/11/85 - 9/30/86) "Characterization of glass and ceramic materials (with Ian Mackinnon)." $ 69,880

Binational Science Foundation, through Technion University, Haifa, Israel (10/1/84 - 9/30/86) "Isotopic fractionation due to alpha recoil damage in crystalline materials" (with Y. Eyal). $ 50,900

Argonne National Laboratories (10/83 - 9/86) $130,500
"Long-term stability of borosilicate nuclear waste forms: application of natural analogues."

Argonne National Laboratories - graduate student award to Rachel Cowan (5/1/85 - 6/30/86) "Alteration and long-term durability of nuclear waste borosilicate glasses." $ 12,000

JOHN W. GEISSMAN

NSF (9/84 - 2/86) $ 56,015
"Paleomagnetic investigations of the Stillwater complex and associated units, Stillwater County, Montana" (transferred from Colorado State Univ.).

NSF (2/1/85 - 8/31/86) $ 54,000
"Paleomagnetic evaluation of Mesozoic-Cenozoic deformation in the Walker Lane region, west-central Basin and Range Province."

714

Anaconda Minerals Company (open) $ 6,500
"Paleomagnetic investigations of basal series rocks, Stillwater Complex, Montana."

UNM RAC (11/84 - 6/85) $ 2,496
"Paleomagnetism and rock magnetism of clinker deposits, San Juan and Powder River basins, western United States."

NSF (12/84 - 12/85) $ 5,428
"Acquisition of magnetic susceptibility/anisotropy of magnetic susceptibility measurement instrumentation and associated hardware/software."

American Chemical Society (11/84 - 8/87) $ 32,000
"Paleomagnetic and structural investigation of the tectonic history of the Early Jurassic Humboldt lopolith and associated units, Fencemaker allochthon, west-central Nevada."

NSF (8/85 - 7/87) $ 50,000
"Acquisition of cryogenic magnetometer systems (standard access), and related equipment, paleomagnetism laboratory."

RAC (11/85 - 6/86) $ 1,860
"Paleomagnetic and structural study of the Mineral Mountains, central Utah."

Sandia National Laboratories (10/85 - 9/86) $ 29,995
"Paleomagnetic and rock magnetic investigations."

N. M. Bureau of Mines and Mineral Resources (8/85 - 4/86) "Paleomagnetic studies of lower Paleozoic Intrusive and sedimentary rocks, Florida Mountains, southern New Mexico." $ 950

JEFFREY A. GRAMBLING

NSF (11/83 - 4/87) $ 98,521
"The effects of minor elements on metamorphic phase relations."

Anaconda Minerals Inc. (6/84 - 5/85) $ 8,000
"Geologic, economic potential and structural features associated with stratabound and discordant precious-metal mineralization, northern New Mexico."

NSF (7/84 - 12/86) $ 67,440
"Foliation development, porphyroblast nucleation and growth, and deformational history" (with Tim Bell).

N.M. Bureau of Mines and Mineral Resources $ 5,430
(5/85 - 8/85) "Initiation of mapping in the Taos and Rincon Ranges, New Mexico."

Los Alamos National Laboratories (6/85 - 5/86) $ 11,000
"Metamorphic and geochemical studies of Proterozoic granites and migmatites, Santa Fe range, New Mexico."

UNM Faculty Microcomputer Program (12/85 ——) $ 1,299
"Use of a microcomputer as a teaching aid in metamorphic petrology."

KLAUS KEIL

NASA (2/84 - 1/85) $235,000
"Origin and evolution of meteorite parent bodies and the Moon."

Sandia National Laboratories (10/84 - 9/85) $ 50,801
"Halite mineralogy of the Salado Formation."

Sandia National Laboratories (10/84 - 9/85) $ 78,939
"Geological support work of Nevada nuclear waste storage investigations."

NSF via University of Northern Iowa (1/85 - 12/85) "Physical and chemical conditions of the lower crust as deduced from xenoliths in lavas of the Lencite Hills, Wyoming." $ 7,429

NASA (2/85 - 1/86) $246,500
"Origin and evolution of meteorite parent bodies and the moon."

NASA Graduate Student Researchers Fellowship $ 17,966
to Tammy Dickinson (5/85 - 5/86) "Ge abundances in lunar rocks: did the Moon form totally molten?"

Sandia National Laboratories (10/85 - 9/86) $ 86,163
"Geological support work for Nevada Nuclear Waste storage investigations."

Sandia National Laboratories (10/85 - 9/86) $ 51,365
"Mineralogy of the Rustler Formation."

CORNELIS KLEIN

NSF (11/84 - 4/86) $ 29,200
"Comparative studies of several Precambrian iron-formations and some manganese deposits."

NSF (4/85 - 3/87) $153,603
"Geochemistry and sedimentology of some essentially unmetamorphosed Precambrian iron-formation sequences."

National Geographic Society (1985 - 1986)
"The earliest history of life"
(coinvestigator in $153,450 research grant administered at UCLA).

ALBERT M. KUDO

UNM RAC (9/84 - 6/85) $ 1,200
"Origin of volcanic rocks composing Orizaba, Popocatepetl, and Iztoccihuatl, Mexico."

LESLIE D. McFADDEN

U. S. Geological Survey (9/84 - 9/85) $ 28,500
"Analysis of soils from chronosequences in the Western U. S."

U. S. Geological Survey (9/85 - 9/86) $ 30,665
"Analysis of soils from chronosequences in the Kyle Canyon, Nevada, and Cima volcanic field, California."

U. S. Geological Survey (9/85 - 9/86) $ 9,592
"Soils-geomorphic relations in the San Gorgonio Pass region, eastern Transverse Ranges, southern California."

N. M. Engineering Research Institute $ 1,000
(6/85 -7/85) "Analysis of the cation exchange capacity and exchangeable bases of asphalt aggregate."

STEPHEN G. WELLS

UNM RAC (1/85 - 12/85) $ 2,150
"Tectonic geomorphology of the southwestern coast of Costa Rica: a comparison of different plate tectonic settings."

LEE A. WOODWARD

N. M. Bureau of Mines and Mineral Resources $ 2,000
(1/85 - 12/85) "Geology of French Mesa 7.5 minute quadrangle, Rio Arriba County, New Mexico."

ROBYN WRIGHT

Sandia National Laboratories (10/84 - 9/85) $ 30,000
"Vertical progressions in settling velocity (SETVEL) data as an indicator of depositional process and environment: Mesaverde Group strata, Piceance Creek Basin, Northwestern Colorado."

UNM RAC (1/85 - 6/85) $ 2,500
"Cyclic event stratigraphy in Cretaceous marine sandstones of northern New Mexico."

Sandia National Laboratories (10/85 - 9/86) $ 30,000
"Vertical progressions in setting velocity (SETVEL) data as an indicator of depositional process and environment: fluvio-deltaic Mesa Rica Sandstone, east-central New Mexico."

CRAYTON J. YAPP

NSF (2/84 - 7/86) $ 66,200
"Stable isotope and chemical study of the mineral system goethite-hematite with applications to iron-rich sedimentary rocks."

NSF (3/84 - 8/85) $ 70,000
"Acquisition of a gas source, light element, isotope ratio mass spectrometer."

TOTAL GRANTS AND CONTRACTS, IN EFFECT, CALENDER 1985 $2,920,965

UNM RESEARCH ALLOCATIONS COMMITTEE GRANTS $ 10,206

II: Professional Lectures to the Department of Geology and the Institute of Meteoritics, Fall, 1985 and Spring, 1986.

Dr. Bruce Black August 29, 1985	"The realities of hydrocarbon exploration."	Visiting Distinguished Professor of Petroleum Geology, UNM, and President, Black Oil, Inc., Farmington, New Mexico
Dr. Cornelis Klein September 5, 1985	"Precambrian banded iron-formations: facts and questions."	Department of Geology University of New Mexico, Albuquerque, New Mexico
Dr. Bruce M. Loeffler September 12, 1985	"The color of minerals."	Department of Geology, Colorado College, Colorado Springs, Colorado
Dr. Daniel B. Stephens September 19, 1985	"Natural groundwater recharge in semi-arid environments."	Department of Geoscience, New Mexico Institute of Mining and Technology, Socorro, New Mexico
Dr. Mary J. Kraus September 24, 1985	"Sedimentary and tectonic setting of early Tertiary quartzite conglomerates, northwestern Wyoming."	Department of Geological Sciences, University of Colorado, Boulder, Colorado

719

Professional Lectures to the Department of Geology
and the Institute of Meteoritics

Dr. G. Randy Keller October 3, 1985	"Regional Geophysics of the Rio Grande Rift: a global perspective."	Department of Geological Sciences, University of Texas at El Paso, Texas
Dr. Thomas J. Shankland October 10, 1985	"Does free water exist in the intermediate and deep crust?"	Los Alamos National Laboratory, Los Alamos, New Mexico
Dr. Albert W. Bally October 16, 1985	"Convergent Plate Boundaries: Fold-Thrust Belts and Associated Basins."	Rice University, Houston, Texas
Dr. Albert W. Bally October 17, 1985	"Divergent Boundaries and Passive Margin Basins."	Rice University, Houston, Texas
Dr. James C. G. Walker October 17, 1985	"Pumping Iron on the Archean Beach." (= Oxidation - Reduction Balance on the Early Earth)	Space Physics Research Lab, Dept. of Atmospheric and Oceanic Science, University of Michigan, Ann Arbor, UNM - Sandia Distinguished Lecturer
Dr. Aaron Yair October 17, 1985	"The Study of Present Day Processes and its Application to the Understanding of the Desert Environment at a Geological Time Scale"	Institute of Earth October Sciences, Hebrew University, Jerusalem, Israel

Professional Lectures to the Department of Geology
and the Institute of Meteoritics

Dr. Tim White October 17, 1985	"HREM and crystal chemistry study of Barium-Cesium -Titanate Hollandites."	Lucas Heights Research Labs, Australian Atomic Energy Commission
Dr. David R. Kingston October 18, 1985	"Worldwide Basin Classification and Oil-Play Perdiction"	Esso Exploration, Inc. Houston, Texas
Dr. Ian D. R. Mackinnon October 24, 1985	"Applications of transmission electron microscopy (TEM) to geologic problems."	Department of Geology, University of New Mexico, Albuquerque, New Mexico
Dr. John C. Eichelberger November 7, 1985	"Drilling very young igneous intrusions."	Geochemistry Division, Sandia National Labs, Albuquerque, New Mexico
Dr. Kent C. Condie November 14, 1985	"Geochemical constraints on the origin of continents."	Department of Geoscience, New Mexico Institute of Mining and Technology, Socorro, New Mexico
Dr. Malcolm Ross November 21, 1985	"How does science translate into public policy?"	Branch of Igneous and Geothermal Processes, U.S. Geological Survey, Reston, Virginia

Professional Lectures to the Department of Geology
and the Institute of Meteoritics

Dr. Douglas Rumble December 5, 1985	"Hydrothermal Graphite"	Geophysical Laboratory and National Science Foundation, Washington, D.C.
Dr. James B. Thompson, Jr. December 5, 1985	"Stratigraphic Crystallography" "The anatomy of the Northern Appalachians"	Caswell Silver Distinguished Lecturer, Department of Geology, Harvard University, Cambridge, Massachusetts
Dr. James B. Thompson, Jr. December 6, 1985	"Reaction space and mineral assemblages"	Caswell Silver Distinguished Lecturer, Department of Geology, Harvard University, Cambridge, Massachusetts
Dr. Horton Newson January 23, 1986	"The composition of the Earth's mantle and crust: evidence for accretion and core formation."	Research Scientist, Institute of Meteoritics, UNM.
Dr. W. S. Baldridge January 30, 1986	"Physical processes of magma generation along the Rio Grande Rift."	Earth and Space Sciences Division, Los Alamos National Laboratory, NM.
Mr. Alan Jay Kaufman February 6, 1986	"Covariance of $\delta\ ^{13}C$ and $\delta\ ^{18}O$ in a banded iron-formation and its genetic implications."	PH.D. candidate, Departmentof Geology, Indiana University, Bloomington, IN.

Professional Lectures to the Department of Geology
and the Institute of Meteoritics

Mr. Larry Smith February 13, 1986	"Laramide alluvial sedimentation, paleogeography and tectonics: recent advances and current problems."	Ph.D. candidate, Department of Geology, UNM.
Dr. Jeffrey A. Grambling February 20, 1986	"The geology, metamorphism, and tectonics of Proterozoic rocks in northern New Mexico."	Department of Geology, UNM.
Dr. Crayton J. Yapp February 27, 1986	"Stable isotope geochemistry of low temperature iron oxides."	Department of Geology, UNM.
Dr. John W. Shomaker March 6, 1986	"Hydrogeology: is it Geology, Engineering, or Law?"	Consulting Geologist and Adjunct Associate Professor, UNM.
Dr. Samuel S. Adams March 13, 1986	"New approaches for mineral deposit models: Grants uranium region, N.M., as a case study."	Consulting Geologist, Boulder, CO.
Dr. Linda D. Raedeke March 27, 1986	"Platinum group element metallogenesis in the Stillwater Complex, Montana."	Chevron Oil Field Research Co., La Habra, CA.
Dr. Henry O. A. Meyer April 3, 1986	"Recent advances in kimberlite and diamond research."	Department of Geosciences, Purdue University, West Lafayette, IN.

423

Professional Lectures to the Department of Geology
and the Institute of Meteoritics

Dr. James B. Thompson, Jr. April, 10, 1986	"Stratigraphic Crystallography."	Department of Geological Sciences, Harvard University. Caswell Silver Distinguished Lecturer.
Dr. Carol L. Stein April 17, 1986	"Brine chemistry and diagenetic alteration in the Solado Formation, southeastern New Mexico."	Earth Sciences Division, Sandia National Laboratory, Albuquerque, NM.
Dr. Charles E. Chapin April , 1986	"Two-Stage Laramide Orogeny in southwestern United States: tectonics and sedimentation."	NM Bureau of Mines and Mineral Resources, Socorro, N.M. AAPG Distinguished Lecturer.
Dr. Robert M. Garrels May 1, 1986	"Cycling of sediments through geologic time."	Department of Marine Science, University of South Florida, St. Petersburg, FL. Caswell Silver Distinguished Lecturer.

III: GRADUATES FOR 1985-1986

The following students completed degrees during the report period.

B.A.

Cathy Applegarth
Michael Schwantes

B.S.

Mark Bauder
Brian Elias
Gwinn Hall
Brant Hayenga
Douglas Heath
Penny Hobbie
Michael Jackson
Roger James
Leonard Loughran
Kenard Mize
Curtis McHaley
Charles Reynolds
Marei Richards
Timothy Richardson
Michael Space

M.S.

Elizabeth M. Colvard, "Petrogenesis of the Sunlight Basin Intrusions, Park County, Wyoming."

Berton W. Coxe, "The Virginius Vein Ore Deposit, Northwestern San Juan Mountains, Colorado: A Study of the Mineralogy, Structure, and Fluid Inclusions of an Epithermal Base-Metal and Silver Vein in a Volcanic Environment."

Richard Lee Ford, III, "The Effect of Quaternary Climatic Change on Alluvial-Fan Sedimentation in the Harquahala Plain, Sonoran Desert, West-Central Arizona."

Joel Grimm, "Late Cenozoic Geomorphic History of the Lobo Canyon Area of the Mount Taylor Volcanic Field, Cibola County, New Mexico."

Michael Charles Hultgren, "Tectonics and Stratigraphy of Part of the Southern Gallina-Archuleta Arch, French Mesa and Llaves Quadrangles, Rio Arriba County, New Mexico."

Keith Irvin Kelson, "Long-term Tributary Adjustments to Base-level Lowering, Northern Rio Grande Rift, New Mexico."

Stephen R. Maynard, "Precambrian Geology and Mineralization of the Southwestern Part of the New River Mountains, Maricopa and Yavapai Counties, Arizona."

Karol Gillespie Nimick, "Geology and Structural Evolution of the East Flank of the Ladron Mountains, Socorro County, New Mexico."

David A. Plummer, "The Petrology and Structure of Proterozoic Rocks Northeast of Salida, Colorado."

David Barry Ward, "Rb-Sr Dating Techniques Applied to a Metamorphosed Proterozoic Terrane in the Southern Sangre de Cristo Mountains, North-Central New Mexico."

Jo Ann T. Weber, "Oscillatory Compositional Zoning in Grossular-Andradite Garnet."

Ph.D.

Gautam Sarkar, "Late Cenozoic Low-Temperature Near-Surface Tungsten-Bearing Manganese Oxide (Romanechite) Veins: Blackie Mine, Fra Cristobal Mountains, Sierra County and Selected Localities in Socorro, Grant, and Hidalgo Counties, Southwestern New Mexico."

IV: TEACHING AND RESEARCH ASSISTANTSHIPS
1985 - 1986

NAME	TA/RA	PROJECT DIRECTOR	FUNDING
R. Abitz	RA	Brookins	NSF
C. Amindyas	GA	Husler	Geology Public Serv.
R. Beard	TA	Woodward	Department
M. Bersch	RA	Keil	NASA
S. Brothers	Fellowship	Grambling	Silver Found.
C. Bryan	Fellowship	Elston	NSF
J. Callian	TA	Geissman	Department
J. Clark	TA	Woodward	Department
R. Cowan	TA/RA	Ewing	Dept./ANL
B. Criswell	RA	Elston	NSF
T. Dickinson	RA	Keil	NASA
B. Epling	RA	Keil	NASA/Inst. Meteor.
D. Erskine	TA	Kudo	Department
Y. Enzel	RA	McFadden	USGS
J. Faulds	Fellowship	Elston	Silver Found.
R. Glenn	RA	Keil	Sandia
S. Harlan	RA	Geissman	NSF
B. Harrison	RA	McFadden	USGS
J. Holbrook	TA	Woodward	Department
M. Hultgren	TA	Woodward	Department
A. Hunt	TA	Kues	Department

NAME	TA/RA	PROJECT DIRECTOR	FUNDING
D. Iseri	TA/GA	Woodward/Geissman	Dept./RAC
M. Jercinovic	RA	Ewing	ANL
P. Karas	GA	McFadden	USGS
M. Kisucky	RA	Wright	Sandia
G. Lumpkin	RA	Ewing	BES
D. Lusby	RA	Keil	NASA
C. Menges	TA	Woodward	Department
B. Menne	TA	Woodward	Department
R. Metcalf	RA	Elston	Los Alamos
R. North	TA	Wright	Department
J. Perisco	TA	Woodward	Department
J. Saxton	RA	Geissman	NSF
S. Seaman	GA/RA	Husler/Elston	Public Serv./NSF
T. Sewards	RA	Keil	Sandia
B. Singer	TA	Woodward	Department
L. Smith	TA	Lucas	Department
R. Smith	TA/RA	Grambling	Department
K. Taylor	TA	Lucas	Department
J. Warner	TA	Grambling	Department
J. Wesling	GA/TA	McFadden	USGS
C. Williams	TA	Kidd	Natural Science
M. Williams	RA	Grambling	NSF

V: STUDENT SCHOLARSHIPS AND RESEARCH AWARDS
1985 - 1986

ALBUQUERQUE GEM AND MINERAL CLUB SCHOLARSHIP

Adrian Hunt	$ 300.00

AMERICAN GEOLOGICAL INSTITUTE

Juanita Zuni	$ 750.00

GENERAL THOMAS D. CAMPBELL MEMORIAL SCHOLARSHIP

Mary J. Boone	$ 900.00
Christine Newsome	$ 900.00

GEOLOGY RESEARCH AND SCHOLARSHIP FUND

Robert Beard	$ 100.00
Bruce Epling	$ 100.00
Rosemary Glenn	$ 100.00
Mike Hultgren	$ 100.00
Brad Singer	$ 100.00
Roger Smith	$ 100.00
Keith R. Taylor	$ 100.00
Steve Whiteley	$ 100.00

GEOLOGY ALUMNI FELLOWSHIP FUND

Rachel Cowan	$ 350.00
Mike Kisucky	$ 350.00
Terry Sewards	$ 350.00
Larry Smith	$ 350.00
Mike Williams	$ 350.00
Barbara Menne	$ 200.00
Todd Smith	$ 200.00
John Ritter	$ 125.00
Shelia Seaman	$ 125.00

GEOLOGY PUBLIC SERVICE SCHOLARSHIP FUND

Paul Bauer	$2,300.00
Brad Singer	$ 339.00
C. William Criswell	$ 300.00
Mike Kisucky	$ 277.00
Terry Sewards	$ 225.00
Gautam Sarkar	$ 200.00
Jim Callian	$ 100.00
Penny Hobbie	$ 58.00
Shirley Adams	$ 50.00

730

HARRY AND MABEL F. LEONARD SCHOLARSHIP FUND

Susan E. Rich	$2,050.00
Mike Jackson	$1,700.00
Mary J. Boone	$1,100.00
Paula J. Stout	$1,000.00
Steve Brooks	$ 500.00
Mark Mohorcich	$ 500.00
Christine Newsome	$ 500.00

JAMES DREW PFEIFFER MEMORIAL AWARD

Mike Jackson	$ 118.00

NEW MEXICO BUREAU OF MINES

Larry N. Smith	$2,100.00

SOCIETY OF ECONOMIC PALEONTOLOGISTS & MINERALOGISTS (ROCKY MOUNTAIN SECTION)

Larry N. Smith	$1,000.00

NEW MEXICO GEOLOGICAL SOCIETY GRANTS-IN-AID

Larry N. Smith	$ 500.00
John Persico	$ 350.00
Jeff Clark	$ 300.00
Barbara Menne	$ 300.00
Robert Beard	$ 250.00

ALBUQUERQUE PETROLEUM ASSOCIATION

Susan E. Rich $1,000.00

RODNEY C. RHODES MEMORIAL SCHOLARSHIP

Susan E. Rich $ 165.00

J. PAUL FITZSIMMONS OUTSTANDING SOPHOMORE AWARD

Paula J. Stout

SHERMAN A. WENGERD OUTSTANDING JUNIOR AWARD

Susan E. Rich

STUART A. NORTHROP OUTSTANDING SENIOR AWARD

Michael E. Jackson

VINCENT C. KELLEY OUTSTANDING FIELD GEOLOGIST AWARD

Scott Johnson

VI: GEOLOGY ALUMNI FELLOWSHIP FUND CONTRIBUTORS 1985-1986

Kathleen Affholter

F. W. Bachhuber

Julia Berger

Saleh M. Billo

Bryan Chakoumakous

William L. Chenoweth

Tom Evans

Rodney and Jerri Ewing

James R. Ezell

David B. Givens

Craig and Martha Goodknight

Harry J. Graff

Jeffrey A. Grambling

Patrick J. Gratton

Alberto and Marilyn Gutierrez

James, Brian and Kathryn Huber

David and Rebecca Jagnow

Cornelis Klein

Douglas and Marilyn Krohn

John G. Kuhn

Jean LaPaz

Moon J. Lee

Winifried Leopoldt

Bill Lovejoy

James Lee Martin

Randy Merker

Blanche M. Moreno

David L. Paffett

Greg and Christy Pino

Irving Rapaport

W. Colson Schaab

Carol Condie Scott

W. L. Shaffer

Martin Steinpress

Ralph G. Stevenson, Jr.

Arvid A. Stromquist

David R. Swenson

Patricia M. Todd

Otto M. Vrooman

Lawrence H. Wagner

Mr. and Mrs Alexander Wanek

Richard and Janet Warren

Carol Jean Spencer Wolcott

Lee and Katheryn Woodward

D. Zieglar

Robert E. Zilinski

CORPORATE MATCHING CONTRIBUTIONS TO FELLOWSHIP FUND

Conoco, Inc.

Chevron

Shell Oil

Santa Fe Southern Pacific

Phillips Petroleum

GEOLOGY DEPARTMENT FUND

Phillips Petroleum

American Institute of Mining Engineers

Geoscience Consultants Ltd.

The Annual Report of the Institute of Meteoritics

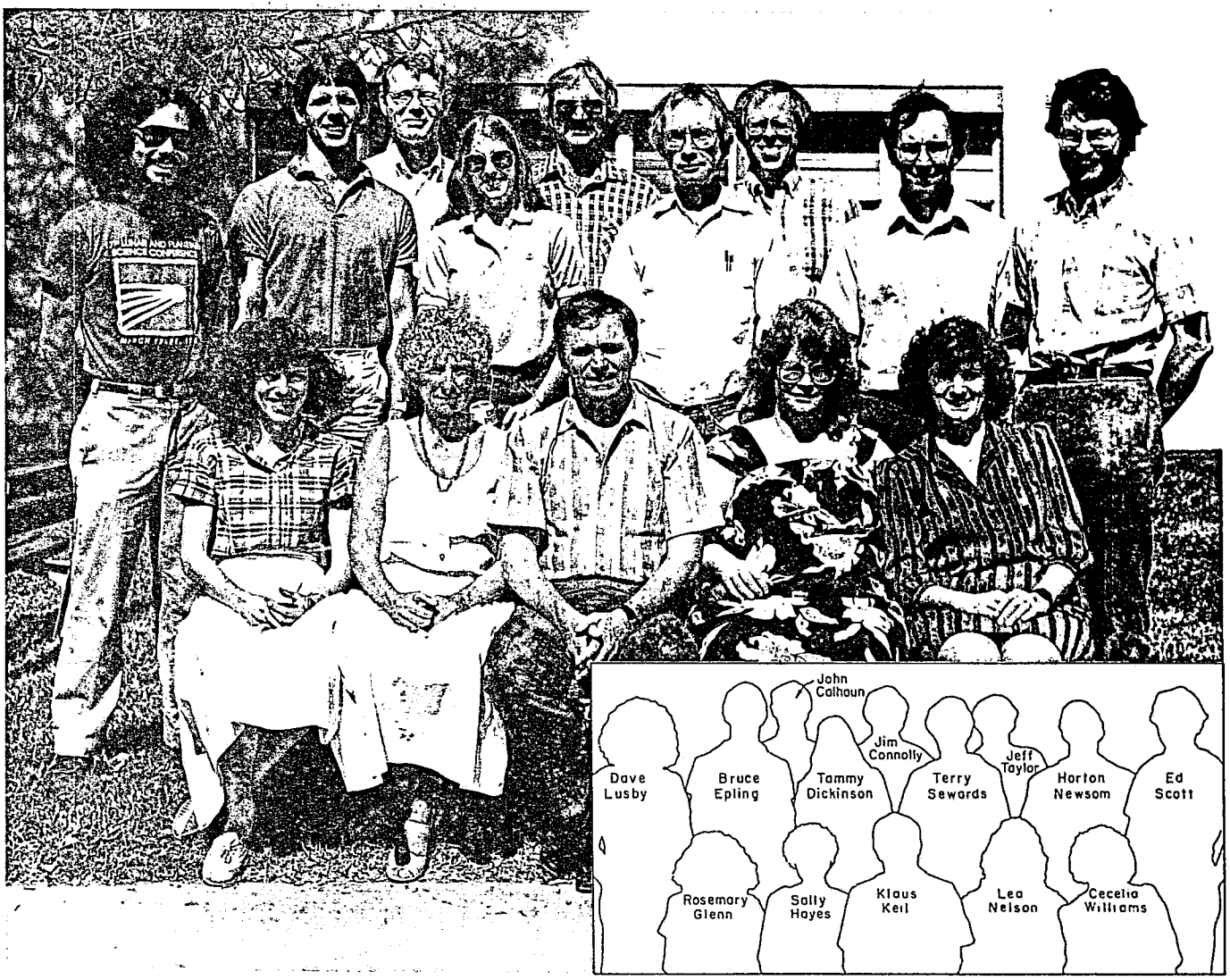
July 1, 1985 to June 30, 1986

Klaus Keil, Director

Institute of Meteoritics
Department of Geology
University of New Mexico
Albuquerque, NM 87131, USA

Table of Contents

		Page
1.	Table of Contents	2
2.	Institute Staff	3
3.	General Departmental Information	4
	3.1 Research	4
	3.1.1. Formation and Evolution of Chondrites and Their Parent Bodies (Supported by NASA).	9
	I. Origin of Primitive Components in Chondrites	9
	II. Nature of Metamorphorphism and Brecciation in Chondrite Parent Bodies	11
	III. Other Meteorite Studies	13
	3.1.2. Origin and Evolution of Differentiated Meteorites (Supported by NASA)	14
	3.1.3. Origin and Evolution of the Moon (Supported by NASA)	15
	3.1.4. Impact Processes on Earth and Mars (Supported by NASA)	17
	3.1.5. Petrologic and Geochemical Investigations in Support of Engineering and Design Studies for a High-level Nuclear Waste Repository in Silicic Volcanic Tuff, Nevada Test Site (Supported by Sandia National Laboratories)	18
	3.1.6. Mineralogical Characterization of Rock Samples from the WIPP Site (Supported by Sandia National Laboratories)	20
	3.2 Teaching	20
	3.3 Public Service	21
4.	Composite of Individual Biographical Supplements	22
	4.1. Teaching	22
	4.2. Publications	22
	4.2.1. Scientific Articles Published in Major National and International Reviewed Journals; Scientific Publications of the Institute of Meteoritics; as well as Books	22
	4.2.2. Abstracts Published in Proceedings of Meetings and in Journals	24
	4.2.3. Papers Submitted or in Press	25
	4.2.4 Abstracts Submitted or in Press	27
	4.2.5. Professional Papers Read	27
	4.3. Other Research Projects or Creative Work in Progress or Completed During Period	29
	4.4. Activities in Learned and Professional Societies	30
	4.4.1. Offices Held	30
	4.4.2. Meetings Attended	31
	4.4.3. Presentations at Professional Society Meetings	32
	4.5. Other Professional Activities	34
	4.6. Non-Teaching University, College and Department Service	36
	4.7. Advanced Study and New Scholastic Honors, Fellowships, etc.	37
	4.8. Sabbaticals, Leaves of Absence, Summer Teaching Elsewhere, Travel, etc., During Period.	39
	4.9. Public Service	42


John Calhoun
Jim Connolly
Jeff Taylor
Dave Lusby
Bruce Epling
Tammy Dickinson
Terry Sewards
Horton Newsom
Ed Scott
Rosemary Glenn
Sally Hayes
Klaus Keil
Lea Nelson
Cecelia Williams

2. Institute Staff

Dr. Klaus Keil, Director and Presidential Professor of Geology
Ms. Lea Nelson, Secretary
Ms. Sally Hayes, Accountant
Dr. G.J. Taylor, Senior Research Scientist
Dr. E.R.D. Scott, Senior Research Scientist
Dr. H.E. Newsom, Research Scientist
Dr. Cyrena A. Goodrich, Post-doctoral Fellow
Dr. A.J. Ehlmann, Visiting Scholar
Dr. J.A. Berkley, Visiting Scholar
Dr. Carle Pieters, Visiting Scholar
Dr. R. Bild, Visiting Scholar
Dr. H. Gies, Visiting Scholar
Dr. H. Planner, Visiting Scholar
Mr. G.H. Conrad, Microprobe Specialist
Mr. J.R. Connolly, Staff Scientist
Mr. J. Calhoun, Photographer
Mr. T. Servilla, Preparator
Mr. M.G. Bersch, Graduate Research Assistant
Ms. T.L. Dickinson-DeNault, Graduate Research Assistant
Mr. B. Epling, Graduate Research Assistant
Ms. Rosemary T. Glenn, Graduate Research Assistant
Mr. M.R. Jercinovic, Graduate Research Assistant
Mr. D. Lusby, Graduate Research Assistant
Mr. T. Sewards, Graduate Research Assistant
Mr. S. Hayden, Undergraduate Research Assistant

3. General Departmental Information

The Institute of Meteoritics, founded in 1944 (one of the oldest institutions of its kind in the world), continued to develop vigorously during the report period as one of the leading centers in research and teaching of Meteoritics, Cosmochemistry and Planetary Sciences. The major research, teaching and public service activities in the Institute during the report period may be summarized as follows:

3.1 Research

Research activities of staff and students of the Institute of Meteoritics cover a wide range of topics, mostly aimed at understanding of the origin and early history of our solar system and the evolution of the planets. Our research during the report period has resulted in the publication of

twenty-two scientific articles in major national and international journals (see 4.2.1, #s 1-22 of this Report), as well as in the publication of five abstracts of papers presented at national and international conferences (see 4.2.2, #s 23-27). During the report period, twenty-six papers were in press or were submitted for publication to major reviewed journals (see 4.2.3, #s 28-53). Furthermore, four abstracts were submitted for publication or are in press (see 4.2.4., #s 54-57). In addition, staff and students presented the results of their research in the form of thirty-four professional papers at national and international meetings (see 4.2.5, #s 58-91). The extensive involvement of students in original research projects in the Institute of Meteoritics is particularly important for their education and advanced training. Specifically, students were three times senior authors and seven times co-authors of major scientific articles; five times senior authors and five times co-authors of major scientific articles that are submitted or in press; presented four professional talks and co-authored four professional talks before national and international meetings. Staff members of the Institute were on forty professional travel assignments in this country and abroad (see 4.8) and students were on twelve such assignments. Note that all these trips were paid for by funds provided by outside funding agencies through grants and contracts.

We continued 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. During the report period, grants and contracts totalling $849,732.00 were in effect. Funding came from the National Aeronautics and Space Administration, The National Science Foundation, and Sandia National Laboratories.

Our research activities attracted many foreign and domestic researchers to the Institute of Meteoritics for the purpose of short-term study, research and lectures. These were:

1. Dr. J. Berkley, Dept. of Geology, State University of New York, Fredonia, N.Y. June 24 - July 3, 1985.

2. Dr. M. Drake, Dept. of Planetary Sciences, University of Arizona, Tucson, Arizona. August 26, 1985.

3. Dr. J. Bell, Planetary Geosciences Division, Hawaii Institute of Geophysics, University of Hawaii, Honolulu, Hawaii. November 10-13, 1985.

4. Dr. F. Hawthorne, Dept. of Geology, University of Manitoba, Winnipeg, Manitoba, Canada. February 17, 1986.

5. Dr. C. Sonnet, Lunar and Planetary Laboratory, University of Arizona, Tucson, Arizona. March 11, 1986.

6. Dr. Robert Hutchison, Dept. of Mineralogy, British Museum - Natural History, London, England. March 12 - 16, 1986.

7. Dr. H. Schmitt, Albuquerque, N.M., April 15 and 18, May 7 and 30, 1986.

8. Dr. G. Ondracek, Dept. of Metallurgy, Nuclear Research Center, Karlsruhe, West Germany. May 11 - 14, 1986.

9. Dr. H. Gies, Bundesanstalt fur Tieflagerung, Braunschweig, West Germany. May 29 - October, 30, 1986.

Research of staff and students of the Institute of Meteoritics as well as of visiting scholars was also presented in a series of Brown Bag Seminars of the Institute of Meteoritics, as follows (names of student speakers are underlined) (speaker^{+}):

1. M.J. Drake (Dept. of Planetary Sciences, Univ. of Arizona, Tucson, Arizona): The origin of the earth's moon. August 26, 1985.

2. Cyrena A. Goodrich (IM): The origin of carbon in ureilites. September 30, 1985.

3. G. Lumpkin (Dept. of Geology, UNM): High-resolution electron microscopy of carbonaceous material in meteorites. October 18, 1985.

4. H.E. Newson (IM): Geology of large impact craters and impact ejecta: evidence from Sudbury, Canada and the Ries, West-Germany. October 25, 1985.

5. J.F. Bell (Planetary Geosciences Division, Hawaii Institute of Geophysics, University of Hawaii, Honolulu, Hawaii): Mineralogical mapping of the asteroid belt. November 11, 1985.

6. D. Lusby (IM): Why enstatite chondrites are not the highly reduced meteorites you thought they were. January 31, 1986.

7. M.B. Boslough+, E.L. Venturini and R.A. Graham (Sandia National Laboratories, Albuquerque, N.M.): Magnetic properties of shocked and thermally altered nontronite. March 11, 1986.

8. G.R. Lumpkin (Dept. of Geology, UNM): High resolution electron microscopy of carbonaceous material from CI, CM, CV, and H chondrites. March 11, 1986.

9. H.E. Newsom+, G. Graup, T. Sewards and K. Keil (IM): The role of fluidization in the emplacement and alteration of the suevite impact melt deposit at the Ries Crater, West-Germany. March 11, 1986.

10. D. Lusby+, E.R.D. Scott and K. Keil (IM): Ubiquitous FeO-rich pyroxenes in enstatite chondrites: Implications for metamorphism and brecciation. March 11, 1986.

11. E.R.D. Scott+, P. Maggiore, G.J. Taylor, K. Keil and D. Szuwalski: Chondritic impact melts and cratering processes on asteroids. March 11, 1986.

12. R. Hutchison (Dept. of Mineralogy, British Museum - Natural History, London, England): Why type 3 ordinary chondrites are not the primitive meteorites you thought they were. March 14, 1986.

13. G.J. Taylor (IM): Geological considerations for observations on the moon. April 16, 1986.

14. H. Poths (Dept. of Geology, UNM): Ruthenium isotopic composition in meteorites - Search for isotopic anomalies in the early solar system. May 12, 1986.

15. W. Benz (Los Alamos National Laboratory, Los Alamos, N.M.): The origin of the moon by the large impact theory: Results of numerical simulations illustrated by computer animation. May 19, 1986.

The outstanding electron microprobe and scanning electron microprobe facilities in the Institute of Meteoritics and Department of Geology were made available for use to the following individuals and institutions outside our own Department, and our personnel instructed these users in the operation of the equipment.

1. Dr. A. Ehlman, Dept. of Geology, Texas Christian University, Fort Worth, Texas.

2. Institute for Explosive Research, New Mexico Institute of Mining and Technology, Socorro, New Mexico.

3. Dr. P. Kyle and students, Dept. of Geology, New Mexico Institute of Mining and Technology, Socorro, New Mexico.

4. Dr. K.J. DeNault, Dept. of Earth Sciences, University of Northern Iowa, Cedar Falls, Iowa.

5. Dr. J.L. Berkley, Dept. of Geology, State University of New York, Fredonia, New York.

6. Dr. W.A. Gross, College of Engineering, University of New Mexico, Albuquerque, New Mexico.

Research in the Institute of Meteoritics, during the report period, concentrated in a number of major areas, all of which are supported by outside funds. Brief summaries of our more significant contributions follow:

Studies in Extraterrestrial Materials.

We study meteorites and lunar samples to better understand solar nebular processes and the metamorphic, igneous, and impact processes that affected the planetary bodies which accreted from the solar nebula. We pursue these goals with petrologic studies of extraterrestrial materials and some terrestrial analogs using optical microscopy, electron microprobe and neutron activation analysis and scanning and transmission electron microscopy. We also collaborate with other investigators having other expertise to obtain isotopic, rare gas, and age data.

3.1.1. Formation and Evolution of Chondrites and Their Parent Bodies

I. Origin of Primitive Components in Chondrites

We have found that Al-rich chondrules, inclusions and fragments are widely distributed in ordinary and enstatite chondrites, providing strong support for our argument that C, O, and E chondrites and their constituents have similar, though not identical, ingredients and related origins. Ion probe studies with R.W. Hinton revealed a hibonite clast from Dhajala that contains large ^{26}Mg excesses due to in situ decay of ^{26}Al, the first to be observed outside CAIs in carbonaceous chondrites. In collaboration with W.V. Boynton and co-workers, we found that trace elements in Al-rich chondrules from Dhajala are quite different from type B CAIs in Allende; refractory elements are less enriched in Dhajala Al-rich chondrules and siderophiles are strongly depleted.

Our review of chondrule origins showed that impact and igneous processes are sufficiently well understood to rule out origins involving processes on meteorite parent bodies or planetesimals. This leaves the solar nebula as the likely setting for chondrule formation. We found relict olivines and pyroxenes in chondrules from C and O chondrites that probably did not crystallize in situ. We proposed that grains in chondrules with anomalous compositions could result from a) unmelted chondrule precursor material, b) collisions of partly molten chondrules and chondrule fragments of diverse compositions, or c) changes in oxygen fugacity during chondrule crystallization. Measurements of chondrule sizes in two L3 chondrites revealed no size differences between types of chondrules in a chondrite. However, one L3 had significantly larger

chondrules, suggesting that chondrules accreted sufficiently rapidly in the nebula to prevent extensive mixing of differently sized populations, but slowly enough to allow local mixing of types.

Enstatite chondrites did not form as a result of mixing between crystals and liquids from two chemically distinct, partially molten planetesimals, as Leitch and Smith proposed. Instead, most compositional variations in enstatite in E chondrites result from heterogeneities in chondrule precursors, fractional crystallization of chondrule melts, and metamorphic equilibration. FeO-rich pyroxenes are a ubiquitous component of E chondrites and may have formed as a result of changes in oxygen fugacity during chondrule crystallization.

We have studied fine-grained objects in type 3 ordinary chondrites and defined a class of objects with properties intermediate between those of matrix and chondrules. These objects contain 5-80 vol.% of igneous groundmass which encloses mineral fragments and patches of recrystallized and unrecrystallized network-textured matrix material. Incomplete melting of matrix material and collisions between chondrules and other objects in regions of chondrule formation were probably both responsible for these objects. We have surveyed the diverse occurrences of matrix material in ordinary chondrites and found that mean concentrations of Mg, Na, Al and Ca can show fivefold variations in a single chondrite. Chondrules and associated matrix rims commonly have unrelated compositions but one chondrule was found to have a composition identical to that of its matrix rim (and internal matrix lump), suggesting that some chondrules did form from matrix material. In collaborative studies of a large matrix lump in an H chondrite we found that its trace and minor element concentrations are relatively unfractionated and that it is richer in ^{16}O than almost all known chondrules in O chondrites. Further studies are needed.

Studies of a suite of chondrites from Roosevelt County, New Mexico led us to conclude that correlations between nebula-controlled bulk chemistry and planetary metamorphic effects can only be produced under special conditions of accretion. One possible origin is runaway growth in which 100-km asteroids grew from km-sized planetesimals, accompanied by differential movement of chemically distinct large and small bodies to produce radially zoned parent bodies that were subsequently metamorphosed by internal heating.

II. Nature of Metamorphism and Brecciation in Chondrite Parent Bodies.

We have identified a new C4 chondrite, Pecora Escarpment 82500, and made a mineralogical survey of seven C4-6 chondrites. Their unusual mineralogy -- little metallic Fe,Ni or troilite, abundant magnetite and pentlandite, and FeO-rich olivine (mostly Fa 29-40) -- indicates high oxygen fugacity during metamorphism. C4-6 chondrites probably formed from C3-like material, but they may come from one or more separate bodies. Among C03 chondrites, all but two that we studied show evidence for metamorphic enrichment of FeO in chondrule rim olivines. However, in some cases the chondrites were lithified after metamorphism. The unmetamorphosed parent material of types 4-6 ordinary chondrites closely resembled type 3.0-3.4 ordinary chondrites in many respects, e.g., chondrule and probably matrix mineralogy. However, it is unlikely that known type 3 material is identical in composition to type 4-6 parental material.

Preliminary quantitative theoretical studies of equilibration and recrystallization of olivine and low-Ca pyroxene indicate that equilibration is more rapid than recrystallization, consistent with what is observed in types 3 and 4 chondrites. Two- stage cooling histories seem to be required to account for the properties of types 4-6 H-L-LL chondrites, arguing in favor of metamorphism in planetesimals prior to formation of their parent bodies.

We found that the Leoville CV3 chondrite is an accretionery breccia whose parent body accreted after its CM-like xenoliths had formed and undergone alteration. Our initial survey of type 3 ordinary chondrites suggests that many are breccias of materials that formed after the ingredients had been metamorphosed to diverse extents, even though some have been considered previously to be "normal" type 3 chondrites. Some type 3 chondrites are breccias that were lithified during metamorphism. We suggest that many type 3 chondrites were lithified by shock and that poorly consolidated type 3 material may be abundant on the chondrite parent bodies.

Our studies of metallographic cooling rates in types 4-6 ordinary chondrites and the clasts and matrices of ordinary chondrite regolith breccias suggest firstly that chondrite parent bodies never had onion shell structures or, if they did, they were broken up and reassembled prior to cooling below 500°C. Secondly, H and L parent bodies broke up and reassembled after they experienced metamorphism. Thus, many asteroids are gravitationally bound rubble piles. Petrographic studies of chondrites of types 4-6 reveals many that contain olivines and pyroxenes with aberrant Fe/(Fe + Mg) ratios and must have been lithified after maximum metamorphism. We conclude that meter-sized unbrecciated pieces of H, L and LL chondrites are probably rare on their parent bodies.

Impact melt rocks commonly occur in ordinary chondrites as clasts in fragmental and regolith breccias, but rarely as whole rocks. We have identified a new impact melt breccia, Chico, which contains impact melt regions up to 5-10 cm across and made a comparative study of silicates in Chico and other chondritic impact melts. We find that mineral compositions in melt and chondrtic portions are often surprisingly similar. Ramsdorf appears to be a

unique shock melted chondrite that may come from a fourth ordinary chondrite parent body. There are few or no samples of melt from impacts that exposed meteorites to cosmic rays.

Additionally, we have studied the lithification of regolith breccias by grain boundary and localized shock melting, characterized the matrix and clasts of the Kendleton fragmental breccia, and reviewed meteoritic breccias.

III. Other Meteorite Studies.

We have carried out mineralogical and petrographic studies of 145 previously undescribed, small meteorites from Antarctica. They comprise 120 equilibrated ordinary chondrites, 19 specimens of an unusual L3 rich in graphite-magnetite, three other unpaired L3(?) chondrites, two paired EH3 specimens and a CO3 chondrite. Similar studies of thirty new meteorites from Roosevelt Co., New Mexico lead to other studies that showed that many equilibrated ordinary chondrites are post-metamorphic breccias, provided important clues to the nature of chondrite accretion and ureilite genesis.

Collaborative studies of the Ragland LL chondrite showed that it is one of the least equilibrated (type 3.4), and contains isotopically heavy oxygen. In addition, we have characterized 7 undescribed ordinary equilibrated chondrites, and published catalogs of meteorite collections at the University of New Mexico, and in collaboration with others, the collection at the Museo Nacional de Ciencias Naturales in Madrid. Studies of possible pairings among Antarctic meteorite specimens have a) shown that identifying paired specimens of equilibrated ordinary chondrites is difficult, b) the number of individual meteorites is roughly 15-50% of the number of specimens, and c) that strong winds have transported small specimens up to 6 km. Petrologic study of Norton County [56] lead to the identification of a new mineral, schollhornite, $Na_{0.3}(H_2O)_1[CrS_2]$ [ref. 19].

3.1.2. Origin and Evolution of Differentiated Meteorites

Much of our research efforts on differentiated meteorites has been expended on the study of ureilites. This effort was spearheaded by our post-doctoral fellow, Dr. Cyrena Goodrich, who has recently left the Institute. Dr. Goodrich used her knowledge of the carbon-bearing magmas found on Disko Island, Greenland, to confirm and investigate in more detail an idea we published several years ago, namely that ureilites crystallized in carbon-rich magmas on their parent bodies. The main evidence for this derives from the presence of cohenite-bearing spherules trapped within olivines in ureilites and the trends displayed by minor elements in ureilite olivines and pyroxenes. We also discovered in a new ureilite, Roosevelt County 027, the presence of trapped magmatic liquid, which strongly suggests that these rocks are cumulates and might explain at least some features of their rare earth patterns.

Our research on aubrites has concentrated on Norton County and Khor Temiki. Both samples indicate a more complicated igneous history for the aubrite parent body than previously thought. For example, Norton County contains dunites, pyroxene-olivine rocks, pyroxenites, and feldspathic clasts, all of which are embedded in a clastic matrix made mostly of enstatite. The study of Khor Temiki involved establishing our INAA laboratory, including installation of spectral processing software. We also compared aubrites to enstatite chondrites and concluded that the two did not come from the same parent body, although the aubrite parent body could have originally resembled enstatite chondrites before it melted. In addition, we worked on two monomict, brecciated eucrites, Cachari and Palo Blanco Creek. Their ages, 3.0 and 1.0 Gyr, respectively, indicate a long period of brecciation on the eucrite parent body. Collaborative INAA studies of metal in mesosiderites

showed that metal in these stony irons is relatively homogeneous and was not derived from a fractionally crystallizing core. Finally, Horton Newsom finished work he started in Mainz on Mo in eucrites. This project further substantiates the presence of a core on the eucrite parent body.

3.1.3. Origin and Evolution of the Moon

We have used a wide variety of lunar samples in our research during the past three years: igneous rocks or monomict breccias, polymict breccias, rake samples, coarse fines, and lunar meteorites. One focus of these studies was the search for pristine nonmare rocks. The search yielded two relatively large samples of granite, the discovery of alkali anorthosites and alkali norites at Apollo, and hyperferroan anorthosites. One of the implications of these additions to the highland menagerie is that it now seems clear that many magmas must have assimilated KREEP as they migrated through the lunar crust. The granites have lower REE than does KREEP, in spite of being highly evolved, suggesting that their genesis might have involved silicate liquid immiscibility. We also found an unusual ferroan, mafic, igneous-textured lithology rich in apatite in lunar meteorite ALHA81005, which contains pyroxene and apatite with olivine crystallized around them. This rock appears to have formed in a two-stage process involving coprecipitation of pyroxene and apatite, followed by mixing with a magma unsaturated with apatite but saturated with olivine.

Our program to analyze minor and trace elements (down to 20 ppm) in mafic minerals in pristine highlands rocks is a testament to the tenacity of one of our students, Michael Bersch. The project's start had to wait for the arrival and installation of our new JEOL microprobe. More importantly, we are requiring the probe to operate beyond its normal specifications, e.g., beam

stability has to be incredibly good and even minuscule jumps in the vacuum can ruin an analysis. Preliminary results indicate that Mg-suite rocks formed from numerous separate magmas, that our analyses mirror the east-west dichotomy among pristine rocks, and that ferroan anorthosites may have formed by processes more complicated than simple fractional crystallization.

Another focus of our lunar research has been the study of mare basalts, especially from Apollo 14. We studied a collection of mare fragments separated from 14321, which show a factor of eight range in REE, but almost uniform major elements. It appears that the suite could have formed by assimilation of KREEP from a common magma, but the precise nature of the KREEP material is not clear. Our study of breccia 14304 yielded two samples of VHK (very high K) mare basalt. Our colleague, Paul Warren, in work begun here, also described a VHK basalt from 14181. The origin of these interesting rocks seems to involve assimilation a K-rich material, such as an unsampled lithology formed by differentiation of urKREEP or perhaps a form of granite. We also collaborated with Roger Phillips and Steve Mueller (SMU) on synthesizing geophysical and petrological models for the lunar mantle. This work suggests that the lunar mantle overturned, perhaps in a series of separate events. At least some mare basalts could have been produced when this happened.

We have also been exploring the implications of Ge abundances in mare basalts. This has required learning (with the invaluable assistance of Dr. Richard Bild of Sandia Laboratories) how to analyze Ge by radiochemical neutron activation analysis. This frustrating task has been carried out by another of our tenacious students, Tammy Dickinson DeNault. She has been able to reproduce values in terrestrial rock standards such as AGV-1 (1.25 ppm) and has analyzed ppb levels in lunar samples for which data are already published. However, we still have a slight contamination problem with the lunar samples; this will be solved soon.

We have also done some work on the Moon's origin. Part of this involved helping to organize a conference and edit a book stemming from the conference. More importantly, we have examined some aspects of the Moon's composition. One such study involved the abundances of siderophile elements in the Moon and showed that the Moon's pattern of siderophile-element depletion is consistent with the presence of a small core (less than 5% of the lunar mass). It is in principle possible to constrain the Moon's origin if we can determine how large the core is because different models of origin predict different siderophile element concentrations, hence, different core sizes. The other study dealing with lunar composition was part of the collaborative effort with Roger Phillips and Steve Mueller. Our results suggest that the bulk Moon contains more Al and has lower Mg/Fe than does the terrestrial mantle.

Finally, we have been involved planning in future lunar science activities, such as participating in the Lunar Geoscience Observer workshops, the Lunar Base Symposium, the Workshop of Astronomy from the Moon, and the First Lunar Development Symposium. These endeavors focus on unsolved problems in lunar science, hence, aid us in our lunar research.

3.1.4. Impact Processes on Earth and Mars

In addition to our meteorite studies of impact processes, we have addressed questions such as the origin of the martian soil and the importance of hydrothermal alteration of impact melt sheets. One study suggests a new explanation for the small valley networks on Mars by melting of ground ice with heat from impact melt sheets. Another paper presents results from a continuing study of the suevite impact melt deposit at the Ries crater in West Germany, which shows that vertical degassing pipes present in the suevite were formed immediately after deposition of the suevite due to fluidization of

the deposit. The deposit, consisting of impact melt glass and crystalline ejecta, was subsequently altered by hydrothermal fluids to produce as much as 15 wt% clay in the suevite. A similar process on Mars could have been an important source of the clay minerals inferred to exist in the martian soil.

3.1.5. Petrologic and Geochemical Investigations in Support of Engineering and Design Studies for a High-level Nuclear Waste Repository in Silicic Volcanic Tuff, Nevada Test Site (Supported by Sandia National Laboratories).

The petrography, petrology and geochemistry of any medium considered for storage of commercial high-level nuclear waste (CHLW) are indirectly important parameters in repository design and construction. Thermomechanical and dydrologic properties of the host rock are engineering properties of prime concern; host-rock mineralogy, texture and fabric are important in understanding variations in these properties. A thorough understanding of the geochemistry of the emplacement medium is critical in understanding its response to chemical changes and thermal excursions imposed by emplacement of CHLW.

Sandia National Laboratories (SNL) in cooperation with the U.S. Geological Survey and Los Alamos National Laboratory, has been conctracted by the Department of Energy (DOE) to oversee site selection, design and construction of a CHLW repository in silicic volcanic tuff in the Nevada Test Site (NTS) region about 90 miles northwest of Las Vegas. Work by SNL for the past several years has focused on two loctions at NTS, U12g-Tunnel (G-Tunnel) and Yucca Mountain. Our petrologic work in support of G-Tunnel thermomechanical tests has been completed, and a summary report on tuffaceous media in which tests have been completed has been printed. Yucca

Mountain, located about 21 miles southwest of G-Tunnel, is being considered by DOE as one of the three candidate locations for construction of the first CHLW repository in the continental U.S. SNL, in cooperation with the U.S. Geological Survey and Lost Alamos National Laboratory, is involved in siting the repository andis the prime contractor for design and construction. We provide petrologic and geochemical data on outcrop and core samples in support of physical property, thermal and mechanical tests on rocks from Yucca Mountain.

Results of a study completed last year, which integrates petrologic and bulk properties to aid in evaluating mechanical test results on welded lithophysal tuff, has been submitted for publication in the Journal of Geophysical Research. The petrologic portion of a similar study on welded nonlithophysal tuff, begun last year, has been completed. The preliminary modeling allowing prediction of whole-rock heat capacities in devitrified, zeolitized and glassy tuffs from whole-rock chemical and mineralogic data has been completed, and model results will be integrated with empirical laboratory measurements as soon as these data are obtained by SNL; preliminary modeling results will be presented at the Fall 1986 Americal Geophysical Union Meeting in San Francisco. A new project has been initiated involving a statistical analysis of petrologic, chemical and mineralogic properties and the relation of these properties to mechanical property data for a varied suite of welded, non-welded, glassy and zeolitic tuffs from Yucca Mountain. A collaborative effort with SNL, Los Alamos National Laboratory and UNM staff has been initiated to evaluate the rare-earth rich phases allanite, chevkinite and perrierite as petrologic indicators in the ash-flow tuffs in which they occur.

3.1.6. Mineralogical Characterization of Rock Samples from the WIPP Site (Supported by Sandia National Laboratories)

Mineralogical and geochemical characterization of the region surrounding the WIPP site near Carlsbad, N.M. is a continuing research project of Sandia National Laboratories. As a part of this effort, we performed mineralogical and geochemical analyses of samples from the Rustler Formation, overlying the Salado Formation in which the WIPP repository is located. Bulk mineralogical analysis of all samples, including carbonates, sulfates and mudstones/siltstones was performed by X-ray diffraction. All samples containing clays were studied in detail, including determination of clay mineral species, composition, interstratification and morphology. These data were obtained by X-ray diffraction, electron microprobe and scanning electron microscope. Statistical analysis of the resulting mineralogical and chemical data sets has also been performed to establish correlations between gross mineralogy and lithologic facies. In addition to site-specific data, this research provides information on the diagenetic history of clay minerals in evaporite sequences and clay mineralogical research in general.

3.2. Teaching

Teaching activities of the Institute of Meteoritics staff concern formal classes in Physical Geology (101L), Earth Resources (211), Planetary Geology (265), Mineralogy I (311L), Petrography of Opaque Ores (512L), Meteoritics and Cosmochemistry (513L), and Electron Microprobe Analysis and Scanning Electron Microscopy (518L). In addition, many arranged courses were given to certify Department of Geology and Institute of Meteoritics faculty, staff and students as well as visiting scholars, as operators of the electron microprobe and the scanning electron microscope. A great deal of emphasis was given to

the direction and supervision of graduate student research projects, problems courses, theses and dissertations, as well as the publication of these research results (see 4.2 of this Report).

During the report period, the following graduate and undergraduate students carried out research in the Institute of Meteoritics and were supported by NASA grant and other contract funds:

Graduate Students

1. M.G. Bersch (NASA)
2. B. Epling (NASA)
3. Tammy L. Dickinson DeNault (NASA)
4. Rosemary Glenn (Sandia)
5. D. Lusby (NASA)
6. T. Sewards (Sandia)

Undergraduate Students

1. S. Hayden (NASA)

During the report period, Dr. Cyrena A. Goodrich (Ph.D., Cornell University, Ithaca, N.Y.) was in residence in the Institute of Meteoritics as a post-doctoral fellow (NASA supported).

3.3. Public Service

Public service activities of members of the staff of the Institute of Meteoritics as well as students are devoted to maintenance and enlargement of the Institute's outstanding collection of meteorites and to making research specimens available to Institute members as well as colleagues in the USA and abroad. Many special, private showings of the Collection, the Museum, as well as lunar samples were given, frequently on weekends and after-duty hours. Furthermore, many public lectures on meteorites, lunar geology and high-level nuclear waste disposal were given in the State of New Mexico, the USA and

abroad. Finally, many rocks suspected to be of meteoritic origin and brought to the Institute by the public were analyzed without charge, and major efforts were made to educate the interested public in the recognition and recovery of meteorites (see 4.9 of this Report).

4. Composite of Individual Biographical Supplements

4.1 Teaching

Klaus Keil

1. Prepared new version of course on Lunar and Planetary Geology (Geology 265) in the form of "A semester-long voyage through our solar system", with the aim to have appeal to non-science majors. This course will be taught every Spring, beginning in 1986.

2. Served as substitute lecturer in Geology 301 (Mineralogy I) on Oct. 23, 28 and 30, 1985.

3. Gave special 1 hour lectures on "An illustrated voyage through our solar system" in all Geology 101 sections to advertise the new course Lunar and Planetary Geology (Geology 265), Oct. 28, Nov. 11, 14, 20, 22 and 26, and December 9, 1985.

4. Served as substitute lecturer in Geology 102 (Historical Geology). March 3, 1986.

4.2. Publications

Listed are only publications that have appeared, are in press or have been submitted during the report period. Not listed are papers that are in preparation. Since most publications of the Institute of Meteoritics are co-authored by several members of the Institute, only one list of publications is given, rather than duplicating listings on an individual-by-individual basis. Note that to draw attention to the active participation of students in research of the Institute of Meteoritics, names of student authors and speakers have been underlined.

4.2.1. Scientific Articles Published in Major National and International Reviewed Journals; Scientific Publications of the Institute of Meteoritics; as Well as Books.

1. C.D. Byers, M.J. Jercinovic, R.C. Ewing and K. Keil: Basalt glass: An analogue for the evaluation of the long-term stability of nuclear waste form boro-silicate glasses. Mat. Res. Soc. Symp. Proc. 44, 583-590, 1985.

2. J.R. Connolly and K. Keil: Field, petrologic, and geochemical relations of the Grouse Canyon Member of the Belted Range Tuff in the GTUF Rock Mechanics Test Area, U12g Tunnel, Nevada Test Site. Sandia National Laboratories, SAND84-7206, 1-65, 1985.

3. T. Dickinson, K. Keil, L. LaPaz, D.D. Bogard, R.A. Schmitt, M.R. Smith and J.M. Rhodes: Petrology and shock age of the Palo Blanco Creek eucrite. Chemie der Erde 44, 245-257, 1985.

4. K. Keil, G.H. Conrad, E.A. King and A. San Miguel: Petrology and classification of the Garraf, Spain chondrite. Meteoritics 21, 125-129, 1986.

5. A. Kracher, K. Keil, G.W. Kallemeyn, J.T. Wasson, R.N. Clayton and G.I. Huss: The Leoville (CV3) accretionary breccia. Proc. 16th Lunar Planet. Sci. Conf. Part 1, J. Geophy. Res., Suppl, 90 D123-D135, 1985.

6. E.R.D. Scott, D. Lusby and K. Keil: Ubiquitous brecciation after metamorphism in equilibrated ordinary chondrites. Proc. 16th Lunar Planet. Sci. Conf., Part 1, J. Geophys. Res., Suppl., 90, D137-D148, 1985.

7. M.G. Bersch, G.J. Taylor and K. Keil: Diversity of parent magmas of pristine lunar rocks. Lunar Planet. Sci. XVII, LPI, Houston, Tx, 44-45, 1986.

8. D. Lusby, E.R.D. Scott and K. Keil: Ubiquitous FeO-rich pyroxenes in enstatite chondrites: Implications for metamorphism and brecciation. Lunar Planet. Sci.XVII, LPI, Houston, Tx, 506-507, 1986.

9. H.E. Newsom, G.Graup, T. Sewards and K. Keil: The role of fluidization in the implacement and alteration of the suevite impact deposit at the Ries Crater, West-Germany. Lunar Planet. Sci. XVII, LPI, Houston, Tx, 609-610, 1986.

10. E.R.D. Scott, P. Maggiore, G.J. Taylor, K. Keil and D. Szuwalski: Chondritic impact melts and cratering processes on asteroids. Lunar Planet. Sci. XVII, LPI, Houston, Tx, 785-786, 1986.

11. C.A. Goodrich, G.J. Taylor, K. Keil, G.W. Kallemeyn and P.H. Warren: Alkali norite, troctolites, and VHK mare basalts from breccia 14304. Proc. 16th Lunar Planet. Sci. Conf., Part 2, J. Geophys. Res., Suppl., 91, D305-D318, 1986.

12. E.R.D. Scott, K. Keil and Lea M. Nelson: Catalog of the meteorite collection of the Institute of Meteoritics at the University of New Mexico. Spec. Publ. No. 23, UNM Institute of Meteoritics, 1-60, 1986.

13. P.H. Warren, D.N. Shirley and G.W. Kallemeyn: A potpourri of pristine moon rocks, including VHK mare basalt and a unique, augite-rich Apollo 17 anorthosite. Proc. 16th Lunar Planet. Sci. Conf., Part 2, J. Geophys. Res., 91, D319-D330, 1986.

14. G.R. Brakenridge, H.E. Newsom and V.R. Baker: Ancient hot springs on Mars: Origins and paleoenvironmental significance of small Martian valleys. Geology 13, 859-862, 1985.

15. C.A. Goodrich: Trapped primary silicate liquid in ureilites. Lunar Planet. Sci. XVII, LPI, Houston, Tx., 273-274, 1986.

16. G.J. Taylor: Earth's Moon: doorway to the solar system. In The Planets (Byron Preiss, editor), 64-76, 1985. Bantum Books, New York.

17. G.J. Taylor: The need for a lunar base: answering basic questions about planetary science. In Lunar Bases and Space Actitivities of the 21st Century (W.W. Mendell, editor), 189-197, 1986. Lunar and Planetary Institute, Houston.

18. D.T. Vaniman, G. Heiken, and G.J. Taylor: A closer look at lunar volcanism. In Lunar Bases and Space Activities of the 21st Century (W.W. Mendell, editor), 211-222, 1986. Lunar and Planetary Institute, Houston.

19. E.R.D. Scott: Review of "Catalogue of Meteorites", by E.L. Graham, A.W.R. Bevan and R. Hutchison. Geochim. Cosmochim. Acta 49, 2608, 1986.

20. C.A. Goodrich and J.L. Berkley: Primary magmatic carbon in ureilites. Geochim. Cosmochim. Acta 50, 681-692, 1986.

21. J.M. Hoffer, M. Bersch and R. Page: Explosion craters, Potrillo Basalt Field, Southcentral New Mexico, and Northern Chihuahua, Mexico. In Geology of Southcentral New Mexico, El Paso Geol. Soc. Field Trip, 114-116, 1986.

22. B. Grambow, M.J. Jercinovic, R.C. Ewing and C.D. Byers: Weathered basaltic glass: a natural analogue for the effects of reaction progress on nuclear waste glass alteration. Proc. Sci. Basis for Nuclear Waste Management 50, 263-272, 1986.

4.2.2. Abstracts Published in Proceedings of Meetings and in Journals.

23. A. Okada and K. Keil: Perryite problem. Eleventh Symp. Antarctic Meteorites, Natl. Inst. Polar Res., Tokyo, 33, 1986.

24. J.L. Berkley, C.A. Goodrich and K. Keil: The unique ureilite, ALHA82106-82130: Evidence for progressive reduction during ureilite magmatic differentiation. Meteoritics 20, 607-608, 1985.

25. R. Brett and K. Keil: Enstatite achondrites did not form from enstatite chondrites. Meteoritics 20, 616, 1985.

26. C.A. Goodrich, K. Keil, J.L. Berkley, J.C. Laul, M.R. Smith, R.C. Clayton, T.K. Mayeda and J.F. Wacker: Roosevelt County 027: A low-shock ureilite with primary interstitial silicate liquid. Meteoritics 20, 650-651, 1985.

27. G.R. Brakenridge, H.E. Newsom and V. Baker: Origins and paleoenvironmental significance of small Martian valleys. Geol. Soc. Am. Abstracts with Programs 17, 530, 1985.

4.2.3. Papers Submitted or in Press.

28. R. Brett and K. Keil: Enstatite chondrites and enstatite achondrites (aubrites) were not derived from the same parent body. Earth Planet. Sci. Lett. (submitted).

29. G.J. Taylor, P. Maggiore, E.R.D. Scott, A.E. Rubin and K. Keil: Original structures, and fragmentation and reassembly histories of asteroids: Evidence from meteorites. Icarus (in press).

30. M.G. Bersch, G.J. Taylor and K. Keil: Trace element analyses of olivine in lunar highland rocks: Implications for the origin of the lunar crust. Proc. EMSA Meeting (in press).

31. W.L. Mansker, J.T. Springfield and K. Keil: Kimberlitic garnets: Metamorphism related to composition. Proc. EMSA Meeting (in press).

32. C.A. Goodrich, K. Keil, J.L. Berkley, J. C. Laul, M.R. Smith, J.W. Wacker, R.N. Clayton and T.K. Mayeda: Roosevelt County 027: A ureilite with trapped primary silicate liquid. Meteoritics (submitted).

33. E.R.D.Scott, G.J. Taylor and K. Keil: Accretion, metamorphism and brecciation of ordinary chondrites: Evidence from petrologic studies of meteorites from Roosevelt County, New Mexico. Proc. 17th Lunar Planet. Sci. Conf. (submitted).

34. J.T. Springfield, W.L. Mansker and K. Keil: Enhancement of color metamorphism in chrome-pyrope garnet: Potential applications in the exploration and evaluation of primary diamond deposits. Geol. Soc. Amer. Bull. (in press).

35. M.J. Jercinovic, R.C. Ewing, K. Keil, B. Grambow and W. Lutze: Comparison of corrosion products and processes for basalt glass and nuclear waste boro-silicate glass. Proc. 5th Int'l. Symp. Water-Rock Interaction, Reykjavik, Iceland (in press).

36. H.E. Newsom, G. Graup, T. Sewards and K. Keil: Fluidization and hydro-thermal alteration of the suevite impact melt deposit at the Ries Crater, West-Germany, and implications for Mars. Proc. 17th Lunar Planet. Sci. Conf. (submitted).

37. A. Okada, K. Keil and G.J. Taylor: Petrology of the Norton County enstatite achondrite and history of its parent body. Chemie der Erde (submitted).

38. E.R.D. Scott, S.G. McKinley, I.E. Wilson and K. Keil: Recovery and classification of thirty new meteorites from Roosevelt County, New Mexico. Meteoritics (submitted).

39. E.A. King, A. San Miguel, I. Casanova and K. Keil: Inventory of the meteorite collection of the Museo Nacional de Ciencias Naturales, C.S.I.C., Madrid, Spain. Meteoritics (in press).

40. C.A. Goodrich and J.L. Berkley: Reduction of the ureilite parent magma (s): Evidence from minor elements: Geochim. Cosmochim. Acta (in press).

41. H.E. Newsom, W.M. White, K.P. Jochum and A.W. Hofmann: Siderophile and chalkophile element abundances in oceanic basalts, Pb isotope evolution and growth of the earth's core. Earth Planet. Sci. Lett. (in press).

42. G.J. Taylor: Geological considerations for lunar telescopes. Proceedings of the Workshop on Astronomical Observations from a Lunar Base (in press).

43. G.J. Taylor: The lunar environment. Symposium '86: First U.S. Maglev Transportation Conference and the First Lunar Development Symposium (in press).

44. S. Mueller, R.J. Phillips and G.J. Taylor: Lunar Composition: a geophysical and petrologic synthesis. Proc. Seventeenth Lunar and Planetary Science Conference (submitted).

45. R.H. Price, J.R. Connolly, K. Keil and F.B. Nimick: Mechanical properties of a lithophysal zone within the Topopah Spring Member of the Paintbrush Tuff, Nevada Test Site. JGR (submitted).

46. C.A. Goodrich and K. Keil: Very low-Ti and low-Ti mare basalt and other clasts in Yamato lunar meteorites 791197, 82192 and 82193. Proc. 11th Symp. Antarctic Meteorites, Nat'l. Inst. Polar Res. (in press).

47. E.R.D. Scott: Pairing of meteorites from Victoria Land and Thiel Mountains, Antarctica. Smiths. Contr. Earth Sci. (in press).

48. S.I. Recca, E.R.D. Scott, K. Keil and G.I. Huss: Ragland, an LL3.4 chondrite find from New Mexico. Meteoritics (in press).

49. D. Lusby, E.R.D. Scott and K. Keil: Ubiquitous high-FeO silicates in enstatite chondrites: Implications for chondrule origins, metamorphism and brecciation. Proc. 17th Lunar Planet. Sci. Conf. (submitted).

50. H.E. Newsom: Constraints on the origin of the Moon from molybdenum and other siderophile elements: In Origin of the Moon (W.K. Hartmann, R.J. Phillips and G.J. Taylor, eds.), Lunar and Planetary Institute, Houston (in press).

51. M.J. Jercinovic, R.C. Ewing and C.D. Byers: Alteration products of basalt glass from the Frenchman Springs Flow, Wanapum Basalts, Hanford, Washington. Proc. Meet. Amer. Ceramic Soc. (in press).

52. C.D. Byers, J.K. Bates, R.C. Ewing and M.J. Jercinovic: Experimental alteration of basalt glass applied to the alteration of nuclear waste glass. Proc. Meet. Amer. Ceramic Soc. (in press).

53. J.R. Connolly and B.S. Kues: Precambrian-Upper Paleozoic geology along Interstate 40 east of Albuquerque, New Mexico. Geol. Soc. Amer. Centennial Field Guide, Rocky Mountain Section (in press).

4.2.4. Abstracts Submitted or in Press.

54. H.E. Newsom, K.Keil and E.R.D. Scott: Dark clasts with variable REE contents in the Khor Temiki aubrite: Origin by impact blackening of heterogeneous target materials. Meteoritics (submitted).

55. C.V. Williams, E.R.D. Scott, G.J. Taylor, K.Keil, L. Schultz and R. Wieler: Histories of ordinary chondrite parent bodies: Clues from regolith breccias. Meteoritics (submitted).

56. D. Lusby, E.R.D. Scott and K. Keil: Origin of enstatite chondrites, chondrules, matrices and brecciation. Meteoritics (in press).

57. E.R.D. Scott, G.J. Taylor, K. Keil, S.G. McKinley and I.E. Wilson: Accretion, metamorphism and brecciation of ordinary chondrites: Evidence from petrographic studies of meteorites from Roosevelt County, N.M. Meteoritics (in press).

4.2.5. Professional Papers Read (Speaker+).

58. C.A. Goodrich, K. Keil+, J.L. Berkley, J.C. Laul, M.R. Smith, R.N. Clayton, T.K. Mayeda and J.F. Wacker: Roosevelt County 027 - a low shock ureilite with primary interstitial silicate liquid. Meteoritical Soc. Meet., Bordeaux, France. July 16-19, 1985.

59. K. Keil: The electron microprobe in meteorite research: unravelling the origin of primitive matter in the solar system. Electron Microbeam Analysis Soc. Meeting, Louisville, Kentucky. August 5-9, 1985.

60. K. Keil: Origin of meteorites: From asteroids, comets, Moon and Mars. Subcritical Reactivity Measurements Workshop, University of New Mexico, Albuquerque, N.M. August 28, 1985.

61. B. Grambow, M.J. Jercinovic+, R.C. Ewing and C.D. Byers: Weathered basalt glass: a natural analogue for the effects of reaction progress on nuclear waste glass alteration. 9th International Symp. on the Scientific Basis for Nuclear Waste Management, Stockholm, Sweden. September 9-11, 1985.

62. G.J. Taylor: Lunar science and space resources. Presented to National Commission on Space, October 4, 1985.

63. C.A. Goodrich: Ureilite petrogenesis. Dept. of Planetary Sciences, University of Arizona, Tucson, Arizona. October 4, 1985.

64. C.A. Goodrich: The origin of ureilites. Div. of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California. October 7, 1985.

65. C.A. Goodrich: The origin of ureilites. Institute of Geophysics and Planetary Physics, Univ. of California, Los Angeles, California. October 8, 1985.

66. G.J. Taylor: Fragmentation history of asteroids: evidence from meteorites. Arizona State University, Tempe, Arizona. October 9, 1985.

67. K. Keil: Sources of meteorites: From asteroids, comets, Moon and Mars. Dept. of Physics and Astronomy, University of New Mexico, Albuquerque, N.M. November 15, 1985.

68. J.R. Connolly: Nuclear waste disposal in the unsaturated zone - The Southern Nevada alternative. Albuquerque Geological Soc. Meeting, Albuquerque, N.M. December 3, 1985.

69. K. Keil: An illustrated voyage through our solar system. Four Corners Geological Society, Farmington, N.M. December 6, 1985.

70. G.J. Taylor: The need for a lunar base: answering basic questions about planetary science. Meeting of the American Institute of Aeronautics and Astronautics, Reno, Nevada. January 8, 1986.

71. G.J. Taylor: Geological considerations for observatories on the Moon. Workshop on Astronomical Observations from the Moon, Houston, Texas. January 10, 1986.

72. H.E. Newsom: The composition of the Earth's mantle and crust: evidence of accretion and core formation. Dept. of Geology, University of New Mexico, Albuquerque, N.M. January 24, 1986.

73. H.E. Newsom: The composition of the Earth's mantle and crust: evidence of accretion and core formation. Dept. of Geosciences, New Mexico Inst. of Mining and Technology, Socorro, N.M. January 30, 1986.

74. K. Keil: Meteoritic breccias: Origin and implications. Dept. of Geology, McGill University, Montreal, Canada. February 3, 1986.

75. K. Keil: Sources of meteorites: From asteroids, comets, moon and Mars. Dept. of Geology, McGill University, Montreal, Canada. February 3, 1986.

76. K. Keil: Sources of meteorites: From asteroids, comets, moon and Mars. Dept. of Geology, University of Toronto, Toronto, Canada. February 4, 1986.

77. K. Keil: Sources of meteorites: From asteroids, comets, moon and Mars. Dept. of Geology, University of Manitoba, Winnipeg, Canada. February 5, 1986.

78. K. Keil: Sources of meteorites: From asteroids, comets, moon and Mars. Dept. of Geology, Dept. of Physics, University of Alberta, Edmonton, Canada. February 6, 1986.

79. K. Keil: Meteorite breccias: Origin and implications. Dept. of Geology, Dept. of Physics, University of Alberta, Edmonton, Canada. February 7, 1986.

80. E.R.D. Scott: Iron meteorites. Los Alamos Chapter, Amer. Soc. for Metals, Los Alamos, N.M. February 18, 1986.

81. E.R.D. Scott+, P. Maggiore, G.J. Taylor, K. Keil and D. Szuwalski: Chondritic impact melts and cratering processes on asteroids. 17th Lunar and Planetary Sci. Conf., Houston, Texas. March 17-21, 1986.

82. H.E. Newsom+, G. Graup, T. Sewards and K. Keil: The role of fluidization in the emplacement and alteration of the suevite impact melt deposit at the Ries Crater, West Germany. 17th Lunar and Planetary Sci. Conf., Houston, Texas. March 17-21, 1986.

83. C.A. Goodrich: Trapped primary silicate liquid in ureilites. 17th Lunar and Planetary Sci. Conf., Houston, Texas. March 17-21, 1986.

84. M.G. Bersch+, G.J. Taylor and K. Keil: Diversity of parent magmas of pristine lunar rocks. 17th Lunar and Planetary Sci. Conf., Houston, Texas. March 17-21, 1986.

85. D. Lusby+, E.R.D. Scott and K. Keil: Ubiquitous FeO-rich pyroxenes in enstatite chondrites: Implications for metamorphism and brecciation. 17th Lunar and Planetary Sci. Conf., Houston, Texas. March 17-21, 1986.

86. M.J. Jercinovic+, R.C. Ewing and C.D. Byers: Alteration products of basalt glass from the Frenchman Springs Flow, Wanapum Basalts, Hanford, Washington. Ann. Meet., American Ceramic Soc., Chicago, Illinois. April 27 - May 1, 1986.

87. C.D. Byers+, J.K. Bates, R.C. Ewing and M.J. Jercinovic: Experimental alteration of basalt glass applied to the alteration of nuclear waste glass. Ann. Meet., American Ceramic Soc., Chicago, Illinois. April 27 - May 1, 1986.

88. G.J. Taylor: Meteorites and the early history of the solar system. Annual Meeting of the Rocky Mountain Section of the Geological Society of America, Flagstaff, AZ. May 2, 1986.

89. H.E. Newsom: The origin of the Moon. Dept. of Geological Sciences, Brown University, Providence, Rhode Island. May 5, 1986.

90. G.J. Taylor: Lunar geology from a base on the Moon. Albuquerque Geological Society Meeting. May 6, 1986.

91. T. Dickinson-DeNault+: Germanium abundances in lunar rocks: Implications for the origin of the Moon. NASA Graduate Students Researchers Program Symposium, Washington, D.C. May 12-14, 1986.

4.3. Other Research Projects or Creative Work in Progress or Completed During Period.

The following research grants and contracts were in effect during the report period:

1. "Halite mineralogy of the Salado Formation." Sandia Nat'l Laboratories. October 1, 1984 - September 30, 1985 $ 50,801.00

2. "Geological support work of Nevada Nuclear Waste Storage Investigations." Sandia Nat'l Laboratories. October 1, 1984 - September 30, 1985. $ 78,939.00

3. "Physical and chemical conditions of the lower crust as deduced from xenoliths in lavas of the Leucite Hills, Wyoming." National Science Foundation, via the University of Northern Iowa. January 1 - December 31, 1985. $ 7,429.00

4. "Origin and evolution of meteorite parent bodies and the Moon." National Aeronautics and Space Administration. February 1, 1985 - January 31, 1986. $246,500.00

5. "Ge abundances in lunar rocks: did the Moon form totally molten? NASA Grad. Student Researchers Fellowship, NASA Hq. (to Tammy Dickinson). May 15, 1985 - May 15, 1986. $ 17,966.00

6. "Mineralogy of the Rustler Formation" Sandia Nat'l Laboratories. October 1, 1985 - September 30, 1986. $ 51,365.00

7. "Geological support work of Nevada Nuclear Waste Storage Investigations." Sandia Nat'l Laboratories. October 1, 1985 - September 30, 1986. $ 86,163.00

8. "Origin and evolution of meteorite parent bodies and the Moon." National Aeronautics and Space Administration. February 1, 1986 - January 31, 1987. $241,002.00

9. "Ge abundances in lunar rocks: did the Moon form totally molten? NASA Grad. Student Researchers Fellowship, NASA Hq. (to Tammy Dickinson). May 15, 1986 - May 15, 1987. $ 17,967.00

10. "Field studies of the Ries Crater, West-Germany". Barringer Crater Company. Princeton, New Jersey. April 1, 1986 - December 31, 1986. $ 1,600.00

11. "Mineralogy, petrology and chemistry of Spanish meteorites: Origin and evolution of meteorite parent bodies". National Science Foundation. June 1, 1986 - May 31, 1989. $ 50,000.00

Total grants and contracts in effect in report period. $849,732.00

4.4. Activities in Learned and Professional Societies.

4.4.1. Offices Held

Klaus Keil

1. Member, Advisory Committee on Comparative Planetology, International Union of Geological Science.

2. Associate Editor, Journal Geophysical Research, American Geophysical Union.

3. Acting Associate Editor, Geochimica et Cosmochimica Acta.

E.R.D. Scott

1. Associate Editor, Journal of Geophysical Research, American Geophysical Union.

J.R. Connolly

1. Vice-President and Program Chairman, Albuquerque Geological Society (1986).

4.4.2. Meetings Attended

Klaus Keil

1. Workshop on Antarctic Meteorites, Max-Planck Institute of Chemistry, Mainz, West-Germany. July 10-13, 1985.

2. Meteoritical Society Meeting, Bordeaux, France. July 16-20, 1985.

3. Electron Microbeam Analysis Society Meeting, Louisville, Kentucky. August 5-9, 1985.

G.J. Taylor

1. Annual Meeting of the American Institute of Aeronautics and Astronautics, Reno, Nevada. January 8, 1986.

2. Workshop on Astronomical Observations from the Moon, Houston, Texas. January 10, 1986.

3. Seventeenth Lunar and Planetary Science Conference, Houston, Texas. March 17-21, 1986. Chaired a session.

4. Annual Meeting of the Rocky Mountain Section of Geological Society of America, Flagstaff, Arizona. May 2, 1986.

E.R.D. Scott

1. Attended 17th Lunar and Planetary Science Conference, Houston, Texas. March 17-21, 1986.

H.E. Newsom

1. Workshop on Antarctic Meteorites, Max-Planck-Institut fur Chemie, Mainz, West Germany. July 10-12, 1985.

2. 48th Annual Meeting of the Meteoritical Society, University of Bordeaux, Bordeaux, France. July 16-19, 1985.

3. Seventeenth Lunar and Planetary Science Conference, Johnson Space Center, Houston, Texas. March 17-21, 1986.

J.R. Connolly

1. Bi-Monthly Albuquerque Geological Society Luncheon Meetings (attend all).

2. New Mexico Geological Society Spring Meeting, Socorro, New Mexico. April 4, 1986.

C.A. Goodrich

1. Seventeenth Lunar and Planetary Science Conference, Houston, Texas. March 17-21, 1986.

G.H. Conrad

1. New Mexico Microbeam Users Group, Sandia National Laboratories, Albuquerque, N.M. October 23, 1985.

2. New Mexico Microbeam Users Group, Kirtland Air Force Base, Albuquerque, November 19, 1985.

3. New Mexico Microbeam Users Group, Sandia National Laboratories, Albuquerque, N.M. March 15, 1986.

M. Bersch

1. Seventeenth Lunar and Planetary Science Conference, Houston, Texas. March 17-21, 1986.

T. Dickinson - De Nault

1. Seventeenth Lunar and Planetary Science Conference, Houston, Texas. March 17-21, 1986.

D. Lusby

1. Seventeenth Lunar and Planetary Science Conference, Houston, Texas. March 17-21, 1986.

J.M. Jercinovic

1. Ninth International Symposium on the Scientific Basis for Nuclear Waste Management, Stockholm, Sweden. September 9-11, 1985.

2. 88th Annual Meeting, American Ceramic Society, Chicago, Illinois. April 27 - May 1, 1986.

4.4.3. Presentations at Professional Society Meetings.

Klaus Keil

1. Roosevelt County 027 - a low shock ureilite with primary interstitial silicate liquid. Meteoritical Society Meeting, Bordeaux, France. July 16-19, 1985.

2. The electron microprobe in meteorite research: unravelling the origin of pimitive matter in the solar system. Electron Microbeam Analysis Society Meeting. Louisville, Kentucky. August 5-9, 1985.

3. An illustrated voyage through our solar system. Four Corners Geological Society, Farmington, N.M. December 6, 1985.

G.J. Taylor

1. The need for a lunar base: answering basic questions about planetary science. Meeting of the American Institute of Aeronautics and Astronautics, Reno, Nevada. January 8, 1986.

2. Geological considerations for observatories on the Moon. Workshop on Astronomical Observations from the Moon, Houston, Texas. January 10, 1986.

3. Meteorites and the early history of the solar system. Annual Meeting of the Rocky Mountain Section of the Geological Society of America, Flagstaff, Az. May 2, 1986.
4. Lunar geology from a base on the Moon. Albuquerque Geological Society Meeting. May 6, 1986.

E.R.D. Scott

1. Chondritic impact melts and cratering processes on asteroids. 17th Lunar and Planetary Science Conference, Houston, Texas. March 17-21, 1986.

H.E. Newsom

1. The role of fluidization in the emplacement and alteration of the suevite impact melt deposit at the Ries Crater, West-Germany. 17th Lunar and Planetary Science Conference, Houston, Texas. March 17-21, 1986.

J.R. Connolly

1. Nuclear waste disposal in the unsaturated zone - The Southern Nevada Alternative. Albuquerque Geological Society Meeting, Albuquerque, N.M. December 3, 1975.

C. A. Goodrich

1. Trapped primary silicate liquid in ureilites. 17th Lunar and Planetary Science Conference, Houston, Texas. March 17-21, 1986.

M.G. Bersch

1. Diversity of parent magmas of pristine lunar rocks. 17th Lunar and Planetary Science Conference, Houston, Texas. March 17-21, 1986.

D. Lusby

1. Ubiquitous FeO-rich pyroxenes in enstatite chondrites: Implications for metamorphism and brecciation. 17th Lunar and Planetary Science Conference, Houston, Texas. March 17-21, 1986.

M.J. Jercinovic

1. Weathered basaltic glass: A natural analogue for the effects of reaction progress on nuclear waste glass alteration. 9th International Symposium on the Scientific Basis for Nuclear Waste Management, Stockholm, Sweden. September 9-11, 1985.

2. Alteration products of basalt glass from the Frenchman Springs Flow, Wanapum Basalt, Hanford, Washington. Annual Meeting, American Ceramic Society Chicago, Illinois. April 27 - May 1, 1986.

4.5 Other Professional Activities

Klaus Keil

1. Member, Advisory Committee on Comparative Planetology, International Union of Geological Science. 1982-1985.

2. Associate Editor, Journal of Geophysical Research, American Geophysical Union. 1982-1985.

3. Associate Editor, Journal "Chemie der Erde."

4. Consultant, Sandia National Laboratories, Albuquerque, New Mexico.

5. Reviewed several proposals submitted to NASA and NSF for funding.

6. Reviewed scientific papers submitted for publication in Geochimica et Cosmochimica Acta, Meteoritics, Science, Nature, Chemical Geology, Chemie der Erde, and Materials Research Society Symposium.

7. Member, Advisory Committee for the Institute of Geophysics and Planetary Physics, University of California, Los Alamos National Laboratory, Los Alamos, New Mexico (since 1984).

8. Several interviews with Frank Martinez, UNM Public Information, on activities in Institute of Meteoritics.

9. Chairman, Review Panel on Space Station Planetology Experiments (SSPEX), NASA Headquarters, Washington, D.C.

10. Chairman, Mars Observer Review Panel, NASA Headquarters, Washington, D.C.

11. Interview with Dennis Heard, UNM Journalism student on research in the Institute of Meteoritics. October 10, 1985.

12. Hosted Dr. Zeilick's Astronomy class in the Institute of Meteoritics. Gave lecture on significance of meteorites and showed Moon rocks in the microscope. December 12, 1985.

13. Gave live interview on comets (with D. Lusby) for Art Lloyd Jr., KGGM TV Channel 13 news. April 14, 1986.

14. Gave interview to Lobo's Julie Newcomb, on "Research in the Institute of Meteoritics." April 17, 1986.

15. Visiting Scientist, Planetary Geoscience Division, Hawaii Institute of Geophyics, University of Hawaii, Honolulu, Hawaii. June 8 - July 15, 1986.

G.J. Taylor

1. Chairman of the Lunar and Planetary Geoscience Review Panel.

2. Chairman of the Lunar and Planetary Sample Team.

3. Member of the National Lunar Base Steering Committee.

4. Member of the Planetary Materials and Geochemistry Program Management Working Group.

5. Editor of Origin of the Moon, to be published by the Lunar and Planetary Institute.

6. Reviewed 15 Proposals submitted for funding to NASA and 2 submitted to NSF.

7. Reviewed papers submitted to international scientific journals: two to Geochim. Cosmochim. Acta, one to Earth and Planetary Science Letters, three to the Proceedings of the Lunar and Planetary Science Conference, one to Reviews of Geophysics, and two book manuscripts submitted to Columbia University Press.

E.R.D. Scott

1. Member, Antarctic Meteorite Working Group.

2. Member, Lunar and Planetary Geosciences Review Panel.

3. Associate Editor, Red JGR, J. Geophysical Research.

4. Reviewed 14 NASA grant proposals.

5. Reviewed 13 scientific papers submitted for publication in Geochimica et Cosmochimica Acta (3), J. Geophys. Res. (7), Proceedings of the Tenth Symposium on Antarctic Meteorites (1), Smithsonian Contributions to Earth Sciences (2).

H.E. Newsom

1. Reviewed 2 papers submitted to Nature and 3 papers submitted to Geochimica et Cosmochimica Acta.

2. Interview with KOB-TV on Voyager Uranus encounter, Jan. 25, 1986.

J.R. Connolly

1. Presented talk to Petroleum Geology class on "Oil and gas in Nevada - Railroad Valley Fields, Nye County, Nevada." Dec. 11, 1986.

C.A. Goodrich

1. Served on Program Committee for 17th Lunar and Planetary Science Conference, January, 1986.

G.H. Conrad

1. Calibrated and repaired electron microprobe in Dept. of Geosciences, North Carolina State University, Raleigh, N.C., for Dr. R.V. Fodor. March 5-9, 1986.

M.G. Bersch

1. Consultant, Moraya Gold Mines.

2. Reinstated as a member of the American Association of Petroleum Geologists.

3. Became a member of the Society of Mining Engineers.

C.V. Williams

1. Visiting Faculty, General College, University of New Mexico, January - May 1986, taught Physical science. August - December 1985, taught Natural Science.

4.6. Non-teaching University, College and Department Service.

Klaus Keil

1. Administration of the Institute of Meteoritics and its collections.

2. Chairman and member of several thesis and dissertation committees in the Department of Geology.

3. Served as Director of the Caswell Silver Foundation, Department of Geology, UNM, and attended meetings on January 18 and May 17, 1986.

4. Served on several M.S. and Ph.D. comprehensive examinations committees.

5. Served on UNM Honorary Degree Committee.

6. Hosted the visits of several prospective geology graduate students to UNM.

7. Served on President's Committee on Research and Graduate Affairs, University of New Mexico.

8. Hosted the visit of Dr. Gustavson of the National Science Foundation in the Electron Microbeam Analysis Facilities of the Department of Geology and Institute of Meteoritics, on behalf of the Center for High Technology Materials. October 25, 1985.

9. Provided optical microscope facilities of Institute of Meteoritics to Dr. Larry Strauss and his post-foctoral fellow, Dr. Akashi of UNM's Anthropology Department.

10. Hosted tour of the Electron Microbeam Analysis Facilities by the Board Members of UNM's Center for High Technology Materials. December 10, 1985.

11. Served on Presidents Advisory Council, UNM.

12. Chaired electronics technician search committee, Dept. of Geology, UNM.

E.R.D. Scott

1. Curator, Meteorite Collection, Institute of Meteoritics.

C.V. Williams

1. Served as Track Official for University of New Mexico home track and field meets, Spring, 1986.

4.7. Advanced Study and New Scholastic Honors, Fellowships, etc.

Klaus Keil

1. Listed in "International Men of Achievement".

2. Listed in "Who's Who in America".

3. Appointed Presidential Professor of Geology, University of New Mexico.

4. Appointed Distinguished Lecturer in Meteoritics for 1986, National Research Council and Mineralogical Association of Canada. February 2 - 8, 1986.

M.G. Bersch

1. Continued progress towards Ph.D. degree in Geology with research in Institute of Meteoritics on "Major and minor element distributions in pyroxenes and olivines from pristine lunar highland rocks".

Tammy L. Dickinson-DeNault

1. Continued progress towards Ph.D. degree in Geology with research in Institute of Meteoritics on "Germanium abundance in lunar rocks: Did the Moon form totally molten?"

2. Received renewal of NASA Graduate Students Researchers Fellowship, May 15, 1986 to May 15, 1987, in the amount of $17,967.00.

B. Epling

1. Continued progress towards M.S. degree in Geology with research in Institute of Meteoritics on "Petrology and classification of type 3 ordinary chondrites from Antarctica".

Rosemary Glenn

1. Continued progress towards M.S. degree in Geology with research in Institute of Meteoritics on "Clay mineralogy and diagenetic history of the Rustler Formation, near Carlsbad, N.M."

2. Received Department of Geology, University of New Mexico, scholarship.

S. Hayden

1. Received Harry and Mabel F. Leonard Scholarship, Department of Geology, University of New Mexico.

M.J. Jercinovic

1. Continued progress towards Ph.D. degree in Geology with research in part in the Institute of Meteoritics on "Palagonitization of subglacial volcanics from British Columbia and Iceland".

D. Lusby

1. Continued progress towards M.S. degree in Geology with research in Institute of Meteoritics on "Lithification of type 3 and 4 ordinary chondrites and achondrite regolith breccias".

J.P. McKinley

1. Continued progress towards Ph.D. degree with research in part in Institute of Meteoritics on "Low-temperature alteration of Columbia River basalt".

S.I. Recca

1. Continued progress towards M.S. degree in Geology with research in Institute of Meteoritics on "Fine-grained millimeter-sized objects in type 3 ordinary chondrites and their relation to chondrules and matrix".

T. Sewards

1. Received Department of Geology, University of New Mexico, scholarship.

Cecelia V. Williams

1. Continued progress towards M.S. degree in Geology with research in Institute of Meteoritics on "Cooling rates of clasts in ordinary chondrite regolith breccias: Implications for parent body history".

4.8. Sabbaticals, Leaves of Absence, Summer Teaching Elsewhere, Travel, etc. During Period.

Klaus Keil

1. Mainz, West-Germany. Attended Workshop on Antarctic Meteorites, Max Planck Institute of Chemistry. July 10-13, 1985.

2. Bordeaux, France. Attended Meteoritical Society Meeting, chaired session on "Achondrites and mesosiderites", presented one talk, and co-authored two talks. July 16-20, 1985.

3. Louisville, Kentucky. Attended Electron Microbeam Analysis Society Meeting and presented one invited plenary talk. August 5-9, 1985.

4. Greenbelt, Maryland. Chaired Mars Observer Review Panel at NASA Goddard Space Flight Center, Greenbelt, Maryland. September 29 - October 6, 1985.

5. Farmington, New Mexico. Presented invited talk at Four Corners Geological Society Meeting. December 6-7, 1985.

6. Montreal, Quebec, Canada. Presented two invited talks, Dept. of Geology, McGill University. February 3, 1986.

7. Toronto, Ontario, Canada. Presented invited talk, Dept. of Geology, University of Toronto. February 4, 1986.

8. Winnipeg, Manitoba, Canada. Presented invited talk, Dept. of Geology, University of Manitoba. February 5, 1986.

9. Edmonton, Alberta, Canada. Presented two invited talks. Dept. of Geology, University of Alberta. February 6-7, 1986.

10. Honolulu, Hawaii. Research on spectral reflectance characteristics of asteroidal regolith breccias, as Visiting Scientist at the Division of Planetary Geosciences, Hawaii Institute of Geophysics, University of Hawaii. June 8 - July 15, 1986.

G.J. Taylor

1. Houston, Texas. Attended meeting of National Lunar Base Steering Committee held at the Lunar and Planetary Institute and the Johnson Space Center. July 24-26, 1985.

2. Houston, Texas. Attended meeting of a group writing a book called Lunar Materials, held at the Lunar and Planetary Institute. August 26-28, 1985.

3. Houston, Texas. Chaired Group Chiefs Meeting of the Lunar and Planetary Geosciences Review Panel, held at the Lunar and Planetary Institute. September 18-19, 1985.

4. Flagstaff, Arizona. Attended Workshop on Lunar Geoscience held at the Astrogeology Branch of the U.S. Geological Survey. September 23-24, 1985.

5. Tempe, Arizona. Gave invited talk at the Geology Department and Center for Meteorite Studies, Arizona State University. October 9, 1985.

6. Houston, Texas. Chaired meeting of the Lunar and Planetary Geosciences Review Panel held at the Lunar and Planetary Institute. November 3-15, 1985.

7. Washington, DC. Gave presentation to Dr. Geoffrey Briggs, Director of NASA's Solar System Exploration Division and Dr. William Quaide at NASA Headquarters. December 13, 1985.

8. Reno, Nevada. Gave invited talk at Annual Meeting of the American Institute of Aeronautics and Astronautics. January 8, 1986.

9. Houston, Texas. Gave invited talk at the Workshop on Astronomical Observations from a Lunar Base. January 10, 1986.

10. Washington, DC. Chaired presentation to NASA Officials, including Dr. G. Briggs, Director of the Solar System Exploration Division, by Group Chiefs of the Lunar and Planetary Geosciences Review Panel. January 21, 1986.

11. Pasadena, California. Gave invited presentation about review panels to the Planetary Astronomy Management Working Group, held at the Jet Propulsion Laboratory. January 30, 1986.

12. Houston, Texas. Attended meeting of group writing a book called Lunar Materials, held at the Lunar and Planetary Institute. January 3-5, 1986.

13. Houston, Texas. Chaired meeting of the Lunar and Planetary Sample Team held at the Lunar and Planetary Institute. February 21-23, 1986.

14. Houston, Texas. Attended 17th Lunar and Planetary Science Conference held at the Johnson Space Center. March 17-21, 1986.

15. Flagstaff, Arizona. Gave invited talk at Regional Meeting of the Geological Society of America. May 2, 1986.

16. Los Alamos, New Mexico. Participated in presentation by scientists from UNM, the BDM Corp. and Los Alamos National Laboratory to Engineers from the Johnson Space Center, Houston, about design criteria for observatories on the Moon. May 30, 1986.

17. Houston, Texas. Chaired meeting of Lunar and Planetary Sample Team held at the Lunar and Planetary Institute. June 16-18, 1986.

E.R.D. Scott

1. Washington D.C. Attended meeting of Antarctic Meteorite Working Group, U.S. National Museum of Natural History, Smithsonian Institution. September 26-28, 1985.

2. Houston, Texas. Attended meeting of NASA Lunar and Planetary Geosciences Review Panel, LPI. November 3-8, 1985.

3. Houston, Texas. Attended Program Committee Meeting for the 17th Lunar and Planetary Science Conference, LPI. January 23-24, 1986.

4. Houston, Texas. Attended 17th Lunar and Planetary Science Conference, NASA Johnson Space Center. March 16-21, 1986.

5. Houston, Texas. Attended Meeting of Antarctic Meteorite Working Group, LPI. April 3-5, 1986.

H.E. Newsom

1. Mainz, West Germany. Attended Workshop on Antarctic Meteorites at the Max-Planck-Institut fur Chemie. July 10-12, 1985.

2. Bordeaux, France. Attended 48th Annual Meeting of the Meteoritical Society, University of Bordeaux. July 16-19, 1985.

3. Socorro, New Mexico. Visited New Mexico Institute of Mining and Technology, Department of Geosciences. January 30, 1986.

4. Houston, Texas. Attended Seventeenth Lunar and Planetary Science Conference at the Johnson Space Center. March 17-21, 1986.

5. Providence, Rhode Island. Visited Brown University, Department of Geological Sciences. May 5, 1986.

C.A. Goodrich

1. Tucson, Arizona. Visited Department of Planetary Sciences, University of Arizona, and presented invited paper. October 4, 1985.

2. Pasadena, California. Visited Division of Geological and Planetary Sciences, Caltech, and presented invited paper. October 7, 1985.

3. Los Angeles, California. Visited Institute of Geophysics and Planetary Physics, UCLA, and presented invited paper. October 8, 1985.

4. Houston, Texas. Attended Seventeenth Lunar and Planetary Science Conference at NASA Johnson Space Center and presented one paper. March 17-21, 1986.

M.G. Bersch

1. Houston, Texas. Attended 17th Lunar and Planetary Science Conference at NASA Johnson Space Center and presented one paper. March 17-21, 1986.

Tammy Dickinson De Nault

1. Houston, Texas. Attended XVII Lunar and Planetary Science Conference. March 17-21, 1986.

2. Washington D.C. Attended NASA Graduate Students Researchers Program Symposium, presented one talk. May 12-14, 1986.

Rosemary T. Glenn

1. Denver, Colorado. Participated in "Clay Mineral Identification: A Short Course," at the University of Denver, held by The Clayschool (Conifer, Co.). July 15-19, 1985.

2. Carlsbad, N.M. Visited WIPP site and selected samples for analysis. October 15-17, 1985.

3. Austin, Texas. Visited Bureau of Economic Geology, University of Texas at Austin, to compare research on Permian Palo Duro Basin with our work on Delaware Basin. June 15-17, 1986.

M.J. Jercinovic

1. Stockhom, Sweden. Attended 9th International Symposium on the Scientific Basis for Nuclear Waste Management and presented one talk. September 9-11, 1985.

2. Chicago, Illinois. Attended 88th Annual American Ceramic Society Meeting, presented one talk and co-authored another. April 27 - May 1, 1986.

D. Lusby

1. Houston, Texas. Attended 17th Lunar and Planetary Science Conference and presented one paper. March 17-21, 1986.

T. Sewards

1. Denver, Colorado. Participated in "Clay Mineral Identification: A Short Course," at the University of Denver, held by The Clayschool (Conifer, Colorado). July 15-19, 1985.

2. Carlsbad, N.M. Visited WIPP site and selected samples for analysis. October 15-17, 1985.

3. Austin, Texas. Visited WIPP Bureau of Economic Geology, University of Texas at Austin, to compare research on Permian Palo Duro Basin with our work on Delaware Basin. June 15-17, 1986.

4.9. Public Service

Klaus Keil

1. Many private showings of Moon rocks to interested citizens, school classes, civic groups, etc., many of which were after working hours and on weekends.

2. Investigated without charge, many rocks suspected to be meteorites and brought to the Institute by citizens.

3. Presented talk on "Origin of Meteorites: From asteroids, comets, Moon and Mars:, Rio Rancho Senior Citizens Rock Hound Club, Rio Rancho, New Mexico. September 3, 1985.

4. Guided tour through Meteorite Museum, Electron Microbeam Analysis Facilities, and Optical Microscopy Laboratories for Rio Rancho Senior Citizens Rockhound Club members. October 18, 1985.

5. Provided exhibit material to New Mexico Museum of Natural History "Changing Exhibit Program" on "Microspace".

6. Participated in New Mexico Museum of Natural History docent training videotape series. September 25, 1985.

7. Gave workshop on "An illustrated voyage through our solar system", including viewing of Moon rocks in the microscope, for the German classes at the Albuquerque Academy (in German). October 17, 1985.

8. Gave talk on "An illustrated voyage through our solar system" at Awards Assembly, Northwestern New Mexico Regional Science and Engineering Fair, Popejoy Hall, University of New Mexico, Albuquerque, N.M. March 22, 1986.

9. Gave talk on "An illustrated voyage through our solar system," Breakfast Exchange Club, Albuquerque, N.M. May 2, 1986.

10. Hosted visit by Young Astronauts of Sunset Mesa School, Albuquerque, N.M., to Institute of Meteoritics, Meteorite Museum, and laboratories. May 15, 1986.

G.J. Taylor

1. Gave tour of meteorite museum to members of the Albuquerque Gem and Mineral Club. January 25, 1986.

2. Gave talk about the Moon to fifth grade classes at Whittier Elementary School. April 15, 1986.

3. Gave talk about geology from a base on the Moon to the monthly meeting of the Albuquerque Gem and Mineral Club. May 19, 1986.

4. Gave tour of meteorite museum and showed lunar samples to a group of science teachers from Kansas. June 5, 1986.

5. Examined several possible meteorite specimens brought in by interested citizens.

E.R.D. Scott

1. Tour of meteorite museum and talks on meteorites for three parties.

2. Investigated numerous suspected meteorites submitted by members of the public.

H.E. Newsom

1. Arranged for public broadcast of the Voyager Uranus encounter on the Albuquerque Cable TV education channel. Jan. 21-30, 1986.

J.R. Connolly

1. Served as Judge in Special Award Category for Albuquerque Geological Society at Northern New Mexico Regional Science Fair, University of New Mexico. March 21-22, 1986.

2. Led several field trips for kindergarten and preschool classes to Albuquerque Volcanos, N.M. Museum of Natural History and Geology Department Museums.

M.G. Bersch

1. Gave talk on "The geology of the Moon" to 3rd graders, Central School, Lead, S.D. May 7, 1986.

2. Gave talk on "Geology of the Golden Reward", to Kiwanis and Toastmasters, Lead, S.D. February 24, 1986.

Rosemary T. Glenn

1. Served as member and elected chairman in May, 1986 of Albuquerque Metropolitan Parks and Recreation Advisory Board.

2. Served as liaison (of the Metropolitan Parks and Recreation Advisory Board) and member of the Beautification Committee of the Environmental Planning Commission, City of Albuquerque.

D. Lusby

1. Led several groups of interested citizens to view Halley's comet.

Cecelia V. Williams

1. Led tour through the Geology Museum, University of New Mexico, for Natural Science 100 class. November 4, 1985.

2. Led tour through the Meteorite Museum, University of New Mexico, for Natural Science 100 class. November 13, 1985.

3. Served as judge in Chemistry, senior division, at Northwest Regional Science Fair. March 21, 1986.

4. Led tour through the Geology Museum, University of New Mexico, for Natural Science 261 class. March 25, 1986.

5. Led tour through the Meteorite Museum, University of New Mexico, for Natural Science 261 class. April 10, 1986.

The Report of The Department of History

July 1, 1985 - June 30, 1986

Janet Roebuck, Chair

GENERAL DEPARTMENTAL INFORMATION

A. Significant Achievements

1. The following courses were offered under 320 "Studies in History"
   a. The History of Sexuality
   b. History of the Vietnam War
   c. Military Intervention in the Caribbean
2. New or Altered Degree Programs
   a. The new Masters Program in Western History was first available to graduate students in January 1986.
3. Activities Beyond the Formal Curriculum
   a. The Journal, New Mexico Historical Review named a new Editor, Paul Hutton, July 1985. The Hispanic American Historical Review has moved to the University of Florida, Gainesville. John Kessell is director of the Diego de Vargas Project.
   b. The departmental Newsletter was edited by Professor Michael Conniff and distributed to 700 Universities and History Ph.D. Alumni.

c. Many members of the Department participated in this year's particularly successful History Day.

d. The Department co-sponsored a lecture with Women Studies Program, September 23, 1985. Estelle B. Friedman of Stanford University spoke on "Sexuality and Feminism in Nineteenth-Century America".

e. Professor Wolfgang-Uwe Friedrich of the University of Gotlingehn and Hildesheim gave a lecture in the History Department Common Room October 10, 1985 on East-West German relations.

f. The first annual Calvin Horn Lecture Series was held in November, 1985. This annual series is sponsored by Calvin Horn, a New Mexico businessman and educator. The UNM Graduate School will be sponsoring one lecture in the series each year. The 4 day series was attended by 800-900 people.

4. Awards

a. Ferenc Szasz received the Outstanding Teacher of the Year Award 1985-86.

b. Judy Woodward and Ruth Steinberg were the recipients of the Departments Grunsfeld Award.

c. The Dorothy Woodward Memorial Travel Grants were awarded to Judith Johnson and Bonnie Sykes.

d. John Wheeler received the Departments Coan Award.

e. Graduate School Awards were received by the following students: Shelley Sinclair - Challenge Assistantship; Janine Young - Graduate Achievement Award.

B. Significant Plans and Recommendations

C. Appointments to Staff

1. Visiting or Part-Time Appointments

a. Michael Welsh, Visiting Assistant Professor, U.S. History, Academic year.

b. Robert Himmerich y Valencia, Visiting Assistant Professor, Latin American History, Acdemic year.

c. Donald Kennon, Visiting Assistant Professor, U.S. History, Academic Year.

d. Bill Tydeman, Visiting Lecturer, Fall 1985.

e. Walter McMurtry, Visiting Lecturer, Academic year.

f. Rolf Lokke, Visiting Lecturer, Fall 1985.

g. William Zahner, Visiting Lecturer, Fall 1985.

h. Barron Oder, Vising Lecturer, Fall 1985.

2. Office Staff Appointments

a. Pat Devejian joined the office staff as Staff Secretary.

D. Separation From Staff

1. Professor Frank Ikle, a long time faculty member, retired in December 1985. We thank him for his many years of service and wish him well in his retirement.

E. Sponsored Research

1. Four professors submitted 8 proposals, (15% of current faculty).
2. Of these 4 submitting proposals, three obtained awards. (75%).

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Annual Report, 1985-1986

JOURNALISM DEPARTMENT

A. Significant Achievements

1. Installation and use, effective summer term, 1986, of a 15-station personal computer/printer news writing and editing classroom, replacing electric typewriters. It is the second such classroom on campus, and enhances the position of the department vis a vis professional preparation for virtually all newsrooms in the nation.

2. Accreditation of the entire department by the Accrediting Council on Education in Journalism and Mass Communications. The April, 1986 action removed the "provisional" accreditation from the broadcast sequence, caused by then-insufficient and outd ated equipment. It should be noted that ACEJMC now rates departments in toto, instead of designating each sequence (news/editorial, broadcast, advertising, public relations) as formerly done.

3. Evelyn Kennerly, '85, won the national undergraduate competition for ethics' papers sponsored by the AEJMC and will receive her award at its annual convention Aug. 4 in Norman, Okla. Her teacher was Dr. Fred Bales, "Mass Media as a Social Force."

4. Thirty-five New Mexico high school students who will be editing student newspapers in 1986-87 attended

A.4. (cont'd)

the fifth annual Journalism Workshop June 22-28. Co-sponsored by the Journalism Departm ent and the New Mexico Press Assn., it consists of intense writing, reporting, editing, photography and advertising classes from 8 a.m. until 9:30 p.m. and production of an eight-page tabloid. Courses are taught by faculty and professionals from newspapers around the state.

B.- Significant Plans.

The department wants to expand presently limited advertising work into a full sequence, perhaps paired with public affairs (nee public relations). We agree largely with the Strategic Planning Committee report that the department with Speech Communications and other related disciplines might someday form a separate, professional school or college.

C. Appointments.

None. We will be using three adjuncts to replace one faculty member who has returned to journalism practice at double his UNM salary.

D. Asst. Prof. Burt Wittrup, end of spring semester,1986.

E. Two (28%) submitted. None of the proposals were funded.

Bob Lawrence
Chairm an

THE ANNUAL REPORT OF THE DEPARTMENT OF LINGUISTICS

July 1, 1985 - June 30, 1986

Alan Hudson-Edwards, Chair

FACULTY CHANGES

Having fulfilled his contractual obligations to the Department of Linguistics at Ohio State University, Professor Richard D. Janda joined the faculty of the Department of Linguistics on July 1, 1985. Professor Janda taught one course during the Summer 1985 semester and assumed regular teaching responsibilities in the Fall 1985 semester. As Professor Janda was on leave of absence without pay for the academic year 1984-1985, he joined the faculty at the University of New Mexico in his second year of service.

Professor Chad McDaniel's position in the Department of Anthropology remained unfilled through the 1985-1986 academic year, continuing the dependence of the Department of Linguistics upon a single linguistics faculty member within the Department of Anthropology. The Department of Linguistics continues to hope that a suitable arrangement will be made as soon as possible in order to restore the full complement of anthropological linguistic offerings at the University of New Mexico and to make possible a greater range of course offerings in the areas of field linguistics and Native American linguistics.

Professor Rodney W. Young, by arrangement with the College of Education and the Department of Educational Foundations, resumed his earlier position as Coordinator of the Educational Linguistics Doctoral Concentration. Professor Young's partial salary as

coordinator is budgeted through the College of Education; however, the Department of Linguistics continues to provide office space, staff support, and other services as needed to the Educational Linguistics Doctoral Concentration.

In the closing days of the 1985-1986 academic year, negotiations were initiated between the Department of Linguistics, the Department of Psychology, and the Dean of the College of Arts and Sciences to transfer Professor Jean E. Newman from the Department of Psychology to the Department of Linguistics. Professor Newman will become a full-time faculty member, budgeted through the Department of Linguistics, as of August 1986.

CLASS ENROLLMENTS

Aggregate student enrollments through the 1985-1986 regular academic year showed a decline compared with the previous academic year as a whole. Total student credit hours for Spring 1986 were at 247 compared to 241 the previous year, an increase of only 2%. Over the past three years, Spring enrollments have shown remarkable stability at levels of 247, 241, and 233. Fall enrollments seem more subject to fluctuation, however. Enrollments for Fall 1985 were at 247, a decline of 22% over the Fall 1984 level of 318, but virtually identical with the Fall 1983 level of 248. Levels for the introductory freshman course in linguistics continue to account for almost two-thirds of all linguistics student credit hours and remain relatively stable compared with the levels of previous years. Enrollment in Linguistics 292, the introductory linguistics course for intending majors, seems to have recovered

from a decline in 1984-1985 with total annual figures for 1985-1986 showing an increase from 34 to 51. TABLE 1 below summarizes enrollments in the principal linguistics courses. It should be noted that many of these classes are crosslisted with other departments and that the statistics in TABLE 1 represent linguistics enrollments only. In many cases the full enrollments are considerably larger than those reported in TABLE 1.

TABLE 1

CLASS ENROLLMENTS IN PRINCIPAL LINGUISTICS COURSES

COURSE NUMBER	FALL 84	FALL 85	SPRING 85	SPRING 86
101.001	95	60	96	90
101.002	52	60	43	55
292	21	31	13	20
303	15	25	7	6
317	13	12	-	-
318	-	-	9	10
351	-	-	21	22
362	9	4	-	-
367	23	19	-	-
440	16	11	17	16
ALL ENROLLMENTS	318	247	241	247

PROGRAM ENROLLMENTS

During the 1985-1986 academic year there continued to be 18 students active in the Master of Arts in Language Sciences program. There were 23 students active in the Educational Linguistics Doctoral Concentration.

Of the 18 student in the master's program two took and passed their comprehensive examinations in Fall 1985, and three more

passed their comprehensives in Spring 1986, the second highest number in any year to date. This year, for the first time, two students completed theses in fulfillment of the requirements for the M.A. in Language Sciences. One other thesis is in process and the faculty is optimistic that more students will opt to complete their requirements by thesis rather than by coursework in future.

Of the 23 students in the Educational Linguistics Doctoral Concentration, three defended dissertations and graduated during 1985-1986:

Kun-ok Kim, Defense July 1985, Graduation Summer 1985.
"Operationalizing Principles of Textual Coherence"

Jack S. Damico, Defense August 1985, Graduation Fall 1985.
"The Effectiveness of Direct Observation as a Language Assessment Technique"

Silvia B. Braggio, Defense January 1986, Graduation Spring 1986.
"The Sociolinguistics of Literacy: A Case Study of the Kaingang, A Brazilian Indian Tribe"

Three more Ph.D. candidates are scheduled for dissertation defenses in Summer 1986.

NEW PROGRAMS

During the 1985-1986 academic year, the Department of Linguistics joined with the Department of Communicative Disorders in initiating a double undergraduate major in Linguistics and Communicative Disorders. The double major requires a total of 27 hours in Linguistics and an additional 27 in Communicative Disorders. The full set of requirements is indicated in APPENDIX 1 to this report. The proposal to establish a joint program was approved by the faculty of the College of Arts and Sciences during the Spring 1986 semester.

EXTRACURRICULAR ACTIVITES

The Duke City Linguistics Circle, through the Department of Linguistics, hosted or co-hosted the following events during the 1985-1986 academic year:

"Discourse Processes and Story Schema", presented by
Professor C. Pleh, University of Budapest,
September 3, 1985.

"Colombian Inca and Diachronic Simplification of Quechuan Morphology", presented by
Roger Parks, Summer Institute of Linguistics,
November 4, 1985.

"Linguistics and Language Teaching in Brazil", presented by
Professor F. Gomes de Matos, University of Pernambuco, Brazil,
November 7, 1985.

"What Intonation Teaches About How We Mean in English", presented by
Carol Woodall, Ph.D., Anthropological Linguistics, UNM,
November 18, 1985.

"Cognitive Science and the Computer Metaphor", presented by
Professor John Searle, University of California, Berkeley,
November 21, 1985.

"Tones in Laguna and Cochiti Keresan", presented by
Hillaire Valiquette, UNM Ph.D. Student, Anthropological Linguistics,
December 2, 1985.

"Current Topics in Generative Phonology: Language Games as Linguistic Evidence", presented by
Stuart Davis, Massachusetts Institute of Technology,
January 24, 1986.

"Beyond Language in Bilingual Education", presented by
Professor Shirley Brice-Heath, Stanford University,
with Special Luncheon Discussion, February 3, 1986.

"Stress Shift in Spanish Lyrics as Phonological Evidence", presented by
Professor Richard Janda, Department of Linguistics, UNM,
March 4, 1986.

AWARDS AND HONORS

Professor Emeritus Robert W. Young was a recipient of the 1986 Native American Award from the New Mexico Association for Bilingual Education in recognition of his outstanding contribution to

bilingual-bicultural education and in particular in recognition of his work on the publication and revision of the Navajo language dictionary.

DEPARTMENT PLANNING AND DEVELOPMENT

One of the main preoccupations of the faculty of the Department of Linguistics during 1985-1986 was the formulation of a plan of development in response to the Graduate Unit Review conducted during the Spring 1985 semester.

The faculty first addressed themselves to the formulation of a clear statement regarding the proper mission and goals of the Department of Linguistics. The finished statement affirms the academic integrity and validity of the discipline of linguistics and the importance of continuing and developing linguistics at the University of New Mexico. The statement further emphasizes the commitment of the Department to the practical application of linguistic theory in the fields of language education, bilingual education, and language and speech remediation. Finally, the statement recognizes the social responsibilities toward the various non-English-speaking populations of New Mexico which rest upon a department of linguistics located at the principal university of the State of New Mexico. The full statement, as approved, is attached as APPENDIX 2 to this report.

The second concern of the faculty was the radical reform of course offerings in line with many of the suggestions put forward by the Graduate Unit Review team. The faculty has decided to seek, in collaboration with the Department of Anthropology, the coalescence

of Linguistics 101 and Anthropology 110, both freshman introductory courses in linguistics, although with admittedly different emphases. In addition, following agreement with the Department of English, Linguistics/English 440 will be moved completely to the jurisdiction of the Department of Linguistics and merged with the existing Linguistics 292. The resulting 300-level course will be suitable as an introduction to linguistics for undergraduate and graduate majors in linguistics, English, and education. In the area of general interest courses, the Department has decided to offer a 200-level course in dialects of English and a (probably) 400-level course on bilingualism, viewed from linguistic, psychological, and sociological perspectives. Other, equally far-reaching, efforts at curricular reform are in progress and a full reworking of the Department's course offerings should be ready for approval by the end of the Fall 1986 semester.

The Department was not in a position, during 1985-1986, to pursue the Graduate Unit Review recommendation that the necessary resources be made available for programs in Hispanic and Native American linguistics, although it remains firmly committed to such a development as a longer-term objective.

However, the imminent transfer of Professor Newman from the Department of Psychology to the Department of Linguistics is a major step in the direction of faculty consolidation and reorganization, a second major recommendation of the review. The faculty of the Department of Linguistics wishes to record its gratitude to the Department of Psychology for its support and cooperation in making Professor Newman's transfer possible without delay.

APPENDIX 1.

REQUIREMENTS FOR THE DUAL MAJOR IN
LINGUISTICS AND COMMUNICATIVE DISORDERS

(1) A total of fifty-four (54) hours in Linguistics and Communicative Disorders. Twenty-seven (27) hours to be taken in Linguistics and twenty-seven (27) to be taken in Communicative Disorders.

(2) The Linguistics major to consist of twenty-one (21) hours of required courses plus six (6) hours of approved electives. The following courses to be required in Linguistics:

Ling 292	Introduction to Linguistic Analysis
Ling 317	Phonological Analysis
Ling 318	Grammatical Analysis
Ling 351	Language in Society
Ling 362	Language Testing
or	
Ling 367	Psychology of Language
Ling 417	Phonological Theory
Ling 418	Grammatical Theory

(3) The Communicative Disorders major to consist of twenty-one (21) hours of required courses plus six (6) hours of approved electives. The following courses to be required in Communicative Disorders:

Com Ds 302	Introduction to Communicative Disorders
Com Ds 303	Phonetics
Com Ds 320	Acoustics and Perception of Speech
Com Ds 321	Introduction to Audiology
Com Ds 360	Speech Disorders
Com Ds 430	Development of Speech and Language
Com Ds 450	Neurology and Neuropathologies of Speech

APPENDIX 2.

MISSIONS AND GOALS OF THE UNM DEPARTMENT OF LINGUISTICS

The University of New Mexico Department of Linguistics takes as its primary concerns the theoretical and applied study of the structure, use, processing, and acquisition of language. The significance of this pursuit lies largely in the fact that it teaches us much about ourselves not only as humans in general but also as particular individuals and social groups in relation to other individuals and social groups. Such inquiry is pursued both through faculty scholarship and through teaching which seeks to provide students of diverse backgrounds with a thorough grounding in the essentials of linguistic theory and in methods of linguistic argumentation and research. Thus the members of the faculty of the Department of Linguistics conduct research into the fundamental bases and nature of language systems, the social mechanisms and ramifications of language use, and the interplay of psychological processes and environmental effects in the production, comprehension, and acquisition of language.

The Department recognizes an additional commitment to promote and investigate the application of linguistic theory to educational and social concerns. It is particularly concerned to serve both local and wider communities by providing the best and most appropriate linguistic training possible for students who intend to pursue practice or research in the fields of education, language policy and planning, and the clinical treatment of language-impaired persons. Finally, at the same time that it contributes to the broad preparation of such students both inside and outside its degree programs, the UNM Department of Linguistics seeks to provide its own students with encouragement and generous opportunities for obtaining the additional training needed in order to take the fullest advantage of their linguistic knowledge and to pursue the most effective practice of their future professions.

Because it operates within the multicultural context of the State of New Mexico, the Department bears a particular responsibility to the linguistic communities which it serves. Two prime departmental goals are therefore: (1) within the limits of community-defined propriety, to cultivate the study and use of local languages, particularly where they are threatened with extinction, and (2) to make the tools of linguistic methodology and the skills of our own professionals accessible to these communities, especially by actively involving them and their individual members in our educational programs.

ANNUAL REPORT 1985-87

Department of Mathematics and Statistics

I. Introduction

The University of New Mexico suffered twin crises this year. One was the ongoing fiscal crisis of the State of New Mexico and its concomitant effects on the University. The other was a crisis in leadership of the University. These problems have caused the Department of Mathematics to drift ever downward.

The numerical analysis effort of the Department has been decimated by the loss this year of Richard Allen and Steve Pruess. These losses together with the loss of Bob Russell last year have just about wiped out our program in numerical analysis, a program that is a vital part of our applied mathematics effort. These losses were due primarily to the grim fiscal condition of the Department, but also were caused by a sense that things are not going to get better soon and that the Department is suffering from lack of other kinds of support.

The Department was visited by an outside evaluation team to look over our graduate program. The report written by the evaluation team indicates a number of serious problems, the most important of which is the salary problem that is adversely affecting everyone - faculty, teaching assistants and staff.

An important problem that was pointed out by the report is that the Department of Mathematics has slots for only 25 teaching assistants. By way of comparison, the Department of English (a department that is about the same size as ours) has double the number of T.A.'s that we do. The Department of Physics and Astronomy, a department one half the size of ours, has an equal number of T.A.'s as us. A result of this underrepresentation in T.A.'s is that we are often unable to draw enough students to make our advanced classes and the graduate students end up suffering. In addition, the workload that we thereby require of our T.A.'s is disproportionately high.

It is a very high priority item that the Department of Mathematics and Statistics be allocated more positions for teaching assistants.,

A variety of other problems plague the Department and are flagged in the graduate review report - miniscule funds for faculty travel and visiting speakers, low numbers of funded grants on the part of faculty, continuing lack of office space, lack of computing hardware and software for office support staff for accounting purposes and data base construction, and niggardly funds for part-time instructors and grading.

As it is now, the Department regularly overspends its part-time teaching budget and the College of Arts and Sciences invariably comes through and bails us out.

Rather than running the ship that way, it would be vastly preferable to have a *realistic* part-time instruction budget and make us live within the bottom line. The effect of the current situation is that when there is a crunch we are the ones who get axed first. Speaking of which - there was a 2% mandated budget cut for the 1986-87 academic year and the Department of Mathematics and Statistics was once again called upon to do more than its fair share - we gave up $55,000 in replacement funds for faculty, the largest amount of any department in the College.

It is our considered opinion that the University is going to have to make up its mind what kind of department of mathematics it wants. Are we to be largely a service department, teaching hordes of remedial students, or are we to be a full participant in the much-vaunted "high technology economic development of the Sun Belt"? If the answer is the latter, then the University must simply do more than what it is doing now for the Department of Mathematics and Statistics. We are truly at the crossroads.

II. Personnel

A. Faculty

There have been several changes in personnel in the past academic year with the almost total loss of the numerical analysis group. Robert Russell left in the academic year 1984/85. This year Steven Pruess left to join the faculty of Colorado School of Mines and Richard Allen has become a Group Leader at Sandia National Laboratories. David Sanchez, chairman for the past three years has gone to Lehigh University to be its Provost and Vice President. Abraham Hillman and Donald Dubois have both retired from the ranks.

At the beginning of fall semester 1985, we welcomed Michael Frazier from Washington University, Pedro Embid from UC Berkeley and Andrew Mullhaupt from the Courant Institute.

We had a quota of visitors. Deborah Lockhart visited from Michigan Technological University, Weiji Su from Mainland China and Ferenc Varadi from Hungary.

B. Staff

There have been no changes in staff, which remains constant at 4 employees, aided by a workstudy.

III. Sabbaticals, Leaves of Absence, Travel

Professors Griego, Zimmer, Cogburn and Schrader were on sabbatical for the entire academic year, while Professor Dubois and Wofsy each spent the spring semester on

795

sabbatical.

Mutiara Buys continued on leave of absence and L.S. Hahn, after a sabbatical in Japan in 1984-85, spent 1985-86 on leave of absence.

The total travel budget for 1985-86 was $2,991 which allowed eight professors to travel to conferences and present papers. Any other travel within the department was done from funded research grants.

IV. Publications

The department continues to be prolific in the generation of research papers. Some 40 papers were published in the past academic year by our active researchers.

A second edition of "Differential Equations" by Kyner, Sanchez and Allen is being worked on. Reuben Hersh's book, "The Mathematical Experience" has been reproduced in other languages, among them German. Richard Grassl and Abraham Hillman have collaborated on "Discrete Combinatorial and Mathematics", which is due out later this year.

V. Faculty Matters

Michael Buchner was tenured and promoted to Associate Professor in the academic year 1985/86.

The department continues to acquire research funding in these difficult times. Professors Ellison, Gibson, and Steinberg have all had existing funding renewed. Professor Stone has a grant from AFWL, while Professor Buchner has been awarded an NSF grant. Professor Griego's grant from the National Science Foundation for development of educational computer software continued.

Professor Richard Griego was awarded a Presidential professorship during the past academic year and Professor Carla Wofsy was the recipient of a Presidential Lectureship for a period of two years beginning on July 1, 1986. Professor Richard Griego won the Regents Meritorious Service Medal for 1986.

VI. Undergraduate Program,

The Undergraduate Program in the Department of Mathematics and Statistics is continuing to flourish. The number and quality of our majors is up from last year. Several of the following programs are responsible for this success: the statewide effort on the New Mexico Mathematics Contest, now in its 20th year, has produced several outstanding winners who have elected to attend UNM. We have presented Carey Kingsbury, a senior from Sandia H.S. with the $1,500 renewable scholarship

and our persistence with the Development Office has earned us a one time $500 scholarship which was offered to Glenn Stark. Glenn is currently spending his summer working on a research project in mathematics with Professors Grassl and Kelly.

It was an excellent year for our undergraduates on the 1986 Putnam Intercollegiate Mathematics Competition. Eight New Mexico residents, four from the University of New Mexico, were among the top contestants in the 1985 William L. Putnam Intercollegiate Mathematics Competition. A total of 2079 undergraduates from 348 institutions in the United States and Canada participated in the 6-hour written examination on highly challenging problems prepared by a committee of the Mathematical Association of America. The top 500 participants are considered worthy of consideration for graduate assistantships and fellowships.

The state of new Mexico was second only to Vermont (placing four students in the top 500) in ratio of number of residents listed to population. The top performance on an individual basis of a University of New Mexico participant was achieved by sophomore, William Goldman. His rank was 82 overall and was among the top 29 sophomores in the country. Goldman was several times a top finisher in the New Mexico Mathematics Contest while at Los Alamos High School and currently holds the Mathematics Contest scholarship.

The next highest ranking University of New Mexico students were Jan Hutson, 224th overall and approximately 73rd among all seniors, and Timothy Bolek, a chemistry major, ranking 324th.

Another previous winner of the New Mexico Mathematics Contest, Charles Ferenbaugh, ranked in the top 100 and was a member of the Rice team that finished 4th in the country. He is from Los Alamos High School and currently lives in Houston, Texas. Both Goldman and Ferenbaugh were among the top 29 sophomores from United States colleges and universities.

The Second Annual Problem Solving Seminar, held in May, attracted 32 students and 6 teachers from around the state. We invited the 10-11-12th grade winners of the NM Mathematics Contest to participate in a 2 hour seminar involving problems from past Putnam Competitions. We mailed these out a month prior to the seminar date and suggested that they attempt the problems and volunteer to present solutions at the seminar. We had six student presentations in this very successful recruiting effort.

In April our undergraduate committee conducted the second Annual Freshman Mathematics Competition. Although attracting just 14 students, the quality was high and we offered a chance for these students to meet and get to know one another.

Our undergraduates research projects are continuing to fare well. The following professors have been involved in projects with out undergraduate majors: DeMarr, Entringer, Grassl, Kelly, Johnson, Mullhaupt and Qualls. Several students have completed results that will be presented at the Math Association of America Sectional Meetings held in Albuquerque of March 1987.

We have added a new option for Mathematics Majors entitled "Mathematics of Computation" requiring a number of discrete and applied courses combined with a special minor in Computing Science. We have implemented the MAA nationalized placement exam replacing our own much used decade-old departmental exam. Advantages include (a) it is a national, standardized exam (b) we can change the exam more frequently, (c) we can make use of data obtained by neighboring universities.

VII. Students

The number of undergraduate mathematics has continued to grow in recent years with 120 students as declared math majors. 20 students graduated as math majors in the academic year. They have a choice of four majors: pure; statistics; math education; mathematical computation.

The graduate program remains constant around 60 students, almost evenly divided between the master's and the doctoral program. There are three programs available: pure; applied and statistics.

Our teaching assistant number has increased from 23 to 25 recently, but is still inadequate to our needs. This past academic year, we had more than 20 good candidates and only had five T.A. spots to fill.

The research professors support research assistants over the summer, but there are no research assistant positions per se in the department.

VIII. Curriculum

During this past year we continued the phasing out of Math 100 at the University of New Mexico. An agreement was entered into with TVI whereby the bulk of the classes are now to be taught there. We still offer a minimum of classes for veterans and athletes, who are constrained by regulations and schedules from taking the class at TVI.

During the year the Undergraduate Committee has entered into a dialogue as the relative merits of Math 121 and Math 150. At present Math 121 is the precursor of the Calculus series for Business (180 & 181), while Math 150 is the preparation for the Engineering calculus (162 & 163). Much study is being done on the course

content of these courses and changes are likely to be decided upon during the course of the coming academic year.

IX. Colloquium

The colloquium program is necessary because of geographical isolation from other universities. It stimulates and encourages research.

The program is largely sustained by our indirect costs, i.e. a proportion of the amount of money the university gets, that is generated by research funding. The indirect costs money in the Department of Mathematics and Statistics is used first to pay Math Society dues, then the remainder for honoraria and travel expenses for colloquium speakers.

Once per annum, we share speaker expenses with the Sandia Colloquium program and invite an eminent mathematician to give a talk. In September 1985, Professor Selfridge of Northern Illinois was the featured speaker. We also have the Efroymson Memorial lecture, which allows us to invite one speaker per annum in the pure mathematics field. Professor Weinstein of UC Berkeley delivered the first Memorial lecture in May 1986.

X. Budget and Related Matters

As ever the department operates in perennially straightened circumstances, with no real latitude for new and exciting ventures. These are difficult times. The Undergraduate Committee made a strong case for more money for the Grading Program, as the Math Department traditionally teaches classes as large as 70 students, with much of the learning done through take home material. The proposal went to Scholes Hall but nothing was heard of it. More money for Materials and Services would be helpful, as would a line item for Computer Expenditure.

We continue to have problems with office space. Better conditions are planned for the long term, which keeps optimism high.

XI. External review

On April 17th and 18th, 1986, the Department was the subject of a Graduate review. Professors Alspach, Morris and Newell were our external reviewers while Professor Chandler of Physics was our internal reviewer. General comment was made on the effect of low salaries with little hope of reprieve on faculty morale. It was suggested that more teaching spots should be accorded to Teaching Assistants.

The reviewers also felt that there should be positive incentives for faculty who actively research and generate research funding. If their efforts were financially rewarded, more faculty would endeavor to be funded, more money would be available to the department in the form of indirect costs. The benefits would be many and various, both financially and in terms of morale.

College of Arts and Sciences

Department of Modern and Classical Languages

July 1, 1985 to June 30, 1986

Tamara Holzapfel, Chair

A. Significant Achievements:

The 1985/86 academic year, more than any other in the recent past, has been significant for the Department of Modern and Classical Languages because of the unprecedented number of awards, decorations, and honors bestowed on faculty members who have distinguished themselves in the international cultural arena. Faculty members in French, German, and Spanish have used their creative genius and knowledge as a bridge between the United States and the other nations, enhancing both cultural and personal relations.

Professor and poet Angel González was awarded, in October 1985, Spain's most coveted literary prize. The prestigious Príncipe de Asturias prize for literature is the Nobel prize of the Hispanic world. A reception in his honor was held at UNM (Hodgin Hall) on May 2, 1986.

An annual "Angel González Poetry Prize" was created in his honor by the City Council of Oviedo, Spain, the city of his birth.

Professor Pelayo H. Fernández received the distinction of the Encomienda de la Orden del Mérito Civil on May 8, 1986. He was decorated by the Council General of Spain in Houston in recognition of his academic and civic contributions. Professor Fernández has published a half a dozen books on Spanish themes and has served on the New Mexico Association for Bilingual Education and on the Albuquerque Arts Board Committee. The

latter has been instrumental in raising the funds and commissioning a statue of the founder of Albuquerque. The large equestrian statue will be completed in the summer of 1987 and placed at the entrance of Old Town.

Professor Claude-Marie Senninger received the distinction of Chevalier de L'ordre National du Merite from the French Consul General in Los Angeles on September 14, 1985. Professor Senninger who is the director of the UNM French Summer School at Montezuma and the honorary Consul of France in Albuquerque, was recognized for her efforts to bring French culture to New Mexico through the Summer School and other activities such as French theatre, music, lectures. Professor Senninger was awarded one of UNM's Senior Presidential Fellowships in recognition of her contributions to scholarship, teaching, and service.

Professor George F. Peters was decorated with the Bundeskreuz-Erste Klasse, Officer's Cross of the Order of Merit of the Federal Republic of Germany, by the Acting Consul General of the Federal Republic of Germany in Houston on October 4, 1985.

Professor Peter K. Pabisch received the same distinction as Professor Peters in a separate ceremony at Taos in the summer. Professors Peters and Pabisch are the co-directors of UNM's German Summer School at Taos, and they have both distinguished themselves in furthering relations between Germany and the United States and, through the Summer School, have contributed to the education of American students about German culture and language.

On April 17, 1986 Professor Pabisch was decorated by the Austrian government with a Grosses Ehrenzeichen (Medal of Merit) for his contributions to Austrian cultural understanding.

Other Faculty News:

UNM Junior Presidential Fellowships were awarded to Professor Dick Charles Gerdes, Spanish, and Professor Natasha Kolchevska, Russian.

Professor Tamara Holzapfel became an honorary member of Dobro Slovo, the National Slavic Honor Society.

Professor Rowena Rivera was awarded two Fulbright Faculty Fellowships to study folklore. Fall 1985-Mexico and Summer 1986-Paraguay.

Professor Erlinda Gonzales-Berry is directing UNM's summer study program in Almería, Spain.

Professor Enrique Lamadrid is the co-director for the Mexico summer studies program Conexiones, held in Morelia, Mexico.

Professor Rosa Fernández is directing the Oral Proficiency Workshop, sponsored by the Latin American Institute, on campus this summer.

Professor Edward Benson and Professor Byron Lindsey were chosen to participate in NEH Summer Seminars at Duke University and University of Illinois-Urbana respectively.

Professor Jon Tolman is director of the Summer Portuguese Institute at Santa Fe, New Mexico.

Professor Enylton de Sa Rego is lecturing at the Summer Portuguese Institute at Santa Fe, New Mexico. He has recently become Associate Editor of the Latin American Research Review.

Professor Natasha Kolchevska is coordinator this summer of the Russian studies program in Moscow, U.S.S.R.

Cultural Activities sponsored and cosponsored by M+CL:

Visit of internationally acclaimed Soviet poet Andrei Voznesensky. Over 500 persons attended the performance-lecture.

Symposium on German Studies (July 3-7, 1985) held at the 10th anniversary of the German Summer School at Taos, N.M. Speakers and guests represented all German-speaking countries and many major universities in the U.S.

Contemporary Spanish Photography and lecture by Professor Joan Fontcuberta was co-sponsored by UNM Art Museum. The show subsequently went on a national tour.

The play Menaechmi of Plautus was translated and staged by Professor Warren S. Smith. Among the actors were Professor Smith, Professor Lawrence Lynch and Wendy McCabe, all of M+CL. The production was sold out.

Jean Guillou, famous French organist, gave a concert and workshop on campus. He is the Titular Organist of the historic church of St. Eustache in Paris.

An Italian Renaissance dinner, prepared by a chef from Sienna, Italy, was given for the benefit of UNM's Italian program and the Maxwell Museum.

Lectures and Poetry Reading:

1) Afranio Coutinho on Brazilian poetry; 2) Sonia Maria Ribeiro Dos Santos and Afranio Coutinho gave an interpretative reading of Brazilian poetry; 3) Reinhold Grimm on Bertold Brecht's Chicago; 4) Suzanne Jacob on La Genese de l'imaginaire; 5) Poetry series, "An Eye Through the Wall" with Enrique Lamadrid, Jim Sagel, E.A. Mares, John Brandi.

The Spanish section gave a reception for Spanish majors on Dec. 6, 1985.

The New Mexico musician Cipriano Vigil demonstrated musical instruments and sang some of his compositions.

M+CL faculty members from all language sections participated in the 1985 Language Expo sponsored by the Albuquerque Language Teachers Association. This annual event attracted over 1,000 persons.

B. Significant Plans and Recommendations:

This past year efforts have been made to replenish the scholarship fund given by the Lamadrid family to M+CL in 1983. There are now over $5,000.- in the account in the UNM Foundation, and in the future efforts should continue to be made to increase the scholarship fund by sponsoring benefit events and by contacting alumni through the annual newsletter. It

would be advisable to spend only the interest accumulated on the capital during a calendar year.

C. Appointments:

Walter C. Putnam, III, Assistant Professor of French, Spring 1986.

Roger Ikor, French novelist, visiting professor, Fall 1986.

Carlos Moises, Brazilian visiting professor from Sao Paulo, Brazil, Spring 1986.

Fritz Cocron, Max Kade visiting professor in German and Political Science, Spring 1986.

Wendy McCabe, visiting lecturer in Classics, Fall, Spring, 1985, 1986.

Gloria Sandoval, Department Secretary, Spring 1986.

D. Separations from Staff:

Ernest T. Book, associate professor of French, died July, 1985.

Edward Benson, assistant professor of French, resigned.

Shaw N. Gynan, assistant professor of Spanish, resigned.

Cristina González, assistant professor of Spanish, declined offer.

Elaine Robert, lecturer in German, retired.

E. Sponsored Research:

Professor Dick Gerdes secured a translation project from the Department of Human Services, Income Support Division, Santa Fe, N.M. in the amount of $3,960.-.

Report of the Department of Philosophy
July 1, 1985 - June 30, 1986
Fred Gillette Sturm, Chair

A. Significant achievements during the academic year

1. M.A. Concentrations

Three special areas of concentration were added to the Master of Arts in Philosophy degree program:

Buddhist Philosophy

History and Philosophy of Science

Philosophy of Literature

These bring to four the concentrations possible within the Master's program. Religious Studies was added as a special concentration area in 1978-79. Environmental Ethics was added during the same year but subsequently dropped.

2. Inter-departmental cooperation

The department has participated fully in the following inter-departmental and multi-disciplinary programs:

Asian Studies ("housing" the inter-university cooperative exchange program, between UNM and Shaanxi Teachers University of the People's Republic of China)

Cognitive Science

Critical Thinking (A state-wide program)

European Studies

Latin American Studies

Peace Studies ("housing" the ad hoc university-wide committee and the official College of Arts and Sciences committee)

2. Inter-departmental cooperation

Religious Studies ("housing" the official College of Arts and Sciences committee and the program's secretariat)

3. Cooperation with professional and community organizations

a. American Association for Chinese Studies

The Department provides the editorial office for the Journal of Chinese Studies.

b. International Society for Buddhist Philosophy

The Department provides the Book Review editorial office for the International Journal of Buddhist Philosophy.

c. New Mexico - West Texas Philosophical Society

The Department provides the office for the Secretariat of the Society.

d. Philosophy Documentation Center

The Department provides the editorial office for the annual Directory of American Philosophers.

e. SPARS (Science, Philosophy and Religion Symposium)

Beginning this year three faculty and one student major represented the Department on the SPARS planning committee, an inter-disciplinary group affiliated with Kirtland Airforce Base.

4. High School Philosophy Program

Members of the departmental faculty and several teachers, administrators, and parents of the Albuquerque Public School system constituted a steering committee to plan four conferences designed to involve high school students in philosophical discussion. The

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4. High School Philosophy Program

conferences were held in Farmington, with cooperation from faculty of San Juan Community College and the Farmington area secondary schools; Las Vegas, with cooperation from faculty of Highlands University and the Las Vegas area secondary schools; Santa Fe, with cooperation from faculty of the College of Santa Fe, St. John's College, the World College, and Santa Fe area secondary schools; as well as in Albuquerque. The program was underwritten by a grant from the New Mexico Humanities Council.

5. Center for Philosophy and the Professions

Groundwork was laid for the establishment of an inter-collegiate center to encourage inquiry into the philosophical dimension of education for the professions and practice of the professions. Deans and/or their representatives from nine professional schools at UNM met monthly with representatives of the Department of Philosophy to begin to identify the major issues which need to be addressed in depth.

6. Phi Sigma Tau and the Philosophy Colloquium

Under strong student leadership drawn from both undergraduate and graduate ranks the weekly Philosophy Colloquium, held Friday afternoons in the Department Library, continued to be an important forum with philosophy faculty and students engaged in discussion with faculty and students from other disciplines. The Colloquium is publicized through the media and participation in sessions includes persons from the community who are not affiliated directly with the university.

7. Community Outreach

Department Faculty continued to make themselves available to fill speaking engagements with community organizations and school classes.

8. Mediaeval Academy of America annual conference

The Department was one of the official sponsors of this year's Mediaeval Academy conference.

B. Significant plans and recommendations for the near future

1. High School Philosophy Program

We intend to work with the college and secondary school teachers who cooperated with us this year in laying the groundwork for a state-wide program that would infuse philosophical reading and discussion into appropriate courses already in the curriculum and also provide continuing opportunity for interested and qualified high school students to engage in philosophical discourse under the direction of professional philosophers.

2. Center for Philosophy and the Professions

We intend to strengthen the program initiated this year and look forward to valuable assistance from the 1986-87 Distinguished Visiting Professor of Philosophy, Stephen Barker, who has done similar work at Johns Hopkins University.

3. Dual degree program

We hope to conclude conversations initiated two years ago with the Division of Public Administration to provide a joint program leading to the two degrees: Master of Arts in Public Administration and Doctor of Philosophy in Philosophy.

503

C. Appointments to staff

Tom Buchanan, Instructor (part-time)	1 August 1985
Gary Cesarz, Instructor (part-time)	1 August 1985
Robert Reeves, Visiting Assistant Professor (part-time)	1 August 1985
John Trujillo, Instructor (part-time)	1 August 1985

D. Separations from staff

Tom Buchanan	21 Dec. 1985
Gary Cesarz	17 May 1986
Brian O'Neil (deceased)	21 Dec. 1985
John Trujillo (deceased)	17 May 1986
Archibald Woodruff III	17 May 1986

E. Sponsored research or other projects

a. number and percent of faculty submitting proposals to outside agencies: 3 faculty members representing 25% of the total department faculty submitting 7 grant proposals

b. number and percent of faculty obtaining awards from outside agencies: 1 faculty member representing 8.33% of the total department faculty obtaining funding for 1 grant proposal

THE REPORT OF

THE DEPARTMENT OF PHYSICS AND ASTRONOMY

July 1, 1985 - June 30, 1986

Daniel Finley - Chairman

THE REPORT OF THE DEPARTMENT OF PHYSICS AND ASTRONOMY

July 1, 1985 - June 30, 1986

Daniel Finley -- Chairman

I. General Departmental Information

A. Significant Achievements During the Academic Year 1985-86

The most significant aspect of the past year is our continued, substantial, progress in the midst of major change, within both the department and the university, and in the face of serious fiscal problems. With strong support from the college and university administrations we can report a number of major accomplishments toward our long-term departmental objectives.

After trying unsuccessfully for the past few years to attract an outstanding experimentalist for our optical sciences faculty, we succeeded in persuading Professor Jean-Claude Diels to join us. Dr. Diels is one of the top two or three researchers in the world in the area of short pulse laser techniques and laser timing. His experimental efforts in these areas will complement Dr. Marlan Scully's work with ring lasers and should bring future grant funding to the department. His research also fits nicely with work currently being done in the Center for High Technology Materials and has application to many areas of physics. His appointment is extremely important to the optical sciences Ph.D.

program since the majority of the students are in need of experimental dissertation projects. Dr. Diels will be setting up several laboratories in the basement of our building that will be available for such projects, whereas we have previously needed to send most of them to facilities outside our department, such as AFWL or CHTM. Also very important, he will teach the experimental laboratory that is essential for the complete education of our graduate students in optics.

Our past difficulty in attracting a suitable person for this position had been generated by the tremendous amount of start-up funding required for equipment and laboratories in the establishment of a new experimental program. Our success in attracting students to our optical sciences graduate program has made the addition of a faculty member in experimental optics absolutely critical to the continued success of the program. Recognizing the importance of such a position and the past difficulties involved in securing an outstanding person for it, the Dean of Arts and Sciences, the Vice President for Research, and the Director of the Center for High Technology Materials (CHTM) each allocated substantial funds to supplement departmental resources to provide start-up funds required for Dr. Diels to establish his laboratory. The Vice President for Academic Affairs and the Dean of Arts and Sciences also agreed to provide the necessary resources to offer Dr. Diels a sufficiently competitive salary. In addition to the support provided by UNM, Dr. Diels will bring about $500,000 worth of equipment from North Texas

State University, as well as contract and grant support, and collaborative projects with other universities. He is also actively pursuing additional research opportunities.

Three other faculty appointments during the year also greatly enhanced both the research and academic sides of our optics efforts. Professor William Streifer, Director of the CHTM, and Professor Steven R. J. Brueck, Professor of Electrical Engineering and member of the CHTM, both accepted joint appointments as Professors of Physics. Both are well known and highly respected for their work—Dr. Streifer with semiconductor lasers, and Dr. Brueck with optical properties of solids. Their addition to the optical sciences faculty provided important strength to the Ph.D. program. Early in the fall semester we hired Dr. Sudhakar Prasad as an assistant professor with half-time academic responsibilities and the remaining half of his time devoted to research. He filled a vacancy created by the resignation of Professor John Bellum. Professor Prasad had previously been a research associate in the department, with interests in quantum optics, laser physics, and condensed matter physics. Because of his work in quantum field theory and turbulence theory in fluids, his addition to the faculty also provided a strong boost to our theoretical physics capabilities, which we expect to be our next area of primary emphasis.

The formal establishment of the Institute for Astrophysics in the fall was also a major accomplishment which was supported by the Vice President for Research and the Dean of Arts and Sciences.

The establishment of the institute is indicative of the university's strong support of our astrophysics program and reflects the success of our recent efforts in this area. With research emphases in the fields of radio astronomy, synthesis research, and general extragalactic astronomy in both the visual and infrared portions of the spectrum, the institute is involved in overseeing our connections with the National Radio Observatory's Very Large Array telescope (VLA) near Socorro and the Very Large Baseline Array (VLBA) which will soon be established with its computer headquarters in Socorro. Our Capilla Peak telescope, which has been upgraded this year through the use of modern CCD micro-electrical optical devices, is now a major observational tool. The extremely dark skies in much of New Mexico make a site in this state very likely for a new telescope project now being proposed by a consortium of universities. Representatives of sixteen universities met in Albuquerque in the fall to discuss the project and visit possible sites in the state, one of which is Capilla Peak. Members of the Institute for Astrophysics are also interested in pursuing greater cooperation among the universities in the state so that programs at each university capitalize on individual strengths, avoid competition, and complement other astrophysical efforts within the state. Because this concern is shared by the administrations of all the state universities and also of the legislature, a meeting was held at Cloudcroft in the fall to discuss similar programs in a number of academic areas. Professor Gregory attended the meeting and was

very encouraged about future possibilities for cooperation.

Two new astrophysics faculty members were appointed during the year. Dr. Nebojsa Duric and Dr. Belva Campbell were hired as assistant professors. Dr. Duric's research in extragalactic astrophysics and his interest in CCD and radio imaging will add strength to the work currently being done within the Institute for Astrophysics. Dr. Campbell's research efforts involve the use of infrared, optical, and radio techniques. Her work will complement Dr. Michael Zeilik's research in infrared astronomy and star formation. Although Dr. Campbell's research is not as closely related to much of our current work as is Dr. Duric's, she was one of the top candidates for our open faculty position because of her excellent reputation as a teacher. We were very fortunate to be able to offer her one of the positions for outstanding minority candidates made available by the president's office. This position was granted primarily because of Dr. Campbell's excellent credentials and because of the small number of women physicists and our previous lack of any female faculty members in the department.

The return of Halley's Comet to the vicinity of Earth kept all astronomers, both faculty and students, quite busy during the entire year, and members of the office staff were required to develop astronomical expertise to answer questions posed by an unbelievably large number of telephone calls. In response to the extremely high interest in the comet and in astronomy in general, a quarterly astrophysics newsletter was begun. The department

also sponsored a series of four public talks on Friday evenings. Each of the talks was quite well attended. In fact one had to be repeated to accommodate the large number of people, and a later one was moved from Regener Hall to Woodward Hall because of its larger capacity. The speakers and subjects were

"What is a Comet?", Stephen Gregory, UNM, September 27
"The Comet Is Coming -- Again!", Michael Zeilik, UNM, October 25
"Comets and Dinosaur Extinction," Jack Burns, UNM, November 22
"Rendezvous with a Comet," J. C. Brandt, NASA, Goddard Space Flight Center

When the comet reappeared in the spring, after its trip behind the sun, it was visible in the early morning hours. On April 5 and 10, under the direction of Professor Steve Gregory, we sponsored observing sessions between 2 and 5 a.m. at the Double Eagle airport west of Albuquerque. To our surprise, about 4,000 persons turned out the first night and about 2,000 attended the second. A number of our students were on hand to answer questions from the crowd and help them focus their binoculars and telescopes.

Throughout the year our regular Friday night open houses at the campus observatory were packed. Also, with scheduling assistance from the UNM Speakers Bureau, individual faculty members and graduate students presented numerous talks to schools and civic and professional organizations. Dr. Burns presented a series of talks at the Kimo Theatre sponsored by the New Mexico Museum of Natural History. He also participated in a radio call-in talk program on KZIA, which has proven so popular that he is continuing to do it once monthly.

Professor Michael Zeilik and graduate student Bryan Laubscher had the opportunity to observe Halley's Comet from the southern hemisphere. Professor Zeilik was engaged in a collaborative research project, sponsored by the National Science Foundation, at the Carter Observatory in New Zealand during the spring semester. Mr. Laubscher, with partial support by a grant from the International Astronomical Union (IAU), also travelled to New Zealand where he presented a talk at an IAU Symposium.

A considerable amount of faculty time and effort during the year was also devoted to self study and serious long-range planning. After several years of successful effort toward recent goals of developing our programs in optics and astrophysics, the need to focus on the future and consider new directions became apparent. The immediate problem of selecting a new department chairman, resulting from Professor Marcus Price's departure to join the administration of President Farer, and the campus-wide efforts of the Strategic Planning Committee provided the impetus to begin our study at the beginning of the academic year.

Following Professor Daniel Finley's appointment as interim chairman until a decision was made concerning a permanent chairman, the faculty held a series of meetings early in the year to discuss the results of a planning survey distributed by Professor McAllister Hull. The survey results indicated a number of areas of general agreement among the faculty and a number of things which required further detailed study and discussion. Initially a decision was made to advertise nationally for a new

permanent chairman for the department, with the agreement that applicants from within the department would be welcome. At the conclusion of the search, Professor Finley was selected as the new chairman.

The faculty concentrated much of their discussion on the department's administrative structure and generally agreed that an administrative officer was needed to assume many of the duties formerly handled by the associate chairman. It was felt that such a person was essential to coordinate the complex financial and administrative structure of the department and relieve the faculty of many time-consuming activities that presently detract from their primary responsibilities of teaching and research. However, because of financial constraints, we were not successful in getting such a new position at the desired salary level, so Professor Colston Chandler agreed to serve as associate chairman, with the understanding that additional administrative support will be provided by a new administrative position, at a lower salary level. We believe the new staff structure will accomplish this objective of giving the faculty, including the chairman and associate chairman, more time to devote to teaching and research.

Other areas of general agreement among the faculty are the need for more support in certain areas. The theoretical side of our optics program is currently sound; our need in that area is a stronger experimental effort, which will require another faculty member to be hired this coming year. More faculty positions in theoretical support areas are also needed, while the need for more

support for the junior and senior laboratories has arrived at the critical point. The need for the junior and senior laboratories is twofold. We must have a highly trained equipment supervisor and various new pieces of apparatus if we are to continue providing our undergraduate majors the experience they need to succeed in modern physics. Efforts to solve these problems are now underway, through upgrading of current positions, borrowing from LANL, Sandia, begging from industry, and the using in the laboratories of some equipment bought on research grant monies.

Research activity in the department remained high. A rather "telling" way to look at this is that all of our faculty are actively pursuing research, involving publications and research proposals. This is a very desirable and unusual position for a department to be in. Ongoing projects sponsored by outside agencies were funded at a level of almost $2 million, and several unsponsored research projects are also underway. Faculty and research staff are working in the fields of atomic and molecular physics, biophysics, computer physics, elementary particles and fields, energy sources, fluids, general relativity, materials science, nuclear physics, scattering theory, solid state physics, and theoretical particle physics, as well as several branches of both astrophysics and modern and laser optics.

Several faculty members have been involved in work with Los Alamos National Laboratory. Professor Howard Bryant is continuing his work on resonant absorption beam sensing techniques with ion and neutral beams available from LAMPF. This project, underway

for a number of years, provides important experience and financial support for several graduate students. As well, it is providing new benchmarks for measurements on the properties of atomic systems in strong electric fields, and is developing the spectroscopy of neutral beams to new levels of capability. In connection with this latter research, Professor Bryant's expertise is in demand from various federal agencies. Professors Bassalleck, Dieterle and Leavitt, along with Adjunct Professor Stephenson, are working on an experiment with the Neutrino Detector Group at Los Alamos to probe the fundamental structure of the elusive neutrino. Another graduate student, Ju Kang, is heavily involved with this project and should complete his dissertation work in the coming year. Professors Burns and Gregory and graduate students Clarke, Laubscher, and Wells have been collaborating with Adjunct Professor Michael Norman and other Los Alamos researchers on the possibilities of astronomical experiments to be conducted from a lunar base in a future manned venture to the moon. Professor King is engaged in astronomical research on the physics involved in nonlinear stellar pulsations and will be concentrating his efforts on this work during the next academic year while he is on sabbatical leave at Los Alamos. Professor McIver is also continuing his work on laser induced damage to optical components in a free-electron laser. Professor Scully continues to have research contacts with several groups at LANL, involving his interests both in non-linear materials for laser applications as well as that in uses of ring laser gyros.

He has also become a member of the science advisory group to the director of LANL.

In the area of experimental medium energy particle physics the proton/antiproton experiment at CERN (Geneva) was concluded and Professor Wolfe returned to the department after a three-year absence while he was working on the experiment. He is now analyzing the data from the experiment while continuing his work at Rutherford Labs in England, at Brookhaven National Laboratory, and planning new experiments at CERN. Dr. Bassalleck has continued his interaction with the Carnegie-Mellon University Strange Particle Experiment in addition to his participation in the Los Alamos experiment and the CERN and Brookhaven work. Besides their heavy involvement in the Los Alamos project, Professors Dieterle and Leavitt are still collaborating in a double beta decay experiment at Berkeley, which also has Adjunct Professor Stephenson's strong interest and theoretical support.

Professor Cahill's theoretical studies of particles and fields has been aided by the presence of another theorist, Dr. Jay Banks, who was a visiting assistant professor during the year. The presence of another person in this field is quite important because studies of leading-edge ideas such as supergravity and string theory require the stimulation of discussion. Professor Prasad and some graduate students have also been involved in this work and also in Dr. Cahill's study of the applications of computers to solving physics/astronomy related problems. They have good support from the department and the university for their

very extensive computer needs.

Cosmic ray research on diurnal anisotropy at high primary rigidities was continued by Professor Ahluwalia, who presented several talks at national and international meetings. Professor Swinson continued his collection of data on cosmic ray anisotropy and temporal variations at our Embudo Cave in the Sandia Mountains and the Socorro cosmic ray observatory. In August Dr. Dennis Peacock, Director of the Solar-Terrestrial Research Program at the National Science Foundation visited the department. He gave a presentation concerning current interests and issues at the NSF and visited the Embudo Cave observatory. Also involved in this area of research for many years, Research Professor John Linsley was on leave during the year as a visiting professor at Notre Dame University and the University of Leeds.

In nuclear physics, Professors Chandler of this department and Gibson from the math department have continued their work in scattering theory. They have considerable financial support from the DOE that, among other things, has allowed them to be able to have dual 32-bit computer work stations to apply their few-body equations to new problems in nuclear physics. This research is conducted in collaboration with Professors Bencze and Doleschall, Research Institute for Nuclear and Particle Physics at the CRIP Research Center in Budapest,Hungary. Bencze and Doleschall visited the department twice during the year under the auspices of an NSF international exchange grant, and Chandler and Gibson travelled to Hungary for additional consultations this summer.

Professor Chandler is also giving a major invited talk in Japan on his work.

Professor Alpert is again spending the summer at Pennsylvania State University working on his biophysical research into heat exchange in obesity. Dr. Beckel continued his research into the effects of combined electric and magnetic fields on mammalian cell growth, assisted by graduate student Gregory Obarski, who should soon complete his dissertation.

An important new research area in the department is the study of boron carbides. Professor Charles Beckel, Research Professor Iris Howard, and Adjunct Professor David Emin from Sandia National Laboratories are heavily involved in this exciting new area of physics. An international conference on the physics and chemistry of boron and boron-rich borides was held at UNM in July. The conference, organized by Beckel, Howard, Emin, and staff members at Sandia, was extremely successful. Proceedings of the conference were published in the AIP Conference Proceedings Series and were edited by Iris Howard. The UNM effort in boron research is conducted in collaboration with and supported by the Jet Propulsion Laboratory, in addition to its funding from the DOE.

A new collaborator in the boron research is Professor Nitant Kenkre, who is also continuing his active research program in solid state physics and studies of the interactions of light and matter. He has received new NSF funding for the study of transfer (of both charge and energy) in organic solids. This work also has some interesting international connections since, in part, it

funds his ongoing collaboration with Professor D. Schmid at the University of Dusseldorf and Professor H. C. Wolf of the University of Stuttgart. He also arranged a very stimulating and successful new seminar series on topics in this general area. Called the ν seminar, it met once weekly during the year and featured many speakers invited from both local and distant laboratories.

In academic matters the fruits of the recent growth of our graduate program in physics and also in optical sciences began to appear with an increase in the number of graduate degrees granted. We have also experienced growth in the number of undergraduate students majoring in physics or astrophysics. After rising markedly from the levels of several years ago, enrollment in the graduate program for the past two years has been 90 to 100 students, which we consider an optimum level. We have begun limiting future admissions to maintain this level. We have been attracting increasingly better students over the past few years, and limiting admission should ensure the continuation of this trend. However, until the stipends we offer teaching assistants is increased to a level which makes us competitive with other regional universities, we will continue to lose many of the very top new students. Indicative of the quality of our present students, for the third consecutive year a physics student received the outstanding dissertation award from the Society of Sigma Xi. We are very proud to report that Dr. David Batuski received this year's award. Additionally, this year the

undergraduate award was also shared by a physics student. David Sandison, who graduated in May with honors in Physics, shared this award with an Electrical Engineering student.

During the academic year 1985-86, 31 students received degrees in Physics or Astrophysics. Nine of these were B.S. degrees in Physics, one was a B.S. degree in Astrophysics, and four students minored in Physics for the B.S. degree. Eight students received M.S. degrees in Physics, and nine received the Ph.D. degree. Of the Ph.D's awarded, seven were in Physics and two were in Optical Sciences. The following tables list the students who received degrees in Physics or Astrophysics.

Students receiving a B.S. Degree in 1985-86

Weston Anderson	Robert Cheseborough
Robert Dagit	Bruce Geist (minor)
Arthur Gribble	Reynal Guillen (Astro)
Paula Higgins	Kenneth Miller
Dianne Qualls (minor)	Dana Rink
David Sandison	Carl Sappenfield (minor)
Lars Stangebye (minor)	Harry Watson

Students receiving an M.S. Degree in 1985-86

Mark Daily	Michael Fikani
John Fritts	Philip Harris
Douglas Loverro	Amir Mohagheghi
Brent Richert	James Stewart

Students receiving a Ph.D. Degree in 1985-86

Harro Ackermann	David Batuski
Stanley Cohen	Nam Min Cho (Optics)
Robert Heaphy	Michael Lange (Optics)
Randolph Reeder	James Riker
Paul Smith	

The colloquium and seminar program of the department presented 140 colloquia and seminars during the year. The department's regular series sponsored 63 colloquia and 21 seminars. There were also 21 special seminars in the "ν Seminar Series," sponsored by Professor Kenkre. In addition to these talks the Center for Advanced Studies also sponsored a large number of seminars and special lecture series given by 33 visitors to the Center. The Center for High Technology Materials seminar series was also of special interest to many members of the department. A public talk cosponsored by this department, the Society of Sigma Xi, and Phi Beta Kappa, was presented by Dr. James W. Longworth, IIT, Chicago, on November 8 at 8:00 p.m. in Regener Hall. Dr. Longworth's topic was "Lasers in Photobiology." Dr. Harold Fritzsch, from the University of Munich/Werner Heisenberg Institute in Munich, gave a public talk, "Birth of the Universe," in Regener Hall at 8:00 p.m. on November 26. The talk was a part of the Distinguished Lecture Series on Science and Technology sponsored jointly by Sandia National Laboratories, UNM, and the Society of Sigma Xi. Dr. Fritzsch also presented two colloquia, jointly sponsored by Sandia and our department. On November 26 at 4:00 p.m. he spoke on "Cosmology and Particle Physics," and the following afternoon at 2:30 his subject was "Sub-Structure of Leptons and Quarks." Another public talk, "Exploration of Comets Halley and Gioacobini-Zinner," was presented by Dr. John C. Brandt, NASA, on December 13 at 8:00 p.m. in Woodward Hall. Dr. Brandt's talk was also co-sponsored by

Sigma Xi. The Sigma Xi Student Lecture, "Large Scale Structures in the Universe," was presented by David Batuski on May 2. The department also co-sponsored colloquia with the Institute of Meteoritics and the Geology Department and the Departments of Biology, Chemical and Nuclear Engineering, Chemistry, and Geology.

Besides the awards to our students, two other members of the department were given special recognition. Jim Hontas, our machine shop manager, received the annual Sigma Xi award for providing outstanding support for research. This award is rather commonly given to someone in local scientific industry, rather than the university. Professor Jack Burns received a Presidential Lectureship for the coming two years.

The acquisition of new micro-computers and a scientific word processing system for the office has been very beneficial. It has improved the compatability of office computing equipment with that of individual faculty members and has, thus, eliminated a considerable amount of duplication of effort that previously existed. We hope to make more improvements in this area in the near future. Financial help from the college toward special instructional needs resulted in new equipment and supplies for our lower division courses and labs, such as a laser disk player and new slides, have been helpful in providing better demonstrations and experiments for students in these courses. We were also able to acquire photomultipliers with associated electronics for an improved "Speed of Light" experiment and nuclear physics experiments for our 307 laboratory.

A major improvement to our physical plant occurred this summer. Our building received a much needed new coat of paint. We were pleased that this was possible this year, earlier than had originally been scheduled, because the peeling paint had made it an eyesore.

The faculty retreat was held this year at the Bishop's Lodge in Santa Fe. The tranquil surroundings and isolated location contributed to a very productive meeting which stimulated serious contemplation concerning the future of the department. We hope to find a means to provide a two-day meeting next year and believe that it would be a very positive experience for the department.

B. Significant Plans and Recommendations for the Near Future

As has been previously stated, the hiring of Professor Jean-Claude Diels is a major step forward for our Optical Sciences Ph.D. program. So that we can take advantage of his expertise as soon as he arrives on December 1, our most pressing immediate need is to make the necessary building renovations to accommodate the laser physics laboratories required for his teaching and research work. When the new Electical Engineering building is completed, the experimental programs operated by Professor Jin Kim and presently housed in our building will move, providing us with some greatly needed space which we can use for offices for faculty, research staff, and graduate students, as well as new laboratory space. We also plan to construct additional laboratories in the

basement. Three laboratories were added there a couple of years ago. Their "underground" location has proven to be very effective for our biophysics research and optics work. Two of these existing laboratories will be used by Dr. Diels for a portion of his work. The most urgent problem to be overcome is finding a way to provide adequate cooling for the building. This new experimental program will increase markedly the number of high-energy lasers in the department. We have already experienced some difficulty in obtaining proper cooling for the existing lasers and computer systems in the building. Apparently the chilled water available in our area of the campus is almost insufficient now, so our increased needs will place a burden on the entire system. There is a need for an arrangement for some sort of dedicated chilled water system for the Physics building, to accommodate either all of the building needs, or all of the critical laboratory needs. Since Dr. Diels is already beginning to move some of his equipment from North Texas State, the need to find a solution to this problem is imminent. Finding the resources within the university to provide the additional cooling required will be a difficult problem which must be faced as soon as possible.

Another exciting prospect is the Multiple Telescope Observatory currently being proposed by a consortium of about 15 universities around the country with strong astrophysics programs. This project, originally suggested by the University of Minnesota, would involve the building of two to four large (3.5 meter)

optical telescopes, located about 50 to 100 yards apart on a mountaintop in either New Mexico or Arizona. Such a telescope array would provide a unique opportunity for simultaneous observations with several different instruments Three sites in New Mexico are being considered for the project, including Capilla Peak, where we presently have an observatory, and which is desirable for its very dark skies and remote location. Professors Gregory and Zeilik, as well as a representative from New Mexico Tech, have been working closely with the site survey team. Participation in the project would be of great benefit to our astrophysics program and would be another major step toward making New Mexico a center of astrophysical research in the United States. We are currently seeking various sources of funding so that UNM will be able to join this consortium.

During the coming year we expect to continue our planning discussions begun during the past year. As previously mentioned, our recent emphasis on optics and astrophysics has helped us develop strong programs in these areas. However, we do still have some needs in both fields. One goal to which the faculty is very strongly committed is transforming our three present "part-time" optics faculty positions into full-time academic positions. These part-time faculty members are extremely important to our academic mission and, in fact, spend most of their time in academic pursuits, while still having to provide approximately half of their salaries from research funding and then trying to find time to perform the required research. The addition of a new faculty

member in experimental optics was, of course, vital. However, another is still needed. Our success in hiring two new astrophysics faculty members this year adds needed strength in that area and surely strengthens the still-fledgling Institute for Astrophysics.

We expect our next major departmental emphasis to be strengthening theoretical support for our efforts in high energy physics and other, more fundamental, areas of phsyics. Our growth of the past few years has called national and international attention to our department, and improving our theoretical capabilities is now essential to continue our development as an outstanding physics department.

We also plan to concentrate on the improvement of our upper division undergraduate laboratories during the coming year. We are presently studying various possibilities for obtaining new equipment and hope to provide more technical support in maintaining the labs.

Having a new administrative support person also promises to relieve the faculty of many non-academic duties. We expect more timely accounting procedures and a more efficient coordination of the department's various groups and programs within the department.

Continuing and increasing our collaborative efforts with many of the industrial and research components of the national laboratories and companies is also a high priority. We have established an ad hoc committee to explore and pursue

possibilities in this area. The development of our solid state research program since Professor Kenkre joined the faculty provides an opportunity to further explore the overlap between solid state physics and optics. Along these lines, this fall Professor Kenkre plans to host a mini conference of research groups in this field of research, including those from Stanford, the University of California at San Diego, Los Alamos, and Sandia, to discuss nonlinear physics as it applies to the interaction of light with solids, as well as various important transport problems within solids.

An important priority for the near future, of a different sort, is the addition of a new wing on the north side of our building. We are still finding space for needed laboratories and offices through strategems such as eliminating storage space for extra electronic components, constructing new laboratory facilities in the basement, moving people out to the new EECE building, and even "cannibalizing" an old building entrance into new office space. However, this process will not be possible much longer, as well as being costly. Therefore, we must immediately begin to make plans for this addition in order for the rather slow pace of construction to have completed its job on time.

As has been mentioned in previous years, a new campus observatory remains a high priority. We continue to have a high demand for the undergraduate astronomy laboratories which we are unable to accommodate, and a new, darker location would allow us to make maximum use of the new telescope provided last year by the

C. Appointments to Staff

There were several appointments in addition to the previously mentioned faculty appointments of Drs. Jean-Claude Diels (Professor), Sudhakar Prasad (Assistant Professor), Nebojsa Duric (Assistant Professor), and Belva Campbell (Assistant Professor). Dr. Jay Banks served as a Visiting Assistant Professor during the academic year. Dr. Janos Bergou joined the department as a Senior Research Scientist I on November 11, and Dr. Joachim Krause (September 2) and Dr. Joseph Ward Moody (February 4) were hired as Research Associates II. Nikolaos I. Komninos, who had been a graduate research assistant, became a Research Engineer I after completing his degree in Electrical Engineering. Sue Ellen Kuhn was hired as Editorial Assistant II on October 7, and Sandra Ortiz was hired as a Staff Secretary on January 27. The department also hosted a number of visiting scientists during the year. Among these visitors were Dr. Roy Glauber, Drs. Zofia and Iwo Bialynicki-Birula, Dr. Peter Mulser, Dr. Qifeng Yin, Dr. Edward Budding, Dr. Gyula Bencze, and Dr. P. Doleschall. A list of visiting scientists who spent brief periods at the Center for Advanced Studies is appended to this report.

Professor V. M. Kenkre and Professor Jack O. Burns were granted tenure by the university.

D. Separations from Staff

Assistant Professor John Bellum resigned July 31, and Research Associate Professor Kai Druhl resigned on May 31, and Visiting Assistant Professor Hassan Sharifian completed his term at UNM on August 9. Dr. Roger Hill resigned his position as Sr. Research Associate II to work at Los Alamos National Laboratory, but he continued his involvement in the neutrino detector experiment of Drs. Leavitt, Dieterle, and Stephenson, of this department. Drs. Carol T. Harvey (September 13) and Nely T. Padial, both Sr. Research Associates I, resigned. Research Associates III Mohinder Paul Sharma, Wolfgang Schleich (September 30), John A. Filcoff (December 31), and Charles Hart (June 30) also left the department. Paul Re, Laboratory Technician III, resigned October 29, Ona Marie Bailey, Editorial Assistant II, resigned October 4, and Gail N. P. Budd resigned her Staff Secretary position January 24.

E. Sponsored Research or other Projects

a. A total of 38 proposals were submitted to outside agencies by 19 faculty members, about 95 percent of our total faculty. An additional 5 proposals were submitted by research faculty members through the Center for Advanced Study and the Center for High Technology Materials.

b. A total of 24 grants and contracts were awarded to 15 faculty members, about 80 percent of our faculty. Research faculty members received 2 new contracts or grants.

Almost $2 million were expended on research projects supported by external grants and contracts.

VISITORS TO THE CENTER FOR ADVANCED STUDIES 1985/86

Manuel Velarde - University of Madrid
David Campbell - Los Alamos
Robert O'Connell - Louisiana State University
Gordon Baym - University of Illinois/Urbana-Champaign
Shahid-Saless
Willis Lamb - University of Arizona
Dana Anderson - University of Colorado
Peter Carruthers - LANL
Hanno Rund - University of Arizona, Math Dept.
David Pines - University of Illinois/Urbana-Champaign
Steve Rockwood - LANL
Meyer-Ter-Vehn - Max Planck Institute for Quantum Optics
Gerald Garvey - LANL
Joseph Eberly - University of Rochester
Hannes Riskin - University of Ulm
Wes Sandle - University of Colorado
Tony Siegman - Stanford
Richard Liboff - Cornell
Daniel Greenberger - City College of the C.U.N.Y.
Wolfgang Schleich - University of Texas
Kurt Just - University of Arizona
Harald Fritzsche - University of Munich
Carlton Caves - CalTech
John Farley - University of Oregon
William Unruh - University of British Columbia
Reiner Schlicher - Max Planck Institute for Quantum Optics
Raymond Chiao - U. of California/Berkeley
Sandor Varro - University of Arizona (visiting from U. Budapest)
Seppo Sari - (Industry)
J. Patterson - Montana State
John Reppy - Cornell
Asim Barut - University of Colorado
Virgil Sanders - Rockwell

APPENDIX

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THE REPORT OF THE DEPARTMENT OF POLITICAL SCIENCE

July 1, 1985 - June 30, 1986

Paul L. Hain, Chairman

A. Significant Achievements

1. Institute for Public Policy Symposia Grant

With suport of a grant from the UNM Foundation, the Institute conducted the first of a planned Southwestern Public Policy Symposia Series. The first symposium, on Budget Control and Cutback Management, was held April 12, 1986.

2. U.S. Air Force Research Fellow

In cooperation with Vice President Alex Sanchez, the Latin American Institute and the Political Science Department were, jointly, selected as one of some 18 higher education organizations which will host a US Air Force Research Fellow. This field grade officer will be assigned to UNM for a year. We will provide office support, while the Air Force provides salary and other expenses. Lt. Col. Nestor Ovalle will be the Research Fellow for 1986/87.

3. Heinz Foundation Grant

In cooperation with the Latin American Institute, Professor Karen Remmer received a Heinz Foundation grant to support her study of the military in Chile.

4. Department of Energy Grant

Asst. Professor Hank C. Jenkins-Smith received a grant from the Department of Energy for research on energy prediction models.

5. Graduate Program Review

This was our year for an outside review of the department's graduate program. A committee of Political Science faculty from Pennsylvania State University, Purdue, and the University of Southern California evaluated the department's graduate program under guidelines from the Senate Graduate Committee and gave both the program and the department faculty high marks. Excerpts from the enclosed March 28, 1986, "Report of the External Review Committee on the Department of Political Science" are listed below.

> The department is comprised of a group of highly qualified political scientists who, for the most part, are involved in important research and scholarly activities. These activities are being undertaken in the face of an almost total lack of of support....
>
> The faculty demonstrate considerable quality in both teaching and research.
>
> This is a good department doing a fine job with limited resources.

6. Significant Individual Faculty Achievements

Publications, research papers, and other contributions by various department faculty are listed in the "Annual Supplement to Biographical Record" submitted annually by each department member. Books and certain other special achievements, however, deserve recognition in the department's annual report.

a. Professor Fred R. Harris was author of America's Democracy: The Ideal and the Reality, 3rd ed. (Scott, Foresman and Co., 1985)

b. The following faculty published at least one refereed article or presented at least one paper at a professional meeting

during the academic year:

Anthony R. Brunello (visitor)
F. Chris Garcia
Paul L. Hain
Hank C. Jenkins-Smith
Peter A. Lupsha
Martin C. Needler
Karen L. Remmer
Philip G. Roeder
Debra Rosenthal

c. Noteworthy Service

1) F. Chris Garcia, member, American Political Science Association Council (governing body); Recipient of the American Political Science Association Recognition Award, COSCP, "In Recognition of Excellence in Scholarship and Service to the Profession," August 29, 1985.

2) Paul L. Hain, Commissioner, District III, New Mexico State Alcoholic Beverage Control Commission.

3) Peter A. Lupsha was one of a select few honorees at a December 4, 1985, reception by the Center for Strategic and International Studies, Georgetown University, Washington, D.C.

4) Martin C. Needler, Associate Editor, Armed Forces and Society.

5) Karen L. Remmer, Associate Editor, Latin American Research Review.

6) Harold V. Rhodes, Executive Producer, Illustrated Daily news program, KNME-TV, Albuquerque; recipient of the New Mexico Historical Society Edgar Lee Hewitt Award for Outstanding Contribution to the Understanding of New Mexico's Past.

B. Significant Plans and Recommendations for the Future

We have devoted quite a bit of time and effort this year to our current status and future plans. See the department's report to the Strategic Planning Committee and our March 1986 Department Profile and Self Study which was prepared for the Office of Graduate Studies and the External Review Committee which evaluated our graduate program. As resources shrink, we hope to avoid too much damage to our programs at both the undergraduate and the graduate levels, but we fear loss of key faculty members and that we will gradually lose touch with new developments in the field as our library holdings become dated and travel funds are ever more restricted.

C. Appointments

1. Neil J. Mitchell, Assistant Professor (Code 3), effective August 17, 1986; summer session 1986.
2. Christine M. Sierra, Assistant Professor (Code 2), effective August 17, 1986.
3. Loren Weinberg, Visiting Assistant Professor for academic year 1985-1986.

D. Separations

1. Visiting Assistant Professor Anthony R. Brunello
2. Visiting Assistant Professor Loren Weinberg

E. Sponsored Research or Other Projects

1. Number and percent of faculty submitting proposals to outside agencies: Four (36 percent)
2. Number and percent of faculty obtaining awards from outside agencies: Two (18 percent)

REPORT OF THE EXTERNAL REVIEW COMMITTEE ON THE DEPARTMENT OF POLITICAL SCIENCE OF THE UNIVERSITY OF NEW MEXICO, MARCH 28, 1986

The site visit phase of the review of the graduate program of the Department of Political Science was conducted by the External Review Committee, March 26-28, 1986. The review was preceded by a Departmental self-study. The results of this were presented to members of the ERC prior to the site visit in the "Graduate Program Review, Departmental Profile and Self Study". This self study report was extremely well done and the ERC commends the Department for its work on this project. The ERC consisted of Larry L. Berg, Director of the Institute of Government and Politics of the University of Southern California; David A. Caputo, Head of the Department of Political Science of Purdue University; John D. Martz, Professor and Former Head of the Department of Political Science of Pennsylvania State University and Janet Roebuck, Chair of the Department of History of the University of New Mexico.

The members of the ERC were given every possible assistance in conducting a thorough review. They met with the Chairman, the Dean, the Academic Vice President and

Professor Jose Rivera, the representative of the UNM Senate Graduate Committee. They also met with the Department's Graduate Advisor and in informal small groups with various Department members, graduate students, faculty of the Division of Public Administration and the Director and staff of the Latin American Institute. Requests for additional information were met willingly and promptly and the ERC was provided with adequate support services and equipment. The members of the ERC quickly formed a congenial working team and achieved consensus in their opinions and recommendations. Before leaving campus, Drs. Berg, Caputo and Martz each wrote a draft report with the understanding that Dr. Roebuck would combine these three reports into a single Committee report which would be sent to them in draft form. Their comments and suggestions were incorporated into the draft by Dr. Roebuck and the final version is presented here.

GENERAL OBSERVATIONS

The Department is comprised of a group of highly qualified political scientists who, for the most part, are involved in important research and scholarly activities. These activities are being undertaken in the face of an almost total lack of some of the types of support so necessary to scholarly work and active participation in the profession. Obstacles to major research projects and professional development include very limited travel funds,

limited materials and supplies, and an excessive teaching load. In addition, faculty salaries are lower than average. In spite of these problems, there is considerable professional activity and many individuals, especially the Chairperson and the Graduate Advisor, should be commended for their work. There is quality in both the leadership and in the faculty which deserves and demands both moral and material support and encouragement.

The faculty demonstrates considerable quality in both teaching and research. The overall quality of teaching is excellent and the Department has a good teaching reputation at both the graduate and undergraduate levels. Many, but not all faculty have active research agendas. It is important to note that, at present, despite some disagreements, faculty morale appears to be improving. This reflects optimism about the changes introduced by the present Departmental administration and enthusiasm about recent and forthcoming faculty appointments. However, the optimism is tentative and susceptible to a shift towards negativism if events in the near future do not justify the promise of the moment.

It is evident -- but must be repeated -- that the resources available to the Department are grossly inadequate. We recognize the severe pressures of State and University finances. Nonetheless, it must be noted that very few political science departments -- including several

in the Southwest of much lower quality -- have such a heavy teaching load. This is true in terms of number of courses, taught, undergraduate students advised, theses and dissertations directed, etc. At the same time, noncompetitive salaries make it even more difficult to attract, let alone retain, bright young scholars. The paucity of travel funds also contributes to this unhappy situation.

Both our conversations and the record suggest that the Department has had problems with its graduate program. Progress has been made, however, and necessary reforms are being introduced. Every effort needs to be made to encourage and support those undertaking this most difficult job. In the critical area of relations with the Latin American Institute and programs, the Department has been doing an excellent job of building on what seems to be a solid foundation of cooperation and mutual trust.

The Department has developed and is improving a slightly smaller than average size MA program and a small but high quality Ph.D. program. This is being done by a qualified and strong faculty which has also invested significant resources into its undergraduate program and has an absolute minimum of resources at the graduate level. Neither the University nor the Department should be expected to compete fully, in all fields, on a national basis. Instead, sources of existing and potential future

strength should be stressed. Talent, tradition and regional themes should be developed as providing the unique sources of true quality in the graduate program. This means a continuation of the outstanding Latin American work; encouragement of potential in the field of public policy with specific emphases on energy and other areas within the field; and heightened attention to Border/ethnic/Native American/Southwestern and New Mexican questions and issues. The Department is not lacking in strength in other traditional disciplinary areas, which are able to provide the necessary solid training in the discipline, but it does not have the resources to develop these areas more fully. As resources are so limited, they should be employed to protect, nurture, and strengthen those areas with an established track record of excellence and/or future potential for work crucial to the State and the region.

RECOMMENDATIONS

Our recommendations are that both the MA and PHD programs continue with both our commendations and suggestions for future developments.

COMMENDATIONS

1) The chair is clearly a knowledgeable, industrious and dedicated professional with considerable skills and with a

sensitivity to both internal and external matters. The present graduate advisor is also much to be praised for his clear vision of many of the basic needs of the program and the energy and dedication he has brought to the attempts to solve some of the problems. Both these officers have moved substantively and procedurally to strengthen the graduate program and the Department and they deserve continued departmental and university support both when resources are sought and when policies are instituted.

2) The Department has already initiated debate and discussion of all aspects of the graduate program. When debate has produced decisions, abide by them.

3) Efforts have been made to continue research and to try to help other faculty develop active research agendas -- these efforts should continue.

4) Many individuals have made efforts to develop greater collegiality. These should continue and we encourage those who have been reluctant to play a full and positive role in the Department and its graduate program to do so.

5) Steps have been taken to educate and to develop graduate students with particular attention to their individual needs and interests. An attitude of support for graduate students is crucial and this attitude should be strengthened whenever and however possible.

SUGGESTIONS FOR FUTURE DEVELOPMENT

A) GENERAL/INSTITUTIONAL

1) The administration should provide additional funding and resources for the Department of Political Science. Given the inevitability of limited resources, it is advisable to squeeze out every small incremental benefit whenever possible. Creativity as regards teaching load, flexibility in scheduling and the encouragement of research and of grant preparations through schedule adjustments is important. The Department and the Chair should be supported, indeed prodded, to make qualitiative distinctions in the assignment of teaching duties. This also bears critically upon faculty morale when the financial rewards (and penalties) are so limited in character.

2) The Chair should be supported and rewarded for providing leadership in a manner and style which is both effective and nondisruptive. He is doing an excellent job and enjoys considerable, although by no means unanimous, support from his colleagues. A number of difficult decisions and changes must still be made and faculty unanimity probably will not always be present. If necessary, the Chair must be provided with the backing necessary to ensure compliance from possible faculty recalcitrants. As the Department continues to strengthen its MA and PhD programs, individual faculty may attempt to short-circuit Departmentally agreed

approaches and procedures. The Chair must be able to act in these cases with the full and confident expectation of receiving the complete support of the Dean and the Academic Vice President. Such support is absolutely essential to success.

3) The graduate officer must also be fully and actively supported in his efforts to improve the program, especially when the incumbent is, as now, a junior, non-tenured faculty member. His fine work in the program should be an important positive consideration in any assessments of his performance, including those for tenure and promotion.

4) Efforts both within and beyond the Department to expand work on Latin America and to develop further a concentration on the borderlands and the Southwest should be encouraged. These are the central strengths of the program and need to be even more developed.

5) Teaching loads are simply too high and must be lowered especially those faculty with active research agendas and those with major administrative responsibilities. Faculty who publish regularly should be able to have a 2-2 or a 3-1 load when needed. Both the Chair and the Director of Graduate Studies should have at least two and preferably three courses off per year. These teaching load reductions, if handled in an appropriate way by the Chair, can be achieved without a major reduction in the Department's FTE.

6) Faculty salaries are well below national and regional averages. Salaries need to be upgraded and this would best be done by a sustained committment of funds beyond the ususal budgetary allocations. Any unjustified individual disparities, which can be very detrimental to faculty morale, should also be addressed. The quality of the faculty is such that additional salary support is well deserved.

7) As funds become available, an attempt should be made to reach the following goals:

a) increase the number of teaching assistantships from four to eight;

b) provide full University support for at least one professional conference participation per year for each faculty member;

c) increase individual faculty and Departmental data and word processing capabilities; and

d) substantially increase the supplies and expense budget for the Department, particularly for maintainance costs.

B) DEPARTMENTAL PROGRAM

I) THE FACULTY

1) There is substantial faculty strength in the Department, but the promise for the future lies with the productive seniors and the present and incoming junior faculty, who may easily be lost. Even at the risk of internal budgetary

inequity, more must be done for good junior people, and this is not to say that certain of the truly outstanding senior faculty could not also be wooed away. Whatever the budgetary limitations, this is something which could pose serious problems for the Department in the medium and long term.

2) It is important that the Department not try to do everything at once or to excel in all areas. It should develop its present expertise in state government, public policy (especially science and resources policy and criminal justice) and Latin American politics. With this, greater emphasis should be placed on comparative public policy and ethnic politics (with special emphasis on Chicano/Hispanic and Native American studies). The Department's efforts to establish a Center for Public Policy should be encouraged and should receive University resources. Such a Center will provide the leadership needed in the public policy area and the already mentioned specific policy areas.

3) The Department should consider adding an additional faculty member in the area of public administration. The Division of Public Administration apprears to have a strong public <u>management</u> approach and both MA and PhD students in Political Science need to be exposed to public <u>administration</u>.

4) The Department needs to increase its commitment to grant writing. To this end, every effort should be made to provide release time to develop projects and write major research grants with, for example, NFMH, NSF, and various foundations.

5) Untenured faculty in particular need time not only to write grants but also work on teaching preparation. Efforts should be made to provide them with reduced teaching loads. This could be accomplished by using such approaches as fewer preparations, fewer courses and reduced class sizes.

II) THE STUDENTS

1) As has already been recognized by the Chair, the Graduate Advisor and some other faculty members, there is a pressing need for a systematization of the graduate program policies, procedures and regulations. In the absence of reforms in this area, the demoralization of the graduate student body is unavoidable. While a variety of specific recommendations deserve consideration (below), most important of all is a set of specific guidelines which must be recorded, comminicated, distributed, and honored in practice. Until this is done -- and the effort is already underway -- the program will suffer, student morale will be poor, and relations between students and some faculty will also suffer.

A "Graduate Handbook" should outline requirements such as required courses, expected performance levels, procedures for appeal of specific results or problems, and the whole range of issues that concern relations between gradute students and faculty. There has existed only an informal and unstructured system of traditional practices and expectations. Such a system is subject to abuse and contributes to uncertainty and apprehension and is disruptive generally of faculty/student relations and destructive to student morale. Many obvious irritation points will be removed with published, clear guidelines and policies. This need not and should not mean an inflexible program. Indeed, truly special needs can better be met with a process that permits exceptions to the rule in a clear and orderly way.

2) Graduate students, particularly MA students, do not seem to feel involved in the Department, and the faculty needs to be more concerned with graduate student morale. Graduate student participation in Departmental affairs is absolutely essential. While they should be excluded from such matters as salary and tenure decisions, they should be consulted and their opinions taken seriously on curricular, admissions, and programmatic matters. One would hope that the past quarter century in the discipline, and in academia generally, had demonstrated the value and positive character of graduate student involvement. If a small

minority of faculty still remains intimidated by the imagined threats of marauding graduate students, that fear should, with time and experience, dissipate.

All of this should provide graduate students within the Department with the motivation to form their own organization to provide for the election of their representatives, an orderly mechanism for defining their concerns and making them known, and so on. The faculty should give them every possible encouragement to do so. However, all members of the faculty should always take the greatest care that, no matter what the circumstances, gradute students do not become inappropriately involved in, and the victims of, faculty differences within the Department. On the one hand, graduate students are adult and mature apprentices in the discipline and the Department and their concerns and opinions must be taken seriously; on the other hand they are not qualified practitioners or members of the faculty and must be protected from becoming the victims of faculty disputes.

3) The Graduate Committee should include both senior and junior faculty members as well as graduate student representatives, and, ideally, over an extended period, should involve all members of the Department. Some continuity should be provided and, of course, the Chair and Graduate Advisor can be expected to serve for long periods, but a significant portion of the membership of the Committee should be changed each year.

4) There are far too many undergraduates enrolling in proseminars or 500 level courses. Such students should be the rare exception rather than the norm. The present practice contributes to excessively large seminars and to dissatisfaction on the part of graduate students with the quality of instruction in core areas. To this end, the practice of cross-listing undergraduate courses with 500 level courses should cease.

5) Similarly, the number of undergraduate level courses which graduate students may take for graduate credit must also be carefully restricted. An orderly process with the Chair, Graduate Advisor and/or Committee on Studies or Graduate Committee should carefully screen any request to enroll in such courses and graduates should not be allowed to enroll in undergraduate courses without special permission.

6) The "pro-seminars" and any other required courses should be considered Departmental offerings rather than the province of any one faculty member and should be taught by a number of different faculty over time, as staffing permits. They should not be regarded as the "property" of any one faculty member, given that their purpose is to provide a disciplinary overview of a particular field.

7) The possibility of changing the MA scope and methods sequence into a requirement for the first two semesters, with an additional methods course for PhD students, should be considered.

8) The procedures for the MA exam appear quite arbitrary at this time and need to be codified; flexibility is one thing, but in this instance it has been carried to an extreme which should not be continued. A special committee should be appointed by the Chair to reevaluate the MA exam process. Consideration should be give to the following: creation of a regular Departmental examination committee, with changing membership but some continuity each semester; uniform exams in each field with questions submitted by each member in a field to the examination committee which would prepare the actual examination. The Department should also have regularly updated reading lists in every examination area.

9) The language requirement should be formalized.

10) Inernship opportunities at the graduate level should be developed as much as possible. The Department should consider developing broad based internship program to include both graduates and selected undergradutes. Faculty member(s) involved in the development of such a program should consult with the Graduate Advisor, but this function should not be added to the duties of the Graduate Advisor -- he or she has enough to do.

CONCLUSION

A graduate program review such as this inevitably reveals both strengths and weaknesses. This is a good

Department doing a fine job with limited resources. There are some problems but steps are already being taken to solve and there seems to be a genuine and vigorous committment to improvement on the part of the Chair, the Graduate Advisor, and many other Department members. In short, the potential for further growth and progress is unmistakeable and there are many sound reasons for optimism about the future. At the same time, there is no doubt that this is a significant juncture in the evolution of the Department. There are opportunities which must be seized now for if they are missed the Department could, in five years or so, be weaker than it is now rather than improved.

ANNUAL REPORT

1985 - 1986

DEPARTMENT OF PSYCHOLOGY

Douglas P. Ferraro, Chair

ANNUAL REPORT

1985 - 1986

DEPARTMENT OF PSYCHOLOGY

TABLE of CONTENTS

STATEMENT OF MISSION i

I. OVERVIEW 1

II. DEPARTMENT INFORMATION AND ACHIEVEMENTS 3
- A. Administration and Structural Changes 3
- B. Undergraduate Education 7
- C. Graduate Education 13
- D. Faculty 18
- E. Research 23
- F. Departmental Outreach 26
- G. Staff 28
- H. Space 29
- I. Personal Comment 30

APPENDICES
- Appendix A - Department of Psychology Summary Statistics 32
- Appendix B - Part Time Faculty Hired During AY 1985 - 1986 33
- Appendix C - Annual Senior Honors Thesis Presentations 34
- Appendix D - Graduate Students Accepted for AY 1986 - 1987 35
- Appendix E - Report on Minority Committee's Activities for the 1985 - 1986 Academic Year 36
- Appendix F - Master Degrees Awarded by Department of Psychology 39
- Appendix G - Psychology Faculty Interests 42
- Appendix H - Department of Psychology Colloquia 48
- Appendix I - Persons Holding Professional Titles in Psychology 1985 - 1986 49
- Appendix J - Faculty Salaries by Rank 54
- Appendix K - Faculty Salaries Since Doctorate 55
- Appendix L - Report on the Department of Psychology Clinic's Stress Management Workshops 56
- Appendix M - Annual Report 1985 - 1986 Department of Psychology Clinic 58

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

1985 - 1986

DEPARTMENT OF PSYCHOLOGY

Douglas P. Ferraro, Chair

I. Overview

The 1985 - 1986 academic year was an excellent one for the department of psychology. The department experienced significant growth in its teaching, research and service activities without compromising the stated mission of the department (presented overleaf). The administration and structure of the department continued to emphasize the enfranchisement and unification of the department's faculty, students and staff. The publication of a weekly newsletter, Psychology This Week, and an alumni fund drive were part of the outreach to the department's surrounding communities.

The faculty continued to improve the department's undergraduate curriculum with the result that psychology experienced the largest enrollment increases at the University this year. Particular attention was given by the faculty to our graduate program, which celebrated its 25th anniversary of awarding the Ph.D. degree. Major structural changes were made in the

graduate curriculum, and significant advances were made in awarding graduate students financial aid. New initiatives in the recruitment and admissions of quality graduate students resulted in important increases in the number of women and minority students.

The faculty had a most productive year in terms of publishing their research and obtaining extramural research support. They were widely recognized for their excellence and honored by the receipt of several important appointments and awards. Additionally, new staff positions and upgrades were achieved, and many of our staff functions were computerized.

The department continued to foster its relationships within the University and among professionals in the state; new collaborative relationships were entered into with other universities' departments, private businesses and State agencies. Much of this has been accomplished by the department of psychology clinic, which continues as the leading self-supported training facility in the College of Arts and Sciences.

The department's most critical short-term need continues to be to increase the compensation of its faculty and staff. We need also to increase the indirect support of the faculty in terms of research equipment, travel, and teaching assistant support. More generally, the department's mission will be compromised if additional money for operating expenses is not identified, and if additional space allocations are not forthcoming. The department

has had a long-standing, well-recognized need for a larger building that will incorporate the department's clinic.

During the upcoming year the faculty hopes to add new members to its ranks and to continue its excellent success at graduate student recruitment. The department intends to maintain a controlled growth rate with particular emphasis placed on women and minorities and on graduate education and research. Obtaining extramural research support will be a high priority, as will obtaining budgetary support for the clinic's educational component. We are cognizant of the fiscal restraints to be faced in the 1986 - 1987 year, nevertheless, we look forward with optimism and enthusiasm to further establishing our excellence at UNM.

II. Departmental Information and Achievements

A. Administrative and Structural Changes. There were no major reorganizations of the department's administrative structure during the 1985 - 1986 academic year. The department continued to function with the four administrative/research area committees established last year in order to generate curricula changes, evaluate students, and provide mutual research support. The area committees were about equally represented in terms of faculty participation with 11 faculty serving in the learning/psychobiology area, 9 in cognitive psychology, 8 in developmental/personality/social psychology, and 11 in clinical psychology. Consonant with

the department's current objective to better integrate its clinical and nonclinical programs, this year for the first time nonclinical faculty were represented on the clinical area committee (most faculty served in more than one area).

The department continued to function as a participatory democracy with most of the basic planning functions being accomplished by the department's 17 standing committees. Faculty were represented evenly by area and rank on these 17 standing committees, which were chaired by 16 different faculty members. Graduate and undergraduate students continued to have representation and voting rights on the ten standing committees relevant to their educations. Once again an ad hoc committee of faculty, staff and students conducted an annual evaluation of the chair.

Most major administrative decisions were made at the 16 departmental faculty meetings held this year. As a continuance of the faculty's commitment to enfranchisement and representation begun last year, the faculty endowed the graduate students with the privilege of a vote at faculty meetings this year.

The department's newly established weekly newsletter, Psychology This Week, completed its first year of publication. This newsletter has proven to be an effective vehicle for both inter- and extra-department communication, and it is an important adjunct to the administration of the department. The chair

acknowledges with appreciation the accomplishments of the editor and co-editor of Psychology This Week, namely Carolyn Byers and Mary Hungate.

The chair would be remiss in not mentioning a major impediment to the effective administration of the psychology department, which is one of five science departments that requires the completion of both introductory and advanced laboratory courses in its curriculum. This impediment is inadequate supplies and expenses monies to effectively support the faculty, students and staff of the department. It cannot be sufficiently stressed that the College of Arts and Sciences is clearly underfunded in this budget category with serious consequences for both the College and this department. Psychology's 1985 - 1986 supplies and expenses budget per full-time equivalent (FTE) faculty member was $590.04, and per student credit hour (SCH) was $.87. These amounts rank 7th and 11th respectively among the 20 departments in the College, however, psychology's budget ranks a disparate last relative to other science departments' supplies and expenses budgets. The average supplies and expenses budget for the remaining four laboratory science departments are: per FTE, $2145.03; per SCH, $8.31. Psychology's almost ten-fold difference from the other sciences in supplies and expenses funding on a student credit hour basis seriously imperils the department's mission as stated in the preface to this annual report.

In response to this issue, and because of our continuing effort to maintain excellence, this spring the department under the direction of Sidney Rosenblum initiated its first fund drive with the cooperation of the UNM Development and Alumni Offices. While it is too early to evaluate the response of our alumni to our solicitation for financial help, it is hoped that those alumni who have benefited by their previous exposure to psychology will help us to maintain the excellent status that we have achieved.

One major structural change in the department is anticipated for the 1986 - 1987 fiscal year. As of July 1, 1986 the department's animal facility will no longer be protected by the University's blanket HEW animal assurance. Instead, the department will operate under a main campus animal assurance; the medical center will be covered under their own, separate assurance. Since the department has relied heavily on the medical center for animal support in the past, new structural arrangements will have to be forthcoming in order to accommodate to these newly severed assurances.

Douglas Ferraro completed the second year of his three-year term as chair of the department and was very ably assisted in administrative matters by: Harold Delaney, assistant chair; William Miller, director of clinical training; Eligio Padilla, director of the psychology clinic; and Carolyn Byers,

administrative assistant. For the 1986 - 1987 academic year, Gordon Hodge will serve as assistant chair and Michael Dougher will serve as clinic director.

The chair has established annual awards for those faculty and staff in the department who have best served the administration of the department. In addition to those administrators specifically mentioned above, 1985 - 1986 Chair's Service Awards went to Robin Smith for her efforts in faculty recruiting and to Laura Baxter for her excellent staff support.

B. Undergraduate Education. In order to appreciate fully the contribution of the department of psychology to the education of undergraduates at the University of New Mexico, it is important first to comprehend the enormity of the effort put forth by the department's faculty and staff. The department generates more elective (nonrequired) student credit hours than any other department at the University. In total student credit hours the department, at 25,809 SCH, ranks third to English and Mathematics.

What is more impressive than the sheer size of the department is its dramatic growth, particularly in the past two years. For example, the percentage increases in psychology's student credit hours for the fall of 1985 and spring of 1986 were an impressive 20.5% and 17.3% respectively. These percentage increases were the highest for any department in the College of Arts and Sciences. The average percentage increases for the College as a whole were: fall, 5.2%; spring, 4.6%.

Not only does psychology attract a large number of undergraduate students to its classes, but it also attracts many students who plan to pursue psychology as a major. For example, in the spring of 1986 psychology had 359 undergraduate majors, more majors than any other department within the College of Arts and Sciences. Once again psychology's attraction can be shown to be increasing dramatically relative to other departments. The percentage change in the number of psychology majors for the fall 1985 semester was 18%, and for the spring 1986 semester was 20%. Correspondingly Arts and Sciences averaged 5% and 7%. In this context it should not be surprising to learn that psychology ranked first in terms of the number of bachelor's degrees awarded in the College this year. A survey of University College students shows that the largest number of intended majors (136) is in psychology. Indeed, psychology represents 19.5% of all the intended majors of University College students in the College of Arts and Sciences.

Psychology is a very central department in the broader undergraduate educational mission of the University. Fully one-third of our undergraduate educational effort is devoted to students in management, engineering, education and nursing. Only about 19% of our teaching effort goes to our own majors. Thus, psychology's contribution to undergraduate education is large, is growing, and certainly is central to the University as a whole.

Conversely, psychology's faculty at 23.77 FTE, is only the sixth largest in the college, the five larger departments average ten faculty members more. In terms of teaching productivity, which is the ratio of full time equivalent students to full time equivalent faculty (FTE Student/FTE Faculty), there is no faculty more productive then psychology's. The numbers again tell the story. While the Arts and Sciences average productivity ratio for the fall 1985 semester was 27.90, psychology's productivity ratio was 46.51. The four other laboratory science departments average ratio was 25.33. Clearly, psychology's teaching effort is fast approaching the saturation level such that if enrollment trends continue the department will soon be unable to accommodate all the students interested in taking its courses.

Last year the department undertook a major curriculum reform of its undergraduate course offerings. Some 50 changes were made, which included dropping seldom taught courses and adding new courses in several areas, contemporizing our course titles, and reviewing our prerequisite system. These curriculum changes led to a 29.3% increase in our advanced undergraduate enrollments last year. This year major undergraduate curriculum changes included the removal of graduate credit for all 300 level courses, and the retention of graduate credit for only those 400 level courses for which there were not corresponding 500 level courses within the department.

A second focus of this year's curriculum revision effort was to increase the number of advanced laboratories available to our students. Advanced laboratories were added in abnormal psychology, sensation, psycholinguistics, physiological, and developmental psychology with additional laboratories in alcoholism and motivation planned for the fall of 1986. This represents a 200% increase in the number of our advanced laboratory offerings. In the short term, this will increase our advanced laboratory enrollments and, in the longer term, will produce increases in the number of psychology majors.

As to specific numbers, 3,672 students took introductory psychology with 1,017 of these students enrolling in the introductory psychology laboratories. Our advanced courses attracted 4,802 students of whom 89 students enrolled in advanced laboratories. These student counts are presented along with those for last academic year, and an average of the 1980 - 1984 academic years, in Appendix A. Our introductory course enrollments have averaged 3,590 while our advanced enrollments have responded to our curriculum changes by increasing 38.9% over the past two years. This academic year alone, advanced enrollment increased 12.7%, while advanced laboratory enrollment increased 32.6%. These laboratories ought to show continued enrollment growth next year as the effects of our adding advanced laboratories this year emerge more fully.

Factors other than curriculum changes help account for our recent successes at the undergraduate level. We have improved our undergraduate advisement by constituting a vigorous faculty advisement committee, rewriting our departmental brochures, and widely advertising our new offerings. Our most innovative addition was the establishment of a Psychology Advisement Night at which students are group-advised by faculty from our advisement committee. This past fall over 600 students attended our psychology night presentation, and we intend to continue this feature next year.

Another important element in our undergraduate educational effort has been the participation of part-time faculty (approximately eight per semester) in teaching high-demand courses and specialty courses that would otherwise not be offered by the regular faculty (e.g., Psychology of Women, Gerontology, Industrial/Organizational Psychology, Educational Psychology). In the past, part-time faculty positions have been allocated primarily because of regular faculty sabbaticals and leaves of absence. For the first time next year, two part-time faculty have been added to the department's annual budget. This will enhance our effectiveness and our academic planning for the future.

Part-time faculty in psychology ordinarily are Ph.D. psychologists working full-time in the community who have a keen interest in education. These people are not given the status nor

compensation that their efforts warrant and the department wishes to acknowledge publicly their important contributions. A listing of the part-time faculty for the 1985 - 1986 academic year is given in Appendix B.

While much of the focus in this section has been on the quantity of our undergraduate education, it needs to be emphasized that we have accomplished our goals without sacrificing quality. The flagship for quality education in psychology is our Psychology Honors Program, which has been in existence for over 20 years. This program has been especially attractive to psychology majors who plan to pursue graduate work in psychology. Appendix C lists our 1985 - 1986 honors students along with the titles of their research theses and the names of their faculty supervisors.

The department does not anticipate making significant changes in our undergraduate education program next year. However, we do intend to remain sensitive to several demographic statistics at the national and local levels which chronicle a changing face for psychology. Most significant in this regard, perhaps, is the "feminization of psychology," i.e., the fact that the preponderance of psychology students are now women. For example, of the 63 baccalaureate degrees in psychology offered at the University of New Mexico in 1984 - 1985, 74.6% were to women. In contrast, across the College of Arts and Sciences only 47.4% of the undergraduate degrees were awarded to women.

Another significant trend has been the rapid increase in minority student interest in psychology. In our college fully 35% of undergraduate degrees are awarded to minority students, with 26.2% of these going to Hispanic students. The department of psychology has fully committed itself to serving women and minority students in a sensitive manner, and we will continue to review our curriculum toward that end.

C. Graduate Education. The first doctorate in psychology was awarded at the University of New Mexico some 25 years ago. Since then the department has awarded 145 Ph.D. degrees in the area of general experimental psychology. In recognition of these accomplishments, the department hosted a Silver Ph.D. Anniversary Celebration this year, which was attended by a large number of our Ph.D. alumni from across the country. The celebration included receptions, tours, a banquet and a keynote address by Janet T. Spence, immediate Past President of the American Psychological Association.

Two hallmarks of our graduate education program over the past twenty-odd years have been its excellence and its stability. When rated by external agencies our graduate program has consistently been regarded as in the top sixth of all graduate programs of psychology in this country.

A major component of our excellence is derived from the high caliber of graduate students that we attract. As one indicator, it

is useful to consider the GRE composite scores of applicants to graduate schools. Over the past five years, the national average GRE score for graduate applicants in all fields was 505, while the national average for applicants to all graduate psychology departments was 520. In comparison, the average score for applicants to our department over the same time period was 557, and the average score for students admitted to our program this academic year was 581.

Our graduate students compete well against those of other departments at this University. This past year, in open competition against other departments' graduate students, our graduate students were awarded the following: Graduate Achievement Award, Legislatively Endowed Fellowship, Challenge Assistantship, Cognitive Science Fellowship, AAUW Fellowship. In another context, two of our graduate students won the Graduate Student Research Competition of the Southwestern Psychological Association.

The size of our graduate program has remained reasonably stable over the past ten years reflecting the fact that nationally graduate psychology programs have had an average annual increase in enrollment of only 1.0% since the mid 1970's. Our department has maintained a 3.1 to 3.4 graduate student/faculty ratio with approximately 60 on-campus registered students during this time period. For 1985 - 1986, the department had 63 students registered on campus and 22 students involved in internship or post-internships experiences.

In the past the demographic makeup of our graduate student population has deviated from national norms. Taking 1984 - 1985 as a base year, our graduate student population was 43% women, 4% minority, and 61% clinical students. The corresponding national figures for this 1984 - 1985 base year were: 56% women, 11% minority, and 54% clinical students. Of the 21 M.A. and Ph.D. degrees offered by our department in 1984 - 1985, only 28.6% were awarded to women and none to minorities.

In response to these demographics the department instituted and refined over the past two years a vigorous graduate admissions and recruitment program. The 1985 - 1986 entering graduate class was large at 21 students, and consisted of 67% women, 19% minorities, and 57% experimental students. If the class of 16 students accepted this year into our program for the fall of 1986 is also considered (Appendix D), the graduate student demographics for our newly instituted admissions and recruitment program are 62% women, 19% minorities, and 49% experimental students. We are justly proud of our increased representation of women and minority graduate students and of our ability to continue to attract first-rate experimental students.

Much of our admissions success is attributable to the larger number of applicants we have received over the past two years, to our minority recruitment procedures, and to our improved financial aid picture. In 1985 - 1986 we received a total of 327 graduate

student applicants, which is a 47% increase over the 1980 - 1984 average number of applications received. (Please refer to Appendix A for additional statistics regarding the department's graduate education program). We also intensified our minority recruitment efforts and have experientially derived a procedure that we believe is efficacious and positive for everyone involved. A full report on our minority recruitment efforts and procedures is included as Appendix E to this annual report.

The department offered financial aid to 49 of its 63 on-campus students, a support rate of 78%. This is an increase over the 35% support rate for 1983 - 1984, and the 61% support rate for 1984 - 1985. It also places us above the national support rate of 62% for all public doctoral degree programs of psychology in 1985 - 1986. Because of its considerable importance to our recruitment efforts, this year the faculty formally set aside financial aid slots for incoming graduate students.

The financial aid picture in the department improved during 1985 - 1986 largely because of the efforts of the faculty to obtain new research assistantships, and the allocation by the College of new teaching assistantships. We also benefited by the creation of line item graduate assistantships at our clinic and by the initiation of two experimental externships, one in cognitive science with the BDM Corporation and one in human factors with the Kirtland Weapons Laboratory. For 1986 - 1987 our financial aid

picture remains encouraging, despite impending budget cuts. We believe we can continue to compete successfully for funds from agencies and private businesses, and we intend to establish a number of clinical placements in community psychiatric hospitals and mental health delivery organizations.

A major review of our graduate curriculum was initiated during the 1985 - 1986 academic year. While this review will be continuing next year, several accomplishments have been recorded to-date. Principal among these was the definition of explicit major areas of study, including the specification of the course content of these areas. The major areas of study so defined were: clinical, cognitive, developmental, learning, personality, psychobiology, quantitative, and social. As a corollary to this, the department also established new minor area and collateral area requirements. All of these curriculum changes were made with the intent of providing better structure for our students and to encourage them to train broadly in the many facets of contemporary psychology.

Other major curriculum changes involved specifying precisely the format and expectations for the graduate comprehensive exam, and eliminating the option of taking some 400 level courses for graduate credit. Both of these latter changes were made in order to elevate the already high level of our graduate training. Finally, several new administrative policies were passed. These

concerned the provision of professional services by our students, leaves of absence, and M.A. degrees obtained from other institutions.

The impact of both our admissions procedures and graduate curriculum revisions was reflected in our graduate course enrollments for 1985 - 1986. In terms of graduate student credit hours, we generated 728 SCH in the fall of 1985 and 786 SCH in the spring of 1986. These numbers represent 22% and 44% increases over the corresponding semesters during 1984 - 1985 and, quite impressively, represent 70% and 46% increases over the fall and spring semesters for the preceding five years. Comparable enrollment gains are not anticipated for next year but clearly we have returned our graduate students to the classroom in a significant way and this desideratum should be maintained in 1986 - 1987.

This year proved to be a productive one for our graduate students. The Master's Degree was conferred upon 12 candidates and the Doctoral Degree was conferred on 9 candidates. A listing of these degree recipients, and the titles of their research and faculty advisors are given in Appendix F.

D. Faculty. The size of the psychology faculty during the 1985 - 1986 academic year remained unchanged with 25 voting faculty and a budgeted FTE of 23.77 (Please see Appendix A for additional faculty statistics). Our faculty is underrepresented by women

(particularly senior women), minorities (particularly non-Hispanic minorities), and faculty in the developmental/personality/social and quantitative/methodology areas when compared against the faculty in other Ph.D. programs in psychology at public universities.

The latest national statistics indicate 22.1% of psychology faculties are women and 7.4% are minorities (1.0% Hispanic). Our comparable figures for last year were 16% women and 12% Hispanic. While our department is represented at each academic rank by an Hispanic, all of our women faculty are untenured assistant professors. It remains a strong objective of the psychology department to hire a qualified senior woman psychologist during the 1986 - 1987 academic year. In this context, only 64% of our faculty are tenured against a national average of 71% tenured faculty. Adding a senior person obviously will not create a tenure imbalance in our department.

Our department exceeds the average number of faculty nationally in the subfield areas of clinical, experimental/physiological, and cognitive, which reflects the strong emphasis placed on these content areas in our department. However, two other content areas in our department that fall below the national average are developmental/personality/social and quantitative (please see Appendix G for a description of our

individual faculty interests). Each of these latter subfields can be brought to the national average by the addition of one faculty member.

The department is pleased and proud to have hired Karen Hayes, Ph.D., University of North Carolina, as an assistant professor in developmental psychology next year. Her appointment will enhance our developmental psychology major. Also, Professor Hayes is the first non-Hispanic minority faculty member, and first minority woman to be hired in psychology.

A top priority for next year is to hire a person in psychometrics who will add to our quantitative/methodology major. Other identified hiring needs include faculty members representing particular contemporary interests in psychology, including the areas of cognitive science, the psychobiology of learning, and health psychology. Psychology's continuing need to add faculty seems well documented by the statistics presented in the previous sections of this report. Most notable in this regard is the department's faculty productivity index of 46.51 which leads the College of Arts and Sciences by a considerable margin.

In 1986 - 1987 the department will be searching for a Distinguished Professor to replace Distinguished Professor G. Robert Grice who is scheduled to retire from active teaching. This is an extremely important appointment for the department, the

College, and the University inasmuch as it will anchor the level of excellence for our department. The department appreciates the full cooperation it has been given to-date in this important endeavor.

During the year, Dennis Feeney was on sabbatical leave for the full year, and William Gordon was on sabbatical for the spring semester. Additionally, Jean Newman took a leave of absence in the spring semester. As noted earlier, these faculty leaves were accommodated while meeting the large demand for psychology courses by hiring part-time faculty as visiting assistant professors (cf. Appendix B).

A number of faculty from other universities and several professional psychologists enriched our educational programs by presenting research colloquia to our faculty and students. Appendix H presents a record of this colloquium series.

Within the faculty and staff at UNM and the professional community of Albuquerque there are a number of people who made major contributions to our teaching, training and research missions. A complete annual review of these individuals was again completed by the faculty, and those who were deemed deserving because of their service to our department were awarded professional titles in psychology. The 1985 - 1986 list of persons holding professional titles in psychology is included as Appendix I.

Our excellent faculty has continued to receive the recognition of others. Within the University John Gluck was promoted to

professor, Samuel Roll was promoted to full professor of psychiatry, Michael Dougher was promoted to associate professor, and Timothy Goldsmith was approved for his second 3-year appointment. Rafael Diaz was voted an Outstanding Teacher of the Year and was presented with a Burlington Northern Foundation Faculty Achievement Award by the President of the University. Finally, but by no means least, Michael Dougher received a Presidential Professorship Award at the junior rank. This constitutes the fourth Presidential Professorship to be awarded to our department in the past two years and speaks directly to the excellence of our faculty and the support given to our faculty by the University administration.

The faculty also is well recognized outside the University for its excellence. To mention only a few of its 1985 - 1986 honors: Henry Ellis was elected to the Board of Directors of the American Psychological Association and was a G. Stanley Hall Lecturer for 1986; Dennis Feeney served as a National Cancer Society/INSERM Scholar while on sabbatical in France; Richard Harris was elected to the Society for Multivariate Experimental Psychology; Gordon Hodge was appointed as Secretary-Treasurer of the Southwestern Psychological Association; Samuel Roll was made a Fellow of the American College of Forensic Psychologists; and Michael Dougher served on the Planning Committee for the National Conference on Sex Offenders.

To its credit, the psychology faculty has remained particularly stable over the past two years given the instability of its immediate and national academic environments. There is no gainsaying, however, that during the 1985 - 1986 academic year the faculty fell still further behind national and regional norms in terms of salaries and benefits. This fact is amply demonstrated in the two salary tables reproduced as Appendices J and K.

Given the excellence of this faculty it seems unsatisfactory for our faculty who have been in rank 0 to 5 years to be $2,029 below the national norm, or in rank 6 to 10 years to fall $4,636 behind their peers. When people who have been in rank 16 to 20 years fall still further behind ($8,040) in our department, it may be unreasonable to expect that the stability we have achieved will continue indefinitely.

There is no higher priority for the chair of psychology than to see faculty salaries increased. It must also be the top priority of all others who are concerned with the future of the psychology department.

E. Research. During the past two years the psychology faculty has placed a high priority on research. This has been manifested, in part, by the renewed attention given to graduate education, which has a major research component, and by the faculty's research productivity. As shown in Appendix A, the faculty published 93 books, major articles and monographs, and presented 143 lectures,

workshops or research reports this year. This represents a 42% increase in publications and a 31% increase in research reports over the past two years.

There also has been a significant increase in research funding garnered as a result of preparing research proposals. For the 1985 - 1986 year the department had a total of $370,000 in research funds. Of these, $343,000 were from extramural sources. Approximately $234,000 of this latter money resulted from new 1985 - 1986 grant applications.

The approximately $343,000 in extramural research funding for this year represents a 18% increase in funding over last year, and an impressive 125% increase from the average of the preceding five years. Quite obviously the psychology faculty are writing more grant applications than before. This academic year 18 faculty wrote 24 applications of which 14 were extramural and 10 were intramural. Five of the extramural applications, or 36%, were funded.

While our current extramural funding exceeds that of recent years, and approximates that obtained in the late 1970s when extramural funding was more available, there remain considerable pressures to increase our outside funding, not the least of which are the pressures to fund graduate students and to afford the ever increasing costs of research equipment suitable to our research interests.

Part of our grant success may be attributed to the support we have received from the Technical Excellence Bond Fund monies, which the chair has allocated exclusively for seed projects and for cost sharing on grant applications. While cost sharing in order to enhance extramural funding will be continued next year, there will be no future bond monies of this sort. The problem of procuring necessary funds for research equipment has been complicated further by a recent decision at the federal level. The Office of Management and Budget has decided to phase down the rate of overhead return to universities, which will contribute to the declining availability of funds for research equipment for the department.

As noted previously, the department's animal research facility will be covered under a new letter of assurance. Fortunately, the administration has awarded the department monies to maintain this animal facility and to bring its equipment up to federal standards.

A continuing problem within the department is the lack of funds earmarked specifically for the maintenance of research equipment, particularly our computer facilities. This needs to be a future funding priority for the department.

This year the faculty reaffirmed the importance of our graduate students being involved in research. Student research is a standard for evaluating students and making financial aid awards. For the second year the faculty awarded the Annual

Benjamin Franklin Haught Graduate Research Award to the psychology graduate student demonstrating the most distinguished record of research. The 1985 - 1986 award went to Susan Schradle for her work in the area of social support.

F. Departmental Outreach. The department continued its initiative of last year to establish positive relationships with extradepartmental professionals and organizations both within the University and more generally in the State. One objective of our Psychology This Week publication is to inform the University community of our activities and to help us establish relationships with others.

Within the University we maintained our cognitive science program relationship with computer science, philosophy and linguistics. Major cooperative arrangements were entered into with the College of Education's counselor education and art education programs. It is anticipated that we will have increasing interactions with family studies next year. Our relationship with health, physical education and recreation remains to be clarified.

An additional important outreach to the University community has occurred in the context of our Stress Management Workshops. This series of workshops has been open to all members of the University community and has been intended as a preventative mental health service to our students and co-workers. A report on these workshops for 1985 - 1986 constitutes Appendix L. For the past two

years these workshops have been funded through the Office of the Academic Vice President. The stress management coordinator position was made a line item in the department's 1986 - 1987 budget, however, impending budget cuts may prevent the funding of this line item next year.

We have reached out to the community in a variety of ways. We have requested financial help from our alumni and friends via our fund drive. We have established applied experimental externships in the private sector for our graduate students and hope to do the same in the clinical area next year. We have worked hard to interface our program with the psychiatric hospitals in Albuquerque, and we have continued a strong working relationship with the V.A. Hospital. Finally, we have offered professional appointments to a large number of practicing psychologists in this city who have agreed to contribute to our teaching mission.

Our most efficacious departmental outreach efforts, however, continue to occur because of the department's clinic which now has completed its fourth year of successful operation. The clinic has grown impressively in terms of its budget and in terms of the student credit hours which it generates. By delivering patient care to community members and by entering into contracts with federal, state, and city agencies, the clinic makes a major impact outside of our department. The only major disappointment regarding this outreach effort is that the University has not yet offered direct educational financial support to the clinic.

A report on the educational, service, and financial activities of the psychology clinic has been submitted to the Dean of Arts and Sciences and is reproduced herein as Appendix M.

G. Staff. The chair is pleased to assert publicly that the staff of the psychology department is unequaled at this University. The department appreciates the staff's adoption of the department's mission and their hard work and productive support of that mission.

Carolyn Byers continued to head the staff as administrative assistant this year. Her competent assistance to the chair on budgetary, hiring and office policy matters is noted with gratitude. The production of our publications and grants was largely accomplished by our editorial assistant, Mary Hungate, whose skills have given us a new dimension of productivity. Debra Levesque resigned as department secretary and was replaced in January 1986 by a new staff assistant, Laura Baxter. It is a commentary on her excellence that Laura received this year's Chair's Service Award for staff support. Finally, Clara Maestas was upgraded to student advisor and has carried admirably the brunt of our new graduate admissions and recruitment efforts. The chair wishes especially to thank Clara for her flexibility on the office team.

The clinic has been competently staffed by Elizabeth Nance who joined the clinic as staff assistant in November 1985 after the

resignation of Karen Herr. The chair particularly appreciates the strong identity that Elizabeth has formed with the department's clinic.

With respect to nonoffice staff, Jon Martin joined us in December 1985 as Shop Supervisor replacing Joseph Boroughs who returned to full-time graduate study. Jon is to be thanked for the smooth transition he has effected in maintaining our research and educational equipment. Ector Estrada continues as supervisor of the animal facilities and Jimmy Casaus continues as animal technician. Both of these animal staff members will have new demands to meet in 1986 - 1987 as the department moves under its new animal assurance.

The department is continuing its efforts to computerize our departmental office staff functions, although we retain the need for additional microcomputers, software and auxiliary equipment. More than any other staff consideration, however, is the need to increase the salaries of our existing staff. This is a continuing problem that needs to be resolved in the immediate future.

H. Space. The department of psychology cannot be accommodated by its current space allocation. There are insufficient faculty offices such that some faculty have had to office within their laboratories. With the growth in our graduate classes we are no longer able to house graduate students adequately in our department. A related problem is the actual designs of our

laboratories which are unsuitable in many instances to contemporary research paradigms in psychology. In summary, our building becomes increasingly less satisfactory with each passing year, and we continue to have a high priority need for a new building. This building should be planned to include the psychology clinic, which is now relegated to a temporary building on the North Campus. Our clinic space has likewise become too small to accommodate to our educational effort, and the temporary building that contains it is in ever increasing disrepair.

With the support of the Dean, the department was able to initiate a furniture replacement program and outfit a new seminar room during the 1985 - 1986 academic year. It is essential that this furniture replacement program be continued during 1986 - 1987 inasmuch as the majority of our furniture was issued as part of the original building's furnishings some 15 years ago.

I. Personal Comment. As chair I continue to be thankful for the patience, cooperation and support afforded me by the faculty, staff and students of the psychology department. This was a difficult year along many dimensions for the University of New Mexico. The excellence achieved by the department during this difficult 1985 - 1986 year is most impressive to me, and I cannot do otherwise than to admire the people who make up this department for their dedication and competence. I also wish to express my

continuing respect and appreciation for the Dean of the College of Arts and Sciences, F. Chris Garcia; I am indebted to him for his cooperation and support.

Next year I enter the last year of my three-year term as chair of psychology. I do so with high expectations for the continued success of the department.

APPENDIX A

DEPARTMENT OF PSYCHOLOGY SUMMARY STATISTICS·

	AY 1980-1984 Average	AY 1984-85	AY 1985-86
Faculty Information			
Voting faculty (total)	24	25	25
Professors	11	10	11
Associate Professors	6	7	6
Assistant Professors	7	8	8
Budgeted FTE Faculty	22.35	23.77	23.77
Undergraduate Education			
Introductory Psychology	3,580	3,517	3,672
Introductory Labs	860	1,161	1,017
Advanced Psychology	2,931	4,192	4,802
Advanced Labs	60	60	89
Graduating Majors	66	63	*
Number of Faculty Involved	24	25	25
Graduate Education			
Graduate Enrollment	381	365	432
Graduate Assistants	15	20	26
Research Assistants	3	9	12
Fellows and Trainees	5	6	11
Master's Degrees	5	13	12
Doctoral Degrees	8	8	9
Applications Received	173	262	327
Offered Admission	38	39	36
Accepted Admission	17	21	16
Graduate Students	63	73	85
Number of Faculty Involved	23	25	25
Research Activities			
Books and Articles	54	90	93
Lectures and Reports	99	115	143
Extramural Support (000)	152	290	343
General Information			
FTE Staff	7	7	7
Department Budget (000)	840	945	977

*Data not yet available

APPENDIX B

PART TIME FACULTY HIRED DURING AY 1985 - 1986.

Name	Course Number & Title		
Fall, 1985			
Patricia Burris, Ph.D.	Psychology	450	Psychology of Women
Gerard A. Dizinno, Ph.D.	"	102	General Psychology II
Peggy Keilman, Ph.D.	"	332	Abnormal Psychology
Ronald J. McGowan, Ph.D.	"	210	Educational Psychology
Kermit Parker, Ph.D.	"	101	General Psychology I
Bruce Taylor, Ph.D.	"	200	Statistical Principles
Richard I. Wark, Ph.D.	"	479	Gerontology
Spring, 1986			
Therese Goetz, Ph.D.	"	413	Industrial & Organizational Psychology
Peggy Keilman, Ph.D.	"	200	Statistical Principles
Ronald J. McGowan, Ph.D.	"	332	Abnormal Behavior
Ralph D. Norman, Ph.D.	"	331	Psychology of Personality
Kermit Parker, Ph.D.	"	102	General Psychology II
William Scofield, Ph.D.	"	230	Adjustment & Interpersonal Relations
Richard I. Wark, Ph.D.	"	101	General Psychology I

APPENDIX C

ANNUAL SENIOR HONORS THESIS PRESENTATIONS

Department of Psychology

AY 1985 - 1986

Student	Thesis	Faculty Sponsor
Billiland, Susan	The Effect of Exercise on Mood: Differences Among Six Types of Exercise	Richard Harris
**Brown, Christine	The Comprehensibility of Procedural and Declarative Programming Languages	Timothy Goldsmith
Bynum, Amy L.	Similarity of an Employee's Ideology to the Ideology of his Organization	Therese Goetz
Charles, Marilyn	A Functional Analysis of the Change Process in Psychotherapy	Michael Dougher
DeVilliers, Diana E.	An Assessment of Clients with Eating Disorders	Jane Ellen Smith
Hill, Randall S.	Pain Management Through the Use of Cognitive Strategies	Harold Delaney
Koons, Kirsten	The Effects of Knowledge on Attitudes About the Obese	Mary Harris
#Mason, Jeff D.	A Case History in Scientific Method II	Michael Dougher
Morris, Kimberly	Sex Differences in Stress Related Smoking Behavior	Michael Dougher
*O'Connor, Audrey	The Effects of Pragmatic Information on Memory for Natural Conversation	Jean Newman
White, Jonathan A.	Social Loafing: Momentary Effect or On-Going Phenomenon?	Richard Harris

#Outstanding Honors Student Award
*Research Award (1st place)
**Research Award (2nd place)

APPENDIX D

GRADUATE STUDENTS ACCEPTED FOR
AY 1986 - 1987

Marina Amaya California	Clinical	Professor Diaz
Peter Barela Colorado	Clinical	Professor Rosenblum
Thomas H. Bein New Jersey	Clinical	Professor Miller
Bonnie Clements Colorado	Psychobiology	Professor Ferraro
Beverly Eckhardt New Mexico	Developmental	Professor R. Smith
H. Edward Fouty, Jr. Kansas	Clinical	Professor Yeo
David Greenway North Carolina	Clinical	Professor Dougher
Bruce Gobeo Oregon	Developmental	Professor Dizinno
Edel Kruger California	Clinical	Professor Roll
Mary Lewis New Mexico	Clinical	Professor Gluck
Katherine Long Indiana	Cognitive	Professor Goldsmith
Cynthia Neal New Mexico	Developmental	Professor Diaz
Isabel Rodriquez New Mexico	Clinical	Professor Ellis
Pennie Seibert Arizona	Cognitive	Professor Ellis
Robbie Sovereign New Mexico	Clinical	Professor Miller
Russell Walsh New Jersey	Clinical	Professor J. Smith

APPENDIX E

REPORT ON MINORITY COMMITTEE'S ACTIVITIES FOR THE

1985 - 1986 ACADEMIC YEAR

1. Early in the year, the Minority Committee met and decided on the following mission and goals, in order of priority:
   a. Recruitment of minority graduate students, including handicapped, disabled students.
   b. Support of minority students, once they are in the graduate program.
   c. Inform and facilitate access to minority-related research funds and scholarships, for both faculty and graduate students in the department.
2. Recruitment Efforts. In order to achieve our minority recruitment goals, the Committee planned and carried out the following activities:
   a. We obtained from ETS Minority Locator Service a nation-wide list of minority applicants interested in Psychology graduate program.
   b. From the list, we selected forty-one Chicano and Native American applicants with an expressed interest in pursuing graduate careers in the Southwest area. We sent these applicants a personalized letter inviting them to apply. With the letter we also sent them a somewhat attractive package including information about UNM, the Psychology Department and New Mexico.
   c. Two members of the Committee periodically checked the status of minority applications, and took an active role contacting by phone those applicants with incomplete applications, thus facilitating and encouraging the completion of their application files.
   d. The Chair of the Committee facilitated the process of admission for those minority applicants with completed files.
   e. Both during the admission process and after the student had been accepted, the Chair of the Committee and the assigned academic advisor kept intensive phone and letter contact with the applicants.
   f. As an experiment this year, we invited two minority applicants to visit UNM and the department at our expense. Only one was able to visit but, interestingly, both of them accepted our offers of admission.
   g. The Committee worked hard to increase the number of possible financial aid offers to be made at time of

acceptance in the graduate program. Sources contacted and worked with were: G'POP funds, MBRS program, and APA Minority Fellowship Program.

3. Success! The outcome of our recruiting efforts is truly encouraging. We offered admission to a total of eight highly qualified minority applicants (seven Hispanics and one Native American). Six of those admission offers were made with financial aid packages. The best news is that four of them accepted our offers and will be joining us in the Fall. A rate of 50% acceptance of minority admission offers is not only encouragingly high but highly unusual, as most minority recruiters would testify. We also offered admission to a handicapped student, but she declined our offer.
4. What works in minority recruitment? Well, let me begin this brief evaluation of our efforts with two sets of discouraging data: A) Only two out of forty-one applicants contacted through the ETS Locator Service responded to our invitation to apply. B) Only one student in the applicant pool (one who did not accept our offer of admission) had previous contact with a faculty member in a minority recruitment faculty trip. A good conclusion, but perhaps a bit hasty, is that recruitment money spent in buying the ETS service, in asking minority students to apply, or in faculty recruitment trips is not paying off. What works then?

   First of all, some background data: We received a total of 19 minority applications for the 1985 - 1986 academic year (17 Hispanics and 2 Native Americans). Of those 19 applications, 11 were complete while 8 were incomplete and, therefore, not processed. We did offer admission to eight (or 73%) of all minority applicants that were reviewed for admission. This pattern suggests that the pool of minority students that spontaneously apply to our program is of high quality and substantial, in terms of potential admissions for a given year. The data also suggest that the high number of incomplete minority applications that never go through the review process is a problem that needs to be addressed with some urgency. The fact that 50% of those offered admission accepted our offers reflects the effectiveness of: A) Financial aid offers at the time of admission, B) intensive personal contact by phone and mail, and C) the invitation to visit the campus and the department at our expense.
5. Recommendations. Our recommendations for next year are very straightforward and are based on the 1985 - 1986 admissions data. We recommend the following:
   a. Discontinue support for ETS Locator Service and faculty recruitment trips.
   b. Use the funds to 1) invite minority applicants for a campus visit, 2) for phone contacts and 3) for a more attractive

mailing on UNM, the Psychology Department and New Mexico to be sent to those students who do apply.

c. Make a truly aggressive effort to contact those students with incomplete applications in order to facilitate and speed up their completion.
d. Secure at least four financial aid packages early, in order to be able to make offers of admission with financial aid.
e. Do some serious planning and continue efforts to pursue the Committee's goals other than recruitment.

Submitted by:
Rafael Diaz, Chair
Minority Committee

APPENDIX F

MASTER DEGREES AWARDED BY DEPARTMENT OF PSYCHOLOGY

AY 1985 - 1986

NAME	DEGREE	TITLE OF THESIS	ADVISOR
Chiulli, Steven	MS	Automatic Effortful Processing in a Clinically Depressed Population	Ellis
Franklin, Margaret	MS	Induction of a Depressed Mood State and Constructive Memory Processes	Ellis
Haney, Stephen	MS	Personality & Demographic Variables Related to Adaptation to Dialysis	Gluck
McCracken, Kathy	MS	The Effects of Generation Difficulty on Retrieval	Ellis
Nettleton, Craig	MS	Relationship of Locus Control & Instruction to Biofeedback	Ferraro
Beauchamp, Alan	MS	Sensory Preconditioning in Differentially Reared Rhesus Monkeys	Gluck
Garland, Randall	MS	The Effects of Instructed Action Noncontingent Outcome Frequency and Mood on Judgment of Control	Gluck
Hughes, Robert	MA	No Thesis	
Levick, Mitch	MS	A Multimodal Assessment of Death Anxiety Reactions in Individuals Manifesting the Means, End, and Quest Orientations to Religio	Delaney
Tinkcom, Martha	MS	Graduate Student's Achievement Goals: A Predictive Study	Gluck

899

MASTERS DEGREES AWARDED 1985-86
continued

Voyles, Joy	MS	Chronic Illness in Childhood: An Examination of Perceived Vulnerability and Locus of Control in Children with Long-Term Illness	Ferraro
Vranes, Lynn	MS	An Investigation of the Effects of an Experimental Drug, L-644, 969-01C01 on Unilateral Motor Cortex Injured Rats	Feeney

DOCTORAL DEGREES AWARDED BY DEPARTMENT OF PSYCHOLOGY

AY 1985 - 1986

NAME	TITLE OF DISSERTATION	ADVISOR
James Franklin	Suicide Prediction Using Demographic Data, The MMPI Step-Wise Discriminate Analysis	Gluck
Jack Crossen	Effects of Mood Induction & Relapse Prevention on Maintenance of Smoking Cessation	Dougher
Thomas Hall	Immunosuppression Induced by Psychologic Stress in Rats: Differential Effects of Predictable versus Unpredictable Footshock on Spleen Cell Blasto-gensis	Feeney
Ann Salo	Development of a Model of Cerebral Infarction in Rats and Evaluation of Treatment With Continuous Infusion of Amphetamine or Naloxone	Feeney
Whitney Sunderland	Type A Behavior and Emotional Imagery	Ferraro
David Goldstein	Emotionally-Evocative Immaginal Activity & Empathy: An Analogue Study	Gluck
Kenneth Leight	Emotional Mood States and Chronic Pain	Dougher
David Pogge	Dimensions of Evaluation of Psychotherapeutic Interpretations: A Phenomenological-Empirical Analysis	Dougher
Robert Schoen	Use of Disjunctive Response in Multitask Environments: Implications for Automation	Johnson

APPENDIX G

PSYCHOLOGY FACULTY INTERESTS

DELANEY, HAROLD D.
Associate Professor and Assistant Chair. Ph.D. University of North Carolina, 1975.
Quantitative, human learning and cognition. Current research is in statistical methods, particularly those that are useful in investigations involving individual difference variables. Research interests also include substantive issues in the areas of individual differences in human learning, including learning from prose materials and vocabulary learning. Other interests include philosophy of science, decision-making and methods of improving memory performance.

DIAZ, RAFAEL M.
Assistant Professor. Ph.D. Yale University, 1982.
My major areas of expertise are cognitive and language development. The problem that we are working on is the development of self-regulation, that is, children's capacity to guide, plan and monitor their own behavior. Specifically, we are looking at how young children use language (private speech) to accomplish such self-regulatory goals. Current projects involve training, self-regulatory speech, self-regulation in high-risk populations, and the relation between private speech and cognitive performance.

DIZINNO, JANET E.
Assistant Professor. Ph.D. Florida State University, 1982.
Social Psychology. Areas of primary interest are nonreactive measures, attitude assessment, social psychology of aging, research ethics. Current research includes development of several nonreactive measures for the assessment of attitudes toward the elderly, improving the public's impressions of social psychological research methods.

DOUGHER, MICHAEL J.
Assistant Professor. Ph.D. University of Illinois at Chicago Circle, 1980.
Behavior analysis and behavior therapy. Primary research focus is on the experimental analysis of imagery and covert conditioning procedures. Also conducting research on the treatment of sex offenders, verbal behavior and rule-governed behavior, and the experimental analysis and integration of radical behaviorism and psychoanalytic psychotherapy.

ELLIS, HENRY C.
Professor. Ph.D.. Washington University, 1958.
Human memory and learning, cognitive psychology, emotional factors in performance. Primary interest is in the analysis of encoding, storage, and retrieval processes in memory. My current research work focuses on emotional mood states in memory and cognition, depression and memory, long-term recognition and recall, organizational and elaborative processes in memory, constructive processes in memory, context and attention in memory, imagery, text processing and comprehension, and individual differences in learning, memory, and problem solving. Other interests include memory for visual information, eyewitness testimony and identification, psychology and law, and applications of cognitive psychology to educational and clinical issues.

FEENEY, DENNIS M.
Professor (and Professor of Physiology). Ph.D. University of California, Los Angeles, 1968.
Physiological psychology, 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, autoradiography and behavior. Our goal is to understand and enhance recovery of behavioral functions after brain damage in humans, and determine what commonly prescribed drugs may slow behavioral recovery.

FERRARO, DOUGLAS P.
Professor (and Professor of Psychiatry) and Chair. Ph.D. Columbia University, 1965.
Experimental and applied analysis of behavior, behavioral pharmacology and behavioral medicine/health psychology. Research interests center around an operant conditioning analysis of learned behaviors. Within this context, I am principally interested in the effects of psychotropic agents on behavior and behavioral factors pertaining to health and chronic illnesses.

FRIDEN, THOMAS P.
Associate Professor. Ph.D. University of Illinois, 1970.
Perception, quantitative. Current research includes developing a Euclidean vector model to describe color vision and color mixture data. I am also investigating verbal processes in perception, with attention to the role of stimulus orientation in limiting the amount of verbal encoding.

GLUCK, JOHN P.
Associate Professor. Ph.D. University of Wisconsin, 1971.
Clinical psychology, developmental psychology, comparative

psychology. My general interest in the interface of biological, conditioning and existential models of human activity led to research programs in animal models of psychopathology, the effects of early experience on social and intellectual development, and the philosophy of clinical intervention. Within the clinical framework I have a particular interest in process issues in long-term psychotherapy.

GOLDSMITH, TIMOTHY E.
Assistant Professor. Ph.D. New Mexico State University, 1984.
Applied cognitive psychology, artificial intelligence, human factors. The general theme of my research centers around understanding the nature of cognitive skills, how they are acquired, how they are represented, and how they are used. My current research is in the areas of multiple-cue judgment, cognitive skills of computer programming, and computer models of human decision making.

GORDON, WILLIAM C.
Professor. Ph.D. Rutgers University, 1973.
Animal learning and memory, cognitive processes in animals. Primary research focus is an analysis of the information retrieval process in animals. Specifically, current research concerns the role of context in learning and memory and the effects of cueing or reminder treatments on retrieval of information.

GRICE, G. ROBERT
Distinguished Professor. Ph.D. University of Iowa, 1947.
Information processing, reaction time, classical conditioning, quantitative theory. Current research is directed toward the development of theory that will provide quantitative descriptions of the associative, perceptual and sensory processes leading to response evocation. The analytic procedures are derived from variable criterion theory. Experimental procedures include the various forms of human reaction time.

HARRIS, RICHARD
Professor. Ph.D. Stanford University, 1968.
Experimental and 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.

HAYES, KAREN N.
Assistant Professor. Ph.D. University of North Carolina, 1984.
Developmental Psychology; memory development; cognitive

development; social development. Special interests include understanding how knowledge mediates memory performance, and the organization and structure of children's memory. Secondary interests include social cognition and sex role development.

HODGE, GORDON K.
Associate Professor. Ph.D. University of California, Los Angeles, 1977.
Physiological psychology, psychopharmacology. Research is directed toward revealing the neural mechanisms underlying hyperactivity, and in developing useful therapeutic approaches for eliminating symptoms of hyperkinesis in children. By carefully observing and recording behavior prior to and following the placement of precise lesions in rat brains, and by recording effects of drugs upon behavior, we hope to better understand the causes of hyperkinesis. Another interest is the evaluation of the efficacy of biofeedback training in lieu of traditional drug treatment in ameliorating symptoms of childhood hyperkinesis.

JOHNSON, PEDER J.
Professor. Ph.D. University of Colorado, 1965.
Cognitive processes, human performance attention and representational theory. Current research includes attentional demands of information processing, measurement issues in dual task methodology, context and code activation, and individual differences in attentional capacity and reading skills.

LOGAN, FRANK A.
Professor. Ph.D. University of Iowa, 1951.
Animal learning and motivation, behavior theory. Operant and instrumental conditioning and discrimination learning and stimulus control in animals. Primary focus is on the effects of reward and punishment on the acquisition, maintenance and persistence of behavior. Research is guided by an incentive theory and includes problems related to feedback control of behavior.

MILLER, WILLIAM R.
Professor (and Professor of Psychiatry), Director of Clinical Training. Ph.D. University of Oregon, 1976.
Behavior therapies, treatment outcome research, motivation, self-control, pastoral psychology. Current work focuses on the assessment and treatment of addictive behaviors, particularly alcoholism. Other interests include neuropsychology, behavioral medicine, psychology of religion, and cognition/ behavior interfaces (e.g., attribution theory, expectancies, psychology of humor).

NEWMAN, JEAN E.
Assistant Professor. Ph.D. University of Toronto, 1981.
Psycholinguistics, cognition. Major focus concerns the relation between form and function in the production and comprehension of spoken discourse. Specific research topics include: cognitive constraints on the processing of spoken discourse; the interaction of sound and knowledge in speech understanding; the role of intonation in comprehension; pragmatic and thematic influences on sentence production; discourse topics and anaphoric reference; sex differences in conversation.

PADILLA, ELIGIO R.
Associate Professor (and Associate Professor of Psychiatry), Director of the Psychology Clinic. 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 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. Projects underway also relate to attachment of children and the psychological reaction of "birth mothers".

ROSENBLUM, SIDNEY
Professor (and Professor of Psychiatry). Ph.D. University of Iowa, 1953.
Clinical psychology, developmental abnormalities, cognitive and personality development, family violence, educational psychology. Generally, my research interests focus on aspects of cognitive and personality development in children and youth, both normal and atypical. Specifically, in the area of normal child and adolescent development I am concerned with aspects of the socialization process (e.g., humor, prejudice, aggression, parenting, sexuality training) while my concerns with clinical populations involve learning disabilities, mental retardation in

developmentally delayed children, child abuse and neglect, and sexual victimization. I am also interested in various therapies for children and their families.

RUEBUSH, BRITTON
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.

SMITH, JANE E.
Assistant Professor. Ph.D. State University of New York at Binghamton, 1985.
Clinical psychology. Clinical interests: psychopathology (particularly schizophrenia, obsessive-compulsive disorder, anorexia and bulimia, phobias), family therapy, psychological assessment and adolescent psychology. Research interests: improving methods of psychophysiological assessment, assessment of psychotic symptoms (schizophrenia), fears and phobias, implosive therapy, and assessment of a systems approach to family therapy.

SMITH, ROBIN N.
Assistant Professor. Ph.D. University of Massachusetts, Amherst, 1983.
Cognitive development. Current research focus is on spatial cognition and on the cognitive processing of audiovisual media. Special interest in the development of attention and comprehension and methods for assessing these in toddlers and preschoolers. Future plans include studies of individual differences in these domains of cognitive development.

YEO, RONALD A.
Assistant Professor. Ph.D. The University of Texas, Austin, 1983.
Clinical and experimental neuropsychology. Research interests include individual differences in brain organization, development and validation of process-oriented neuropsychological assessment procedures, the neuropsychology of brain systems governing visuo-spatial abilities, and the rehabilitation of the brain-injured. Also interested in the biological bases of affective disorders and schizophrenia.

APPENDIX H

DEPARTMENT OF PSYCHOLOGY COLLOQUIA

AY 1985 - 1986

Colloquium Presented By	Colloquium Title
Dr. Isidore Gormezano Professor of Psychology University of Iowa	Bridging Temporal Gaps
Dr. Henry C. Ellis Professor of Psychology University of New Mexico	Emotional States and Memory
Dr. Stephen Reed Professor of Psychology Florida Atlantic University	Analogic Reasoning in Problem Solving
Cynthia Berg, M.S., M. Phil. Yale University	Intellectual Development: What You, Your Parents, and Your Grandparents Can Tell Us
Dr. Karen Hayes Department of Psychology University of North Carolina (Greensboro)	Exploring Age-Related Changes in Children's Knowledge: An Evaluation of Content and Organization
Dr. Charles Elliott Associate Professor University of New Mexico School of Medicine, and Director of Behavioral Medicine, Programs for Children	Children's Reactions to Painful Medical Treatments
Dr. Janet T. Spence Professor of Psychology University of Texas (Austin)	Achievement American Style: The Rewards and Costs of Individualism
Co-sponsored Colloquia	
Dr. John R. Searle Professor of Philosophy University of California (Berkeley)	Cognitive Science and the Computer Metaphor
C. Pleh Chairman, General Psychology University of Budapest	Formal and Action-Based Organization and Narratives

APPENDIX I

PERSONS HOLDING PROFESSIONAL TITLES IN PSYCHOLOGY 1985 - 1986

Name and Address	Phone	Professional Title
Julia C. Barker, M.A. Associates in Adolescent Psychiatry 501 Cagua SE Albuquerque, NM 87108	262-1600	Clinical Associate
Samuel G. Charlton, Ph.D. The BDM Corporation Mail Stop R-11 1801 Randolph Rd. SE Albuquerque, NM 87106	848-5122	Adjunct Assistant Professor
Lee Davis, Ph.D. Psychotherapist Student Health Center University of New Mexico Albuquerque, NM 87131	277-4537	Assistant Professor (PT)
Philip Day, D.V.M. Director, Animal Resource Facility University of New Mexico School of Medicine Basic Med. Science Bldg. 632 Albuquerque, NM 87131	277-3936	Assistant Professor (PT)
Charles H. Elliott Associate Professor Programs for Children Mental Health Center 2600 Marble NE Albuquerque, NM 87106	843-2190	Associate Professor (PT)
Roger Enfield, Ph.D. 4004-Q Carlisle Blvd. NE Albuquerque, NM 87107	884-2302	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
Sarah K. Feeney, Ph.D. 1400 Carlisle NE Suite A Albuquerque, NM 87110	243-9872	Clinical Associate
Gail Feldman, Ph.D. Suite 805 300 San Mateo Blvd. NE Albuquerque, NM 87108	266-8488	Clinical Associate
William E. Foote, Ph.D. Clinical Psychologist 120 Vassar Drive, SE Albuquerque, NM 87106	255-9494	Clinical Assistant Professor
R. Gregory Franchini, M.D. Coordinator Mental Health Service Student Health Center University of New Mexico Albuquerque, NM 87131	266-8079	Assistant Professor (PT)
Therese Goetz 1925 Juan Tabo NE Suite B Albuquerque, NM 87112		Associate in Psychology
Kathleen Haaland, Ph.D. Psychology Services Veterans Administration Medical Center 2100 Ridgecrest Drive SE Albuquerque, NM 87108	265-1711 ext. 2440	Adjunct Associate Professor
Mary Harris, Ph.D. Professor Department of Educational Foundations University of New Mexico Albuquerque, NM 87131	277-2925	Associate in Psychology

Name and Address	Phone	Professional Title
Charlene McIver, Ph.D. Clinical Psychologist Charter Sunrise Hospital 5901 Zuni Road SE Albuquerque, NM 87108	265-8800	Clinical Associate
Ruth Mondlick, Ph.D. 7107 Prospect Pl. NE Albuquerque, NM 87110	881-0618	Clinical Associate
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 (PT)
Dennis Pilgrim, Ph.D. Clinical Psychologist Charter Sunrise Hospital 5901 Zuni Road SE Albuquerque, NM 87108	265-8800	Clinical Associate
Alex Quenk, Ph.D. 3500-A Comanche Rd. NE Albuquerque, NM 87107	883-8869	Clinical Associate
Naomi Quenk, Ph.D. 3500-A Comanche Rd. NE Albuquerque, NM 87107	883-8869	Clinical Associate
Elizabeth Roll, Ph.D. 120 Vassar Dr. SE Albuquerque, NM 87106	266-2631	Clinical Associate
Joseph Schenkel, Ph.D. Chief Psychology Service (116B) Veterans Administration Medical Center 2100 Ridgecrest Drive SE Albuquerque, NM 87108	265-1711 ext. 2270	Clinical Associate Professor
Rene Silleroy, Ph.D. 8100 Constitution Pl. NE Albuquerque, NM 87110	292-3776	Clinical Associate

Name and Address	Phone	Professional Title
Frances Koenig, Ph.D. 1007 Luna Cir. NW Albuquerque, NM 87102	242-0439	Clinical Associate
Marcia Landau, Ph.D. Suite 805 300 San Mateo Blvd. NE Albuquerque, NM 87108	266-8488	Clinical Associate
A. Lane Leckman, M.D. 11000 Candelaria NE Suite 110 West Albuquerque, NM 87112	841-1031	Clinical Associate
Sam Leigland, Ph.D. Adelante Development Center, Inc. 4906-A Jefferson NE Albuquerque, NM 87109	883-1102	Adjunct Assistant Professor
Mark Lewis, Ph.D. Department of Psychiatry University of Medicine & Dentistry of New Jersey School of Osteopathic Medicine 401 Haddon Avenue Camden, NJ 08103	(609) 757-7763	Senior Research Associate
George Luger, Ph.D. Professor Department of Computer Science University of New Mexico Albuquerque, NM 87131	277-3204	Professor (PT)
Max G. Magnussen Professor of Psychiatry Director Programs for Children Mental Health Center 2600 Marble NE Albuquerque, NM 87106	843-2956	Professor (PT)
Carol A. Mazur 2738 San Rafael SE Albuquerque, NM 87106	266-9603	Associate in Psychology

Name and Address	Phone	Professional Title
Shirley Sims, Ph.D. Child Guidance Center 117 Montclaire SE Albuquerque, NM 87108	265-8774	Clinical Associate
Thomas Sims, Ph.D. Child Guidance Center 117 Montclaire SE Albuquerque, NM 87108	265-8774	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
Maryann Thompson, Ph.D. 8100 Constitution Pl. NE Albuquerque, NM 87110	292-3776	Clinical Associate
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 (PT)
Walter Winslow, M.D. Chair Department of Psychiatry University of New Mexico School of Medicine 2400 Tucker NE Albuquerque, NM 87131	277-2223	Professor (PT)

APPENDIX J

FACULTY SALARIES BY RANK

Mean 1985 - 1986 Nine-month Salaries for U.S. Doctoral Psychology Departments (N=139), Rocky Mountain[1] Doctoral Psychology Departments in PUblic Institutions (N=7), and the UNM Doctoral Psychology Department for Full-time Faculty by Rank and Years in Rank.[2] The last column gives the percentage difference of UNM from Rocky Mountain salaries.

1985 - 1986 Nine-Month Salaries

Rank	U.S.	Rocky Mt.	UNM	% Difference
Full Prof: 12+ yrs	49,392	45,486	50,950	+12.01
Full Prof: 6-11 yrs	43,977	43,026	41,250	- 4.13
Full Prof: 3-5 yrs	40,912	38.045	33,675	-11.49
Full Prof: 0-2 yrs	38,975	33,537	30,650	- 8.61
Assoc Prof: 6+ yrs	32,622	32,252	27,115	-15.93
Assoc Prof: 3-5 yrs	32,269	29,400	27,110	- 7.79
Assoc Prof: 0-2 yrs	29,973	29,317	--	--
Asst Prof: 3+ yrs	26,596	25,017	23,220	- 7.18
Asst Prof: 0-2 yrs	24,719	24,235	22,725	- 6.23

[1]Rocky Mountain Psychology Departments are MT, ID, WY, CO, NM, AZ, UT, NV

[2]Source: 1985 - 1986 Survey of Graduate Departments of Psychology. American Psychology Association/Council of Graduate Departments of Psychology.

APPENDIX K

FACULTY SALARIES SINCE DOCTORATE

Mean 1985 - 1986 Nine-month Salaries for U.S. Doctoral Psychology Departments (N=139) and the UNM Doctoral Psychology Department for Full-time Faculty by Years since Doctorate.[1]

1985 - 1986 Nine-Month Salaries

Years Since Doctorate	U.S. Departments	UNM	Difference
0-1 year	23,497	21,850	-1,647
2-3 years	24,521	23,017	-1,504
4-5 years	26,019	23,083	-2,936
6-7 years	28,640	23,630	-5,010
8-10 years	31,538	27,275	-4,263
11-13 years	35,168	29,560	-5,608
14-16 years	38,261	27,115	-11,146
17-19 years	40,169	32,467	-7,702
20+ years	47,001	47,725	- 724

[1]Source: 1985 - 1986 Survey of Graduate Departments of Psychology. American Psychology Association/Council of Graduate Departments of Psychology.

APPENDIX L

REPORT ON THE DEPARTMENT OF PSYCHOLOGY CLINIC'S

STRESS MANAGEMENT WORKSHOPS, FALL, 1985

The Stress Management Workshop series offered by the Psychology Clinic has been very successful in it's second year. A total of 69 UNM students and staff have completed this series of workshops. There is a waiting list of individuals interested in enrolling in the next series which is scheduled to begin shortly after the first of the year. The number of interested individuals has continued to rise as the semester progressed, apparently due to increased awareness.

A large component of keeping the workshops running has involved making the student and staff population aware of the existence of this service. Although many students enrolled in the workshop series after hearing about the workshops through friends or roommates, the majority of individuals became aware of the series through other announcements. Advertisements were placed in the Daily Lobo. In addition, flyers were posted on the main campus, and sent to selected student organizations, dormitories and mental health facilities. Students in all undergraduate psychology courses were notified of this service several times throughout the semester, and articles in the Daily Lobo and Campus News assisted in increasing awareness.

The workshops consist of five weekly one-hour sessions, during which topics such as test anxiety, assertiveness, relaxation and time management are discussed. Students are provided with information and instructions on various techniques designed to aid them in reducing their own levels of stress. As an important prerequisite, they are administered a stress test in order to assess their current stress levels and to assist in slightly modifying each workshop to the needs of the individuals participating. A coping skills approach is taken in the workshops, such that students are encouraged to further individualize techniques to best fit their personal experiences.

Evaluations completed at the end of each workshop indicated that students deemed the workshops to be very useful, and believed the series aided them in altering their stress patterns in a healthier direction. Although they did not feel any portion of the series should be removed, they made some suggestions for additional topics to be covered. Several of these will be incorporated in the next series of workshops. The participants emphasized that the relatively small group sizes of the workshops had made it easier for them to discuss their own stress issues.

These workshops continue to fill an important need on campus in that they emphasize primary rather than secondary mental health care. By reaching students and staff before individual stress reaches crisis proportions, the University is continuing to take the extra step needed to insure adequate mental health care is provided for its students and staff. As demonstrated by this past semester, not only does the need for this service still exist, but the demand for the workshops has continued to rise.

Submitted by:
Carl Rimmele
Stress Management Program Coordinator

APPENDIX M

ANNUAL REPORT

1985 - 1986

DEPARTMENT OF PSYCHOLOGY CLINIC

The doctoral program in psychology at the University of New Mexico is based on the premise that psychology is fundamentally an experimental discipline. All students acquire a solid foundation in scientific methodology and in general psychology. Students who also wish to be trained as clinicians are exposed to a vigorous scientist/practitioner model in which they assume increasing clinical responsibilities as their skills in psychological assessment and psychotherapy develop under the supervision of the clinical faculty.

The department of psychology's clinic was established four years ago to serve as the focal point for clinical training before students go on internship. Until the clinic was established, the responsibility for assisting students in the development of their clinical skills had been delegated to psychological and psychiatric colleagues working in various institutions and agencies in the community, such as the Bernalillo County Mental Health Center, the Veterans Administration Hospital, and Programs for Children. While these agencies continue to play an important but diminished role in the training of our students, the faculty decided in 1982 that it was necessary to establish the clinic as the primary training site in order to raise the quality of clinical training to a level comparable to training in research.

This year has witnessed significant growth in training activities, client contact hours, student credit hours and income at the clinic. During the first ten months of this fiscal year, 34 students, including one post-doctoral student, have provided services to more than 300 clients, totaling more than 7,000 hours of service, primarily in individual adult psychotherapy, but also in group therapy, individual therapy for children, therapy for couples and families, psychological and neuropsychological assessments, and the evaluation and treatment of sex offenders. During the past academic year, 60 students generated more than 130 student credit hours in practica and graduate problems courses at the Clinic.

The most frequent recipients of these training efforts have, of course, been our clinical doctoral students. However, training has not been limited to this group. Doctoral students in counseling psychology, special education, and educational foundations have on occasion had the opportunity to work in the clinic. Additionally, more than 139 students and members of the faculty and staff received training in stress management. Even the professional psychological

community has benefited from the training provided through the psychology clinic. Approximately 50 certified psychologists and licensed psychiatrists attended the Second Annual Department of Psychology Clinic Professional Update Conference. Professor Miller conducted a one-day workshop in January for 30 alcohol specialists. More than 250 psychologists, psychiatrists, judges, lawyers, social workers, state employees and teachers attended a conference in March on the legal, educational and clinical issues involved in working with sex offenders and their families. Doctoral students in clinical psychology, a few graduate students from other departments, members of the University community, and professionals in the larger community have availed themselves of training opportunities through the clinic which otherwise would not have been available or would have been offered on a much reduced basis.

Close supervision of students' work at the clinic has been a commitment of the faculty from the beginning. In the past, 95% of supervision was provided by clinical members of the faculty, all of whom are certified as psychologists by the State of New Mexico. While the faculty continues to provide most of the supervision, there has been an increase in supervision provided by professionals in private practice or who work in public agencies and institutions. The decision to increase the amount of supervision provided by professionals other than full-time members of the faculty was based on the desire to avoid burnout among members of the faculty who are essentially donating their time, and to respond to our professional colleagues' desire to be involved in the training of our clinical psychology students. The following individuals provided supervision during the past year: Roger Enfield, Ph.D., Gail Feldman, Ph.D., David Heard, Ph.D., Frances Koenig, Ph.D., Marcia Landau, Ph.D., Ruth Mondlick, Ph.D., Alex Quenk, Ph.D., Naomi Quenk, Ph.D., Frank Spring, Ph.D., Robert Buie, M.D., Sarah Feeney, Ph.D., Will Scofield, Ph.D., Doris Sahd, Ph.D., Charles Elliott, Ph.D., Susan Eissele, Ph.D., and Pat Scofield, Ph.D. Their contributions added considerably to the quality of our training and we gratefully acknowledge our adjunct faculty.

In addition to being one of the few local resources which offers long-term therapy on a sliding-fee scale basis, the clinic provides the vehicle by which our students learn to participate actively in serving the diverse needs of the larger community. Rather than simply waiting passively for clients seeking therapy, students are exposed to a training model which emphasizes community outreach, consultation with other institutions and agencies concerned with the welfare of the people of New Mexico, and collaboration with other professionals where a multidisciplinary effort is more likely to be efficacious. This community oriented, multidisciplinary approach to training has resulted in novel experiences which have broadened and enhanced our students' competencies while, in some instances, generating income to support clinic activities. Students, under faculty supervision, have

consulted with counselors at the Division of Vocational Rehabilitation in evaluating their clients and making recommendations regarding clients' rehabilitation programs. They have worked with neurologists and neurosurgeons at UNM Hospital in determining diagnoses and evaluating the consequences of surgery. One student assisted the director in screening clients for therapy at the Albuquerque Shelter for Victims for Domestic Violence. Another student evaluated students at the Midwest New Mexico Head Start Program and consulted with teachers, school officials, and parents regarding methods to address cognitive and social deficits while enhancing development among preschoolers. Another student is consulting with psychiatric residents in the diagnosis of patients in both inpatient and outpatient programs of the Bernalillo County Mental Health Center. We demonstrated that we could produce better psychological and neuropsychological assessments at a lower cost to the Mental Health Center than they had been obtaining from private practitioners. More importantly, this student had the invaluable experience of conducting a relatively large number of evaluations of patients representing the full range of psychiatric disorders. Several students have consulted with lawyers and other court officers and have testified in court regarding the diagnosis, treatment, and prognosis of sex offenders.

The financial status of the clinic is also much stronger and it is clear that we will complete the fiscal year in the black as well as eliminating the carry-over debt that was incurred last year. During the first 10 months of the year, our expenses totalled $45,297 while our income was $58,839. It is also clear that the clinic will have operated in the black during my three years' tenure as director. Through the first 34 months of the three-year period our expenditures have been $105,858 while our income has been $116,556.

The Department of Psychology Clinic has arrived as a recognized source of high-quality psychotherapy, psychological and neuropsychological evaluations, continuing education and consultation. It is hoped that the new director will receive the same support that I have enjoyed from or faculty and staff, particularly Ms. Elizabeth Nance, administrative assistant, our adjunct faculty who give so generously of their time, the students who justify the clinic's existence, the Dean of Arts and Sciences and the patient people in the Comptroller's Office. All who have believed in the necessity, desirability, and viability of the clinic have had their faith justified. It is time now to take the clinic to the next level of productivity and maturity in our efforts to train our students and to be of service to the people of New Mexico.

Submitted by:
Eligio Padilla, Ph.D.
Director, Psychology Clinic

Annual Report of the Department of Sociology, 1985-86

Richard M. Coughlin, Chair

I am pleased to submit this report covering the first year of my term as Department Chair.

A. Significant Achievements

The past academic year might be characterized as one of reconciliation, reflection, and retrenchment. Over the course of the year a series of planning and self-study exercises initiated by the Office of the President and the Office of Graduate Studies afforded faculty members and graduate students the opportunity to assess the state of the Department and its problems and prospects for the near term. These efforts proved generally worthwhile, resulting in an open examination of a variety of issues central to the academic programs of the Department. While it may be premature to say that consensus has been reached on all the issues facing the Department, the atmosphere in which the debate took place was unquestionably constructive. In this respect, the "lowering of the political temperature" in the Department mentioned by Professor Ross in last year's report seems to have been attained.

However, events external to the Department, particularly the instability of leadership in the central administration of the University, coupled with the fiscal crisis afflicting New Mexico State government provided little cause for complacency. These

outside circumstances have taken their toll on the Department. Despite--or perhaps because of--their strong commitment to academic values and to the education of their students, the Sociology faculty are finding it increasingly difficult to do "more and more with less and less." This is a relatively young faculty with considerable energy and talent; to realize its full potential, however, the Department will need higher levels and more consistent support to carry out its mission than it has received over the past few years.

Undergraduate Program. In the past year the Department's undergraduate programs continued to grow in popularity. Total student credit hours and total degrees awarded in Sociology reaching all-time highs (see Tables 1 and 2 located at the end of the text). This upturn comes after a period of decline from previous enrollment peaks achieved in the early 1970s. In part, the recent increase in enrollments is the result of a conscious effort by the Department to make its undergraduate course offerings as attractive as possible. Beginning in about 1980, in the face of apparently dwindling undergraduate enrollments in Sociology, the Department instituted a curricular planning strategy to build enrollment by assigning the most talented and popular teachers to large, lower-division courses. In addition, at about the same time, the Department began to build a strong set of course offerings in the deviance and criminology area. Over the past five years the undergraduate degree concentration in deviance and criminology has been increasingly in demand. Moreover, in 1983 an interdisciplinary B.A. in Criminal Justice was established,

providing an even larger potential clientele for Sociology courses in this area.

However, the robustness of undergraduate enrollments in Sociology has been something of a mixed blessing. While the Department is justifiably proud of its accomplishments in staving off the gradual decline in enrollments that has afflicted most other Sociology departments nationwide (and some departments in other disciplines at the University of New Mexico), large enrollments in undergraduate sections have placed heavy demands on the time and energy of our best faculty--demands that inevitably compete with other important duties and responsibilities, such as those related to the graduate program, research and publication, and university and community service. In particular, it is disturbing to note that while Sociology enrollments have increased substantially over the past five years, the number of faculty (as measured by FTE budgeted to the Department) has actually declined.

Graduate Program. The 1985-86 academic year marked several developmental milestones in the Sociology graduate program. The Ph.D. degree program, which was inaugurated in 1977-78, attained maturity with the awarding of three doctorates and one master's degree in 1985-86, and with the successful placement of three of our graduate students in academic employment outside of UNM. Guillermo Grenier (Ph.D., 1985) received two offers. The first was for a tenure-track position as Assistant Professor in Labor Studies at Rutgers University (New Brunswick); the second, which he accepted, is as Director of Labor Studies and Industrial Relations at Florida International University. Stephanie Amedeo-Eineker

(Ph.D., 1985) received offers from Westfield State College (Massachusetts) and the University of Hawaii at Manoa. She accepted the University of Hawaii position as Research Associate. Karen Bracken (A.B.D.) was offered and accepted a joint administrative/teaching position in Latin American studies at Tulane University.

This success in placing our students in nationally advertised academic positions offers external validation of the quality of our Ph.D. program. The significance of these appointments is all the more apparent when one considers that the academic market for new Sociology Ph.D.'s is still quite sluggish. As the market improves, as is projected to occur toward the end of the decade, this pattern of successful placement should continue for those of our doctoral students who wish to seek academic positions at other institutions.

A summary of the employment status of other recent graduates of the M.A. and Ph.D. programs and information about graduate applications and admissions are shown in Tables 3 and 4.

The past year also marked an extensive review and several important reforms of the graduate program conducted by the Graduate Committee of Sociology in conjunction with the self-study of the graduate program started in 1983. The secondary areas of specialization in the Ph.D. program were consolidated with a view to increasing the breadth of training of our students as well as to achieve a better fit with the interests and expertise of the current faculty. In addition, the Graduate Committee developed a five-year plan of graduate course offerings to ensure that students

working in these new areas of specialization will have sufficient opportunity to prepare for preliminary examinations. Finally, as part of an ongoing planning effort, Professor Theresa Sullivan, University of Texas at Austin, was invited to visit the Department in May as a consultant to the graduate program. She prepared a report containing a number of recommendations on the M.A. and Ph.D. programs which will be studied and acted upon by the Department in the coming year.

The Graduate Committee of Sociology, particularly Chair Pat McNamara, are to be commended for a job well done during the past year.

Research and Scholarship. The record of the Department in this area continued to show improvement during the past year. As the annual biographical records document, Sociology faculty members, almost without exception, are actively pursuing agenda of research and scholarship. The results of these efforts are apparent in the steady output of books, articles, reviews, papers presented at meetings, and other professional activities. Given the relatively heavy teaching load carried by Sociology faculty--evidenced by the fact that the Department has consistently had one of the highest "teaching productivity" ratios in the College in recent years--and given the generally inadequate resources that have been available to support research (for example, clerical support, travel, and research assistants), I judge the current rate of scholarly production of the Sociology faculty to be adequate. By this I do not mean to imply that there is no room for improvement or that we can afford to rest on our

laurels; I wish only to point out that any fair assessment of the quantity of research and scholarship produced by the faculty must take into account the limited resources available to support their efforts as well as to recognize the many competing demands on their time and energy.

Similarly, it is important to note here that most research and other scholarly work currently being pursued by Sociology faculty is unsponsored or sponsored through units outside of the Department (e.g., the Latin American Institute). The reasons for this situation are manifold. It is attributable partly to the drying up of funding opportunities in the discipline over the past decade, and also due to the fact that the Department simply has not had any coherent policy in this area. Sponsored research has been left to individual discretion and initiative. And while several of our faculty have been active in securing grants and contracts, the Department has provided little in the way of incentive or systematic support for such activities. The question of whether or not the Department should be placing greater emphasis on the acquisition of outside funding remains an open question: one that I shall address shortly in the Plans and Recommendations section of this report.

Computer Use. In January the Department acquired three microcomputers and a variety of peripheral equipment to support the word processing of course syllabi, examinations, manuscripts, and other documents. Over a period of only a few months, virtually all work previously done using typewriters was shifted over to computer. The office staff showed commendable diligence and good

cheer in mastering the new technology. Currently about half of the Sociology faculty make regular use of computers in instruction or research. The Department remains committed to making this technology available to all those faculty and graduate students who wish to use it. In May the Department offered a series of workshops on microcomputer use, covering word processing, operating system, and communications software . The Department also acquired a site license for LIMDEP, a microcomputer statistical software package, which will be used in intermediate and advanced research methods courses.

B. Plans and Recommendations

1. Coping with Budgetary Austerity. Clearly the biggest immediate challenge to the Department is to weather the coming year of budgetary austerity imposed on the University by the action of the State Legislature. While there can be no question that inadequate funding will harm our academic program--indeed, to some extent this has already occurred--the Department must act to contain the damage and minimize long-term adverse effects. For example, under present conditions it is doubtful that the Department can or even should attempt to pursue a policy of maximizing aggregate course enrollments. In the face of static or even declining numbers of full-time faculty, further growth in enrollments can only be achieved by scheduling ever-larger sections of undergraduate courses and by excessive reliance on part-time temporary faculty. The potential problems inherent in these approaches are obvious. Faculty overburdened with teeming masses

of students may have no choice except to forego essay examinations and term papers in favor of multiple-choice tests and no extensive written assignments in their courses. Temporary, part-time faculty who work for low pay with few benefits and virtually no job security are prone to feelings of frustration, alienation, and marginality. In either case, it is the student who stands ultimately to lose through a deterioration in the quality of education.

I recommend that the Curriculum Committee of Sociology act promptly to devise a curricular plan to guide the scheduling of Sociology courses in an immediate future of bleak budgetary prospects. In particular, this plan should address the practical limits facing the Department in instructional resources and suggest how the Department can protect or even improve the quality of education offered in Sociology courses.

2. Improving Support for Research and Scholarship. As noted above, the Department has not had any consistent policies regarding faculty research and other scholarly activities. While research and scholarship have long been regarded as important criteria for tenure, promotion, and merit increase decisions, individual faculty (as well as graduate students) have been left to set their own agenda and devise individual strategies for accomplishing their goals. To some extent, this is as it should be; I do not believe that there would be much support for the idea among the faculty for restricting the scope of individual scholarly activities, much less dictating to faculty members what kind of research they should be doing. Nonetheless, the laissez-faire approach poses its own set

of problems, chief among which is the absence of any structure to support collaborative research projects, especially those that might result in outside funding. Such collaborative research projects could also be of substantial benefit to graduate students by providing a supportive environment-- intellectually, morally, and financially--in which to develop and carry out thesis and dissertation topics.

To this end, I recommend that in the coming year the departmental Research and Computer Use Committee conduct an in-depth study of what steps might be taken to encourage and more effectively support faculty and graduate student research opportunities, whether collaborative or individual, sponsored or unsponsored. While it is expected that one aspect of this study will deal with the prospects of enhancing the development of sponsored research, the Committee's charge extends to the broader question of what the Department can do with the resources that it already has to give more effective support to the full range of scholarly activities carried on by the faculty.

3. Continued Planning, Review, and Reform of the Graduate Program. The self-study process initiated in 1983 and revived in 1985-86 should continue through the forthcoming year. I recommend that the new Graduate Committee of Sociology, which will be appointed in August, carry forward the work of last year's committee, giving particular attention to Professor Sullivan's report on the graduate program.

C. Appointments

Beverly H. Burris (Ph.D., 1982, New York University) will join the regular full-time Sociology faculty beginning in Fall 1986 at the rank of Assistant Professor. Dr. Burris comes to the University of New Mexico after having served for three years on the Sociology faculty at Trinity University. Her areas of specialization are social theory, the sociology of work, and formal organizations.

D. Separations

No regular faculty retired or otherwise terminated employment during the 1985-86 academic year.

E. Sponsored Research

Robert A. Fiala: Grant from UNM Research Allocations Committee, $480, 1985/86.

Jane C. Hood: Grant submitted to NIAAA through the Department of Preventive Medicine, Medical College of Wisconsin, $37,477, for one year.

Gary D. LaFree, one of three co-principal investigators for the Alcoholic Beverage and Medical Research Foundation, "Mandatory Jail Sentences for Drunken Drivers," $32,000, 1986-87.

Philip A. May, National Institute of Mental Health grant, "Training in Applied Research on Deviant Behavior," $48,769, July, 1985-June, 1986. National Indian Fetal Alcohol Syndrome Program,

extension contract to All Indian Pueblo Council, Inc., $95,000, funded December 1984-October 1985. SPRANS GRANT (Special Projects of Regional and National Significance), "Native American Alcohol Related Injury Prevention Project," $145,000, funded to the State of New Mexico Health and Environment Division, Fall, 1985.

Richard McCleary, one of three co-principal investigators for the Alcoholic Beverage and Medical Research Foundation, "Mandatory Jail Sentences for Drunken Drivers," $32,000, 1986-87.

Patrick McNamara, UNM Research Allocations Committee, $350, 1985-86.

Gilbert Merkx (Director, Latin American Institute), Office of International Education, U.S. Department of Education, National Resource Center and Fellowships for Latin American Language and Area Studies, $191,750, 1985-86. Office of International Education, U.S. Department of Education, Assessment of Latin American Foreign Language and Area Needs in International Business: Present and Future, $40,000, 1984-85. The Tinker Foundation, Translation Fund for the Latin American Research Review, $15,000, 1981-to present. The Tinker Foundation, Summer Field Research Grants (Reapplication) $15,000, 1985 and (Approved) $15,000, 1986. The Andrew J. Mellon Foundation, Program Support Grant for the Latin American Institute, $200,000, 1982-88. U.S. Information Agency, Fourth Bilateral Symposium, $13,400, 1985-86. U.S. information Agency, Linkage Program for Faculty Exchanges

between the Universidade de Sao Paulo and the University of New Mexico, $47,010, 1984-87. U.S. Information Agency, Professional Development Seminars in Guatemala and the Dominican Republic, $17,451, 1985. U.S. Information Agency, University Affiliation Program between the National Autonomous University of Mexico and the University of New Mexico, $49,394, 1985-88. Peace Corps, Peace Corps Strategy Contract, $9,982 (Refunded), 1985-86. The Rockefeller Foundation, Mexico Nine: A Suite of Lithographs by Nine Contemporary Mexican Artists, $50,000, 1983-85. National Endowment for the Humanities, A Columbus Quincentenary Newsletter ENCUENTRO, $60,000, 1985-86. 1986 Summer Institute on Brazil, $119,218, 1986. Latin American Studies Association, LARR Managing Editor, $22,638, (Refunded) 1985-86. National Endowment for the Humanities, Portuguese Language Development Program, $158,311, 1985-86. The University of New Mexico Foundation, Recruitment Brochure for Latin American Studies, $3,500, 1984-86. The Howard Heinz Endowment, Latin American Military Institutions Under Conservative Authoritarian Rule, $15,000, 1985-87.

David Montejano, Rockefeller Foundation $25,000 grant, July 1, 1984-June 30, 1985, "The Impact of the Voting Rights Act in the Southwest." UNM Research Allocations Committee, $2,500, 1985-86.

H. Laurence Ross, Insurance Institute for Highway Safety grant, $26,067, 1984-open. Principal Investigator for Alcoholic Beverage and Medical Research Foundation, "Mandatory Jail Sentences for Drunken Drivers," $32,000, 1986-87. Insurance Institute for

Highway Safety, Survey on Drivers Who Have Lost Their Drivers' Licenses, $3,000, 1986-open. Research and lectures on drunk driving grants from the New Mexico Traffic Safety Bureau: (1) $28,843, (1984-85); (2) $14,745, (1984-open); (3) $15,000, (1985-86).

Paul D. Steele, University of Wisconsin, research grant and project, "Assessment for Post-Secondary Educational Needs of Adults," $32,473, March-August, 1985. Consolidated Neighborhoods, Inc., research grant and project, "Coping Strategies of Inner-City Minority Women," $15,000, June-July, 1985.

TABLE 1

Student Credit Hours in Sociology, 1978-85

Semester	Lower Division	Upper Division	Graduate	Semester Total
Spring 1978	5442	998	233	6673
Fall 1978	n.a.	n.a.	n.a	n.a.
Spring 1979	n.a.	n.a.	n.a.	n.a.
Fall 1979	5437	1432	191	7060
Spring 1980	4769	1700	279	6748
Fall 1980	5508	1649	257	7414
Spring 1981	n.a.	n.a.	n.a.	n.a.
Fall 1981	n.a.	n.a.	n.a.	n.a.
Spring 1982	4209	1873	245	6327
Fall 1982	n.a.	n.a.	n.a.	n.a.
Spring 1983	4704	1720	191	6615
Fall 1982	n.a.	n.a.	n.a.	n.a.
Spring 1984	4806	2047	250	7103
Fall 1984	4977	1862	187	7026
Spring 1985	4833	2376	250	7459
Fall 1985	5592	2076	205	7873

TABLE 2

Degrees Awarded in Sociology, 1978-86

Academic Year	BA	MA	Ph.D.	Total
1978-79	22	2	0	24
1979-80	21	0	0	21
1980-81	21	0	0	21
1981-82	23	2	1	26
1982-83	25.5	1	0	26.5
1983-84	29	1	0	30
1984-85	28	2	2	32
1985-86	30	1	3	34

TABLE 3

Admissions to Graduate Study in Sociology, 1983-86

Fall 1983	Applied	Admitted	Actually Started
M.A.	5	5	2
Ph.D.	9	7	6
Spring 1984			
Ph.D.	3	3	1
Fall 1984			
Ph.D.	5	5	4
Spring 1985			
M.A.	1	1	0
Fall 1985			
M.A.	6	6	3
Ph.D.	6	5	3
Spring 1986			
M.A.	0	0	0
Ph.D.	0	0	0
Fall 1986			
M.A.	6	2	*
Ph.D.	10	2	*

*Not available at time of report.

TABLE 4

Employment Status of Sociology M.A. and Ph.D. Students

Name	Date	Title	Employer
Master of Arts			
Rosemary Clark	Spring 1985	Public School Teacher	Colorado
*Cynthia Leyba		Juvenile Probation Officer	City of Albuquerque
*Pamela Page		Teacher	Albuquerque Public Schools
Barbara Reed	Fall 1984	Youth Substance Abuse	Five Sandoval Pueblos
Sally Teaf	Fall 1984	User Support Group Staff	U.N.M. Computing Center
Norma Wilkes	Fall 1984	Counselor on Bulemia and Anorexia	Vista Sandia Hospital
A.B.D.'s			
Karen Bracken		Administrative/Teaching Position	Tulane University
Sharon Phillips		Program Coordinator, Center of Latin American Studies	Stanford University
Twila Turpen		Full-time Staff	U.N.M. Computing Center
Ph.D.'s			
Tomas Atencio	Fall 1985	Associate Director for Research Lecturer III	Southwest Hispanic Research Institute Sociology, University of New Mexico
Stephanie Eineker	Fall 1986	Research Associate	University of Hawaii, Manoa
Guillermo Grenier	Fall 1986	Director of Labor Studies	Florida International University
Gary Lemons	Spring 1986	Part-Time Instructor	N.M.S.U. and University of Texas, El Paso
Sandra Tyler	Fall 1986	Social Science Consultant	Self-employed
Joann Weiss	Spring 1982	Associate Professor	U.N.M. College of Nursing

*Indicates M.A. thesis not yet awarded but almost finished.

The Report of the Department of Speech Communication
July 1, 1985 - June 30, 1986
Kenneth D. Frandsen - Chairman

GENERAL DEPARTMENTAL INFORMATION

A. Significant Achievements

At the beginning of the 1985-86 academic year one faculty appointment was made to fill the position previously vacated by T. Daniels. The appointment of K. Krone as Assistant Professor (Organizational Communication) returned the faculty of this Department to its original number of ten full-time members with professorial rank. Nevertheless, the Department's full-time long-range goal, namely, a faculty of twelve full-time members with professorial rank remains unmet and is still warranted by needs for flexibility and responsiveness to expectations concerning teaching, research and service. In addition the Department's needs for additional graduate teaching assistants, improved physical facilities and increased budgetary support remain unmet.

1. Instructional Activities: (course enrollments, evaluation of instruction, curriculum modification and development, special activities and programs).

a. Course Enrollments: During the past five years enrollment in courses and sections offered at the undergraduate and graduate levels has increased and the number of students declaring their intention or decision to major in

Speech Communication has grown significantly. According to data provided by the University's Office of Institutional Research, compared to Fall 1980, enrollment in upper division courses increased by 32.2%, and enrollment in graduate level courses increased by 21.9%. These increases were only slightly offset by decreases in lower division enrollment. In addition, compared to Fall 1980, the number of student majors in Speech Communication increased by 55% overall (LD - 190%, UD - 65%, GD - 3%) and the number of University College students indicating their intention to major in Speech Communication remained about the same.

The growing demands of both nontraditional and traditional students at both undergraduate and graduate levels continue to exceed the Department's capability to offer courses and sections in sufficient quantity. Consequently, either because of limits on the number of sections that can be staffed (e.g., SpCom 130, 221, and 240) or limits on the frequency of certain course offerings (e.g., SpCom 110, 225, 262, 268, and 270), "backlogs" of students desiring to enroll in introductory and service courses are growing. In turn, the limits on the frequency of certain offerings at the graduate level constrains the ability of students to complete their programs of study in an orderly and timely fashion. Based on enrollment patterns over the past five years, the Department is

confident that an increase in the number of faculty and graduate teaching assistants would be accompanied by a proportional increase in student enrollments that would either maintain or increase the current student/faculty ratio.

b. Evaluation of Instruction: Faculty of the Department are sincere and persistent in their efforts to obtain and respond to students' evaluation of instruction. Office of Institutional Research reports indicate that 100% of the faculty and teaching assistants in the Department use the ICES. Several faculty have chosen to supplement this form of evaluation with "course-specific" methods and instruments. Results of the ICES and other means of evaluation continue to indicate that faculty of this Department are rated at or above the average level of their peers in the College.

c. Curriculum Modification and Development: During this period, faculty reconsidered and made minor modifications in the rotational sequence of course and seminar offerings and considered potential modifications in the undergraduate curriculum. Deliberations will be continued into the next academic year until faculty reach consensus on these matters.

The Department continues to expand opportunities for students at the undergraduate level to complete "internships" in agencies and organizations off campus. In

addition to these "credit-bearing" opportunities available to undergraduate students, the Department continues to obtain support for graduate students through contributions to the Department's Institute for Organizational Communication which, in turn, provide funds for the appointment of Graduate Research Assistants. Through these efforts, faculty of this Department are continuing to expand and enhance educational opportunities for students at all levels.

d. Special Activities and Programs: During the academic year, the Department and the UNM Forensic Union hosted various forms of workshops and tournament competition for high school students and their coaches. University forensic team members participated in four national level championship competitions and finished the season by ranking in the top twenty among those participating in Cross-Examination Debate and among the top ten of those participating in Individual Events. The details of these activities and the record of accomplishments of college participants in the UNM Forensics Program are included in the annual report of the Director of Forensics, T. Jewell (attached).

During the year, the Department held several colloquia featuring scholars and professionals from off campus as well as faculty and graduate students. These sessions were well attended and enhanced the exchange of information among faculty and graduate students. The Department plans to continue these meetings, monthly, throughout the

academic year 1986-87.

A sub-unit of the Department, the Institute for Organizational Communication (IOC) continues to provide training, consulting and research services to a variety of clients. At present these activities must be carried out by faculty in addition to their regular duties. The goal of the IOC is to develop a sufficiently broad base of external support so that faculty can be assigned to these activities on a rotational basis while graduate teaching and research assistants funded by contributions and contracts to IOC maintain the Department's instructional capability at its present level and beyond.

2. Departmental Operations: (faculty decision-making, special appointments and sabbatical leaves, physical facilities)

a. Faculty Decision-Making: Decision-making activities of faculty were distributed across a wide range of issues during the academic year. Preparation of materials for review by the Strategic Planning Committee and preparation of a Self-Study in conjunction with an external review of the Department's Graduate Program claimed a large share of attention. One faculty member was the subject of a tenure review. Several candidates were evaluated for an expansion position on the faculty. In addition, faculty reviewed and made a recommendation concerning a proposal for Sabbatical Leave. Since two new

appointees began their probatinary periods Fall semester 1984 and a third began a probationary period Fall semester 1985, personnel matters will likely demand increased attention from faculty in the 1986-87 academic year. Faculty of this Department continue to reach decisions as a Committee-of-the-Whole and are satisfied with the results of this method.

b. Special Appointments and Sabbatical Leaves: During the 1985-86 academic year one faculty member was assigned partly to special activities. J. Civikly directed the operation of the University's Teaching Assistant Resource Center (TARC). E. Zannes began a period of sabbatical leave during Semester II of the 1985-86 academic year, and R. McKee and R. Krause were given temporary part-time appointments at the rank of Lecturer II.

c. Physical Facilities: The critical need of this Department (and others) for improved facilities is a matter of record that does not warrant repetition in this report. The indication that others face similar needs and that they would welcome assignment to a multi-purpose facility that would bring together all University units concerned with the study and practice of communication is clear and present. It is imperative that steps in this direction be both continued and quickened.

B. Significant Plans and Recommendations

1. Departmental Library and Research Facilities: Space for the Department's working collection of books, journals and other research materials has been reserved in the North Wing of 1801 Roma. However, furnishings and equipment necessar- to make that space functional are beyond the Department's current budgetary limitations. Likewise, the Department has only been able to barely maintain its facilities and electronic equipment used for various types of research and instruction by graduate students and faculty. In order to study human communication at the level of sophistication commensurate with this faculty's background and training, it will be necessary to improve, as well as maintain, the facilities and electronic equipment currently available.

2. Degree Programs: Ranking high among the Department's priorities is the development and enhancement of its contributions to the study and practice of Mass Communication at UNM. Currently only this Department offers work at the graduate level in this area and the undergraduate curriculum is dispersed among the Departments of Speech Communication, Journalism and Theatre Arts. Because of existing demands on faculty within their respective units, these efforts suffer from lack of coordination and integration. Student interest in the study of Mass Communication (Media) remains strong

and the opportunity to integrate the efforts of the several departments involved is an opportunity that should not be overlooked.

3. University Forensics Program: As the details of his report demonstrate, the appointment of an Assistant Director of Forensics (TA Special) with exclusive responsibility for these activities has enhanced this dimension of the Department's program. Still, the funds allocated for team travel and expenses fall considerably short of the minimum amount necessary to conduct a program of acceptable quality. The requirement that student participation in these activities must be limited to match the limited funds allocated will continue to subvert the potential of Forensics at UNM until additional support in the amount originally recommended is made available.

C. Appointments to Staff

1. Faculty

Kathleen J. Krone, Assistant Professor (Organizational Communication) August 19, 1985 - May 17, 1986.

Richard McKee, Lecturer II (part-time) January 20 - May 17, 1986.

Richard M. Krause, Lecturer II (part-time) January 20 - May 17, 1986.

Faculty continuing for the 1985-86 academic year were:

Jean M. Civikly, John C. Condon, Kenneth D. Frandsen, Richard J. Jensen, Thomas E. Jewell, Ellen M. Murray, Janice E. Schuetz, Paul J. Traudt, W. Gill Woodall, and Estelle Zannes.

2. Graduate Teaching Assistants

Cara J. Abeyta
Allen Anderson (Sem. II only)
Robert G. Baca
Trevor Giles (Asst. Dir. of Forensics)
Douglas Kent
Shawn J. Parry
Betty M. Williams

3. Staff (continuing)

Patrick Kiska, Electronic Technician II
May Polivka, Staff Assistant
Carol Jean Stokes, Staff Secretary

4. Student Employees

Daniel Blankenship (Apr.-May 1986)
Nancy J. Gamiz
Sheila Long (Aug.-Dec. 1985)
Leah Neel (occasional)
Michael Stanley

D. Separations from Staff

None.

E. Sponsored Research

None

REPORT OF UNM FORENSIC ACTIVITY: 1985-1986

The 1985-86 academic year has been a rewarding one for the University of New Mexico Forensics Team. Every area of competitive endeavor has enjoyed success on a national level. Indeed, the UNM forensic team has achied a national reputation in debate and individual events. On the local level the team has hosted six high school activities that have uniformly received praise and have brought hundreds of high school students to the campus of the University of New Mexico.

Service

The Forensic Team, in conjunction with the Department of Speech Communication, hosted two workshops and four tournaments for high school students. Over fifty UNM students participated in the planning, teaching, judging, and administration of these activities.

1. UNM Summer Debate Workshop for Lincoln-Douglas and Team Debate

   Thirty high school students and five high school coaches attended this week-long workshop in August that prepared the students and their coaches for competition in Lincoln-Douglas and Team Debate.

2. UNM Fall High School Forensics Workshop

   Sixty-seven high school students and eleven high school coaches attended this two day forensics workshop that included instruction in Team Debate, Lincoln-Douglas Debate, Oratory, Extemporaneous Speaking, and Interpretive Speaking.

3. UNM Fall Debate Scrimmage

   Over one hundred high school students and their coaches attended this one day debate scrimmage. Thirty UNM students participated as judges and tournament staff. This was the fourth annual scrimmage.

4. UNM "Lobo" Invitational

   Over two hundred high school students and their coaches attended this newly-formed tournament. Several veteran coaches remarked that it may have been the largest high school tournament in the history of New Mexico. The tournament offered four divisions of debate as well as five individual events. More than fifty UNM students participated as judges and tournament staff.

5. New Mexico High School State Qualifying Debate Tournament

   For the fourth year in a row, the UNM Forensic Team hosted this important event. One hundred and seventy-five of the top high school debaters in New Mexico attended for the purpose of qualifying for the State Tournament. The Forensic Team provided facilities, judges, and trophies for the tournament. More than fifty UNM students participated.

6. District National Forensic League Qualifying Tournament

   For the fifth year in a row UNM hosted the national qualifying tournament of the National Forensics League, a high school organization that sponsors the only official national tournament. Over 150 students attended the three day affair. UNM provided facilities and judges for the tournament.

Competition

The competitive arm of UNM Forensics was stronger than any in the history of the state of New Mexico during this academic year. The members of the team cooperated to win trophies and gain visibility for the program from New York to California. The individual events competitors have consistently been among the top in their events. The varsity debate team has been in the elimination rounds of every national-level tournament they have attended. It is fair to say that UNM has gained national stature in debate and individual events as a result of these successes in competition.

1. Utah Scrimmage--Salt Lake City, Utah

   1st Place, Prose Interpretation
   2nd Place, Dramatic Interpretation
   3rd Place, Varsity Debate
   4th Place, Informative Speaking
   Finalist, Dramatic Interpretation
   Finalist, Prose Interpretation

2. Vanderbilt National Invitational Debate Tournament Nashville, Tennessee

   5th Place, Varsity Debate

3. San Diego State "Aztec" Invitational--San Diego, California

   1st Place, Duo Interpretation
   2nd Place, Pentathlon Competition
   2nd Place, Duo Interpretation
   2nd Place, Prose Interpretation
   5th Place, Poetry Interpretation

4. U.S. Military Academy National Invitational Debate Tournament--Westpoint, New York

   4th Place, Varsity Debate
   4th Speaker, Debate
   6th Speaker, Debate

5. "Pike's Peak" Invitational--Colorado Springs, Colorado

   1st Place, DSR-TKA Sweepstakes
   1st Place, Dramatic Interpretation
   2nd Place, Junior Varsity Debate
   2nd Place, Duo Interpretation
   2nd Place, Informative Speaking
   3rd Place, Overall Sweepstakes
   3rd Place, Prose Interpretation
   3rd Place, Duo Interpretation
   4th Place, Duo Interpretation
   4th Place, After-Dinner Speaking
   3 semi-finalists in Impromptu Speaking

6. Southern Utah State Invitational--Cedar City, Utah

   1st Place, Poetry Interpretation
   2nd Place, Duo Interpretation
   2nd Place, Informative Speaking
   3rd Place, Duo Interpretation
   3rd Place, Dramtic Interpretation

7. United States Air Force Academy Invitational--Colorado Springs, Colorado

   1st Place, Junior Varsity Debate
   3rd Speaker, Debate
   5th Speaker, Debate

8. Emory University "Peachtree" Debate Tournament--Atlanta, Georgia

   5th Place, Varsity Debate

9. University of Southern California National Invitational Debate Tournament - Los Angeles

   4th Place, Varsity Debate

10. University of California, Los Angeles National Invitational Tournament - Los Angeles

    3rd Place, Persuasive Speaking
    5th Place, Varsity Debate
    4th Place, Junior Varsity Debate

11. University of Texas, Arlington Forensics Tournament--Arlington, Texas

    2nd Place, Duo Interpretation
    2nd Place, Dramatic Interpretation
    3rd Place, Individual Events Sweepstakes
    3rd Place, Duo Interpretation
    3rd Place, Dramatic Interpretation
    4th Place, Duo Interpretation
    4th Place, Dramatic Interpretation
    Finalist, Dramatic Interpretation

12. "Great Salt Lake" National Invitational Forensics Tournament, Salt Lake City, Utah

    1st Place, Duo Interpretation
    3rd Place, Dramatic Interpretation
    4th Place, Junior Varsity Debate
    5th Place, Dramatic Interpretation
    6th Place, Dramatic Interpretation
    Finalists, Duo Interpretation, Informative Speaking, Impromptu

13. Louisiana State University National Invitational Debate Tournament--Baton Rouge, Louisiana

    4th Place, Varsity Debate
    4th Speaker, Varsity Debate
    5th Place, Junior Varsity Debate
    5th Speaker, Junior Varsity Debate
    6th Speaker, Varsity Debate

14. University of Wisconsin National Individual Events Tournament--Eau Claire, Wisconsin

    1st Place, Dramatic Interpretation
    2nd Place, Dramatic Interpretation
    5th Place, Sweepstakes
    3rd Place, Duo Interpretation
    6th Place, Duo Interpretation

15. District IX National Individual Events Tournament Qualifier--Denver, Colorado

    2nd Place, Duo Interpretation
    4th Place, Informative Speaking
    4th Place, After-Dinner Speaking
    4th Place, Dramatic Interpretation

16. Novice National Debate Tournament--Fairfax, Virginia

    5th Speaker, Debate

17. DSR-TKA National Tournament--Ogden, Utah

    1st Speaker, Debate
    4th Place, Debate

18. National Individual Events Tournament
Arlington, Texas

2nd Place, Dramatic Interpretation
6th Place, Dramatic Interpretation
6th Place, Duo Interpretation
7th Place, Team Sweepstakes
7th Place, Duo Interpretation

Recruiting for 1986-1987 has been excellent. Several of the best debaters in New Mexico have committed to participate with the team next year. If the current funding level is mainted we should continue to enjoy success and a national reputation in forensics.