6-30-1997

Annual Report of the University, 1996-1997, Volumes 1-5

University of New Mexico

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## ANNUAL REPORTS 1996-97

**VOLUME I**

**PROVOST/VICE PRESIDENT FOR ACADEMIC AFFAIRS**

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UNIVERSITY OF NEW MEXICO

University Art Museum

1995 - 1996

Peter Walch

Director

September 30, 1996
1. Significant Developments During the Academic Year 1995-96

During much of this time, the main galleries were closed due to the extensive renovations of the performing arts spaces and the shared lobby area in the Fine Arts Center. We slowly began to emerge during the months of April and May, but full operations could not resume until fall. Needless to say, this extended period of working around reconfigured storage (all prints and photographs were temporarily housed in the main gallery) and non-existent exhibition space was difficult for the staff; for our general public, and - especially - for faculty and students, whom we tried to serve as best we could under the circumstances.

One bright note: out of all this came a newly expanded prints and photographs storage area and also a new separate space (carved out from the southeast corner of the lower gallery): a seminar room. As this is written, the first classes are lining up to use this new space.

Another bright note: in October of 1995, we opened 516 (pronounced, by us at any rate, as "five-one-six"). Located at 516 Central, SW in the heart of downtown Albuquerque, this former commercial art gallery building comprises two floors and approximately 5,000 square feet of exhibition space. Owner Ray Graham, a long-time supporter of the University Art Museum, has leased it to us for two years at extraordinarily generous terms. In this space, we aim to conduct a host of outreach programs and to display a lively mix of exhibitions (mostly drawn from our permanent collections). As this is written, it appears that our first-year goal of attracting over 10,000 visitors (approximately doubling the attendance of the gallery when it operated commercially) will be more than realized. Visitor surveys indicate that over 80% of the visitors come from greater Albuquerque, and that some 75% of them have never visited the
University Art Museum on campus. So we are truly reaching a new, and extremely appreciative, audience.

Also during this year, we met with our new "boss," Provost William Gordon, to clarify for him and for us what our mission should be, and what implications that decision on the mission will have on planning future facilities. As this is written, the Provost has strongly indicated that he wishes the University Art Museums to continue both to directly support the educational programs of the University and to play a prominent role in the broader community. We are now in the process of obtaining sufficient information to decide which combination of facilities can best, and most affordably, allow us to fulfill this dual mission.
2. Significant Plans and Recommendations for the Near Future

With the departure of Joseph Traugott from the Jonson Gallery (to the Museum of Fine Arts in Santa Fe, where we wish him well), newly appointed Jonson Gallery Curator Tiska Blankenship has, in consultation with the University Art Museums Advisory Committee, chosen a new emphasis for that gallery's program of exhibitions. The main gallery will now usually feature works by Jonson throughout the year. The smaller galleries will, through close association with the Department of Art and Art History's studio program, usually exhibit the dissertation work of MFA students. Through these more closely focused programs of exhibitions, we hope to build stronger audiences for the Jonson Gallery.

At the main museum, we continue our program of photo conservation, largely underwritten through generous grants from the Stockman Family Foundation. The summer of 1996 saw increased programming aimed at bringing conservation information to other area museums, and in the academic year 1996-97 we will offer our first academic course in this field, aimed at UNM undergraduates.

As mentioned in Section 1, our most vital concern remains the inadequacies and inefficiencies of our facilities, and our most important recommendation is that the University conduct the planning studies necessary to reach an early and binding decision as to when and how to address this condition.
3. Appointments to Staff

Kathryn A. Guscott
Bonnie K. Verardo
Helen Lucero
Krista J. Kersh
Carol T. McCusker

July 3, 1995
November 1, 1995
November 15, 1995
March 14, 1996
May 1, 1996

4. Separations from Staff

Joseph Traugott

February 21, 1996
5. Achievements and Products

A. Exhibitions

University Art Museum

Upper Gallery

April 5 - May 19, 1995
The Faculty Show
Curator: Peter Walch

June 4 - July 28
Beatrice Mandelman: Taos Modernist
Curator: Peter Walch

West Gallery

April 5 - May 19, 1996
May Stevens: Sea of Words and related works
Curator: Peter Walch

June 4 - July 28
WPA Artists in New Mexico
Curator: Peter Walch

Van Deren Coke Gallery

April 9 - May 19, 1996
Intercesores Divinos: Retablos Mejicanos en Hojalata
Divine Intercessors: Mexican Tin Retablos
Curator: Helen Lucero

May 31 - July 30
Flamenco, Las Mascaras de lo Jondo:
Photographs by Elke Stolzenberg
Curator: Kathleen Howe

Study Gallery

April 16 - June 2, 1996
Rudolf Baranik: Napalm Elegy and Recent New Mexico Collages
Curator: Peter Walch

June 4 - July 28
Abstract Art and the Modern Tradition
Curator: Peter Walch
### Lower Gallery

**June 11 - August 11, 1996**  
Made in New Mexico  
Curator: Peter Walch

### Jonson Gallery

**June 9 - September 8, 1995**  
1945: Paintings by Raymond Jonson: Drawings of Iwo Jima by Bob Hooten  
Curator: Joseph Traugott

**June 9 - September 8, 1995**  
Chariots of Desire: Works by Charmaine Brown on Disability Issues and Perspective  
Curator: Joseph Traugott

**September 15 - November 3, 1995**  
Mini Salon  
Curator: Joska Skalnik

**September 15 - November 3, 1995**  
Before the Curtain Closed: Photographs from Eastern Europe  
Curator: Joseph Traugott

**November 14 - January 19, 1996**  
Art Lives/Art Lives: Art in Response to an Encounter with Cancer  
Curators: Linda Tyler and Joseph Traugott

**January 30 - March 15, 1996**  
New Works by April Price  
Curator: Joseph Traugott

**April 2 - May 17, 1996**  
Annual Juried Graduate Art Exhibition  
Jurors: Frederick Hammersley and Page Coleman  
Curator: Tiska Blankenship

**June 4 - September 13, 1996**  
Absolute '50s and Ella Stewart Clayburn  
Curator: Tiska Blankenship

### University of New Mexico, Downtown

**Foyer**

**November 18 - January 14**  
A Salute to Raymond Jonson  
Curator: Tiska Blankenship
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<td>Peter Walch</td>
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<td>April 19 - April 27</td>
<td>Vintage Faculty Lithographs</td>
<td>Peter Walch</td>
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<td>May 4 - May 25</td>
<td>Pathfinder: Ronnie Landfield</td>
<td>Peter Walch</td>
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<td>May 28 - July 20</td>
<td>Aaron Karp</td>
<td>Peter Walch</td>
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<td><strong>North &amp; Mid Bays and West Wall</strong>*</td>
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<tr>
<td>November 18 - April 13</td>
<td>Downtown</td>
<td>Peter Walch and Kathleen Howe</td>
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<tr>
<td>April 19 - April 27</td>
<td>Young Picassos</td>
<td>Peter Walch and Bonnie Verardo</td>
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<td>May 4 - July 20</td>
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<td>Peter Walch</td>
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<td><strong>South Bay and West Wall</strong></td>
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<td>November 18 - January 14</td>
<td>Night Thoughts: David Keating</td>
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<td>January 20 - March 9</td>
<td>Dolls: An Ongoing Series: Dennis Farber</td>
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B. Print Study Room

Despite the closure of the University Art Museum from May 1995 through April 1996, the Print Study Room supported classes offered through the Department of Art and Art History, albeit in a limited capacity. Classes in the history of photography and the history of graphic arts, and studio courses in non-silver photographic processes and the advanced graduate seminar in photography met in the temporary quarters which housed the print and photography collection during the renovation. The Curator of Prints and Photographs presented lectures in the following classes: Seminar in the History of Photography, Introduction to Graduate Studies, History of Graphic Arts since 1800, and the Survey of Nineteenth Century Photography.

The renovation of the Fine Arts Center required the relocation of the entire collection of works on paper to temporary quarters. As a result of the renovation project, the Print Storage Vault was entirely redesigned and a separate Print Seminar Room was created. New procedures have been developed to integrate the new configuration with academic programs. Classes will begin meeting in the Print Seminar Room in Fall Semester 1996.

Under the direction of the Curator of Prints and Photographs and in conjunction with the Stockman Foundation Conservation Project and UNM North, a workshop in preservation/conservation techniques was presented for museum professionals in Taos on 6 and 7 August 1996. The workshop was attended by representatives from the Harwood Museum, the Kit Carson Museum, the Millicent Rogers Collection, Van Vechten Lineberry
Taos Art Museum, the Museum of New Mexico, and the Center for Southwest Research at Zimmerman Library.
## C. Purchases and Gifts

### Purchases

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<td>Early 17th century</td>
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<td>Manuscript Leaf from a Carta Executoria</td>
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<p>| Print | Anguiano, Raul | &quot;Lime Kilns,&quot; 1946 | Friends of Art |</p>
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Jonson Gallery

Four works were purchased:

One fabric Medallion
One antique oak and cane wheelchair modified by artist
One sketch book
One pastel on paper

Charmaine Brown, "I got my disability at Jonson Gallery"

Antique oak and cane wheelchair modified by artist Charmaine Brown with handmade pillow, c. 1900, 95.24. Jonson Gallery funds


Dorothy Morang, "Flaming Cosmos," c. 1953, pastel on paper, 95.16.2. Jonson Gallery funds and funds from Peter Eller.
### Gifts

**University Art Museum**

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<td>“Climbing Grissley Peak,” 1920 Ink 95.22</td>
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|                      | Not titled, 1986 Resin on mirrored plexiglass 95.18.4 |                          |
|                      | Not titled, 1985 Resin on mirrored plexiglass 95.18.5 |                          |
|                      | &quot;Hunter,&quot; c. 1954 Woodblock print 95.18.6 |                          |</p>
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D. Conservation for Fiscal Year 1995-1996

University Art Museum

Photographs

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</tbody>
</table>
Jonson Gallery

Paintings:

<table>
<thead>
<tr>
<th>Medium</th>
<th>Artist</th>
<th>Accession Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil on Canvas</td>
<td>Pelton</td>
<td>82.221.1950</td>
</tr>
<tr>
<td>Oil on Canvas</td>
<td>Jonson</td>
<td>82.221.0159</td>
</tr>
<tr>
<td>Oil on Canvas</td>
<td>Jonson</td>
<td>82.221.0125</td>
</tr>
<tr>
<td>Oil on Canvas</td>
<td>Jonson</td>
<td>82.221.0006</td>
</tr>
<tr>
<td>Oil on Canvas</td>
<td>Nordfeldt</td>
<td>82.221.1869</td>
</tr>
<tr>
<td>Oil on Canvas</td>
<td>Nordfeldt</td>
<td>82.221.1771</td>
</tr>
</tbody>
</table>
E. Institutions to Which We have Lent Works

**University Art Museum**

The Albuquerque Museum  
Albuquerque, New Mexico

Taos Art Association  
Taos, New Mexico

The Columbus Museum  
Columbus, Georgia

**Jonson Gallery**

Palm springs Desert Museum, California, and tour to:  
Montclair Art Museum, Montclair, New Jersey  
Parrish Art Museum, Southampton, New York  
Nora Eccles Harrison Museum of Art  
Utah State University, Logan  
Frederick R. Weisman Museum of Art, Pepperdine University,

Corcoran Gallery of Art, Washington, D.C., and tour to:  
The Chicago Cultural Center, Chicago, Illinois  
The New School For Social Research, NY, NY  
The Virginia Beach Center for the Arts, Virginia Beach  
The Fischer Art Gallery at U.S.C., Los Angeles, California  
The Portland Museum of Art, Portland Oregon

The Columbus Museum, Columbus, Georgia

**Travelling Exhibitions**

Rick Dillingham 1952-1994, A Retrospective Exhibition

Renwick Gallery of the National Museum of American Art  
The Smithsonian Institution  
Washington, D.C.

The Contemporary Museum  
Honolulu, Hawaii

Museum of Fine Arts  
Museum of New Mexico  
Santa Fe, New Mexico
The University's main Art Museum was closed for nearly a year, from May 15, 1995 to April 5, 1996, to accommodate the renovation of UNM's Center for the Arts. Relative to that, lower attendance and programming figures were expected for this report. Somewhat coincidentally, on November 18, 1995, the Museum opened a new branch gallery, 516 University Art Museum Downtown, at 516 Central SW, and a growing attendance to the exhibitions and programs presented there indicates lively visitor interest from Albuquerque's local and surrounding communities.

During the part of the year that the main museum was open (April, May and June of 1996) the total number of visitors to the main campus Museum for April, May and June of 1996 was 7,840, compared to 28,622 during 1994-95. Jonson Gallery's attendance was 3,110, an increase of 388 over last year. Attendance at the new branch gallery, 516 University Art Museum Downtown, was 5,732. The combined attendance for all locations was 16,682 compared to 31,344 in 1994-95.

Out of those 16,682 visitors, attendance to the main Museum from UNM classes, outside school groups and tours was 490; attendance to talks, receptions and events was 1,994, and attendance to non-museum sponsored events was 601. Total attendance for all public programs and events at the main Museum for April, May and June of 1996 was 3,085.
Jonson Gallery attendance to gallery talks and receptions totaled 887, a slight increase over last year. 516 University Art Museum Downtown’s attendance from classes, tours, gallery talks and receptions totaled 1,367. The combined total attendance from all three locations for the University Art Museum’s public programs and special events was 5,339, a decrease of 304 from 1994-95.

University Art Museum

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>1995 (Closed)</th>
<th>1996</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number Attended</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dec.  7</td>
<td>3:00 pm</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Slide talk: Assistant Curator from the New York Metropolitan of Art</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr.  5</td>
<td>6:00 pm</td>
<td>528</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>noon</td>
<td>82*</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>5:30 pm</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>11:30 am</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>2:00 pm</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>11:30 am</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>10:00 am</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>2:30 pm</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>3:30 pm</td>
<td>101*</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>1:00 pm</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>May  2</td>
<td>7:30 pm</td>
<td>146</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>10:00 am</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>7:30 pm</td>
<td>198</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>6:30 pm</td>
<td>360</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>11:30 am</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>3:30 pm</td>
<td>80*</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>3:30 pm</td>
<td>18*</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9:00 am</td>
<td>170</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>10:00 am</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1:30 pm</td>
<td>35</td>
<td></td>
</tr>
</tbody>
</table>

May 2: UNM Arts Expo/College of Fine Arts
3: School Tour: La Mesa Elementary
3: UNM Arts Expo/College of Fine Arts
4: UNM Arts Expo/College of Fine Arts
7: Tour: UNM Elder Hostel
7: Dinner, UNM Vice President’s Office
8: Dinner, UNM Vice President’s Office
11: UNM Commencement
14: School Tour: Lowell Elementary
14: School Tour: San Jose Elementary
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Number</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 15</td>
<td>1:00 pm</td>
<td>43</td>
<td>School Tour: Family School</td>
</tr>
<tr>
<td></td>
<td>11:30 am</td>
<td>31</td>
<td>School Tour: Lowell Elementary</td>
</tr>
<tr>
<td></td>
<td>2:00 pm</td>
<td>33</td>
<td>School Tour: La Mesa Elementary</td>
</tr>
<tr>
<td>June 4</td>
<td>2:00 pm</td>
<td>28</td>
<td>School Tour: Kindercare</td>
</tr>
<tr>
<td></td>
<td>2:00 pm</td>
<td>20</td>
<td>School Tour: Kindercare</td>
</tr>
<tr>
<td></td>
<td>5:00 pm</td>
<td>98</td>
<td>Reception: Beatrice Mandelman: Taos Modernist</td>
</tr>
<tr>
<td></td>
<td>10:00 pm</td>
<td>320*</td>
<td>Flamenco Festival Performers Reception</td>
</tr>
<tr>
<td></td>
<td>11:30 am</td>
<td>15</td>
<td>Tour: UNM Elder Hostel</td>
</tr>
<tr>
<td></td>
<td>1:30 pm</td>
<td>25</td>
<td>School Tour: Sandia Heights Academy</td>
</tr>
<tr>
<td></td>
<td>4:00 pm</td>
<td>27</td>
<td>Reception: Flamenco exhibition</td>
</tr>
<tr>
<td></td>
<td>5:00 pm</td>
<td>347</td>
<td>Reception: UAM Arts of Americas/Artscrawl</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3085</td>
<td></td>
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Programs Attendance Recap
University Art Museum

(Due to the renovation of the UNM Center for the Arts, the University Art Museum was closed from the last half of May, 1995, until April, 1996)

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
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<tbody>
<tr>
<td>School/other tours</td>
<td>490</td>
</tr>
<tr>
<td>Gallery talks</td>
<td>120</td>
</tr>
<tr>
<td>Receptions</td>
<td>1000</td>
</tr>
<tr>
<td>Other events</td>
<td>874</td>
</tr>
<tr>
<td></td>
<td>2484</td>
</tr>
<tr>
<td>Non-UAM events*</td>
<td>601*</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3085</td>
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Combined public events attendance
### Jonson Gallery

#### 1995

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Time</th>
<th>Number</th>
<th>Event Details</th>
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</thead>
<tbody>
<tr>
<td>July</td>
<td>21</td>
<td>5:00 pm</td>
<td>54</td>
<td>Reception: “Chariots of Desire”</td>
</tr>
<tr>
<td>Sept.</td>
<td>5</td>
<td>5:30 pm</td>
<td>40</td>
<td>Gallery Talk: Robert Hooten, &quot;A Look at Life from 1945&quot;</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>5:00 pm</td>
<td>31</td>
<td>Reception: “Minisalon, Before the Curtain Closed,” “Recent Acquisitions from Florence Miller Pierce”</td>
</tr>
<tr>
<td>Oct.</td>
<td>3</td>
<td>5:30 pm</td>
<td>29</td>
<td>Gallery Talk: Dr. Charles McClelland on the cultural background of Minisalon</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>6:00 pm</td>
<td>62</td>
<td>Reception: for Florence Miller Pierce, Recent Acquisitions</td>
</tr>
<tr>
<td>Nov.</td>
<td>17</td>
<td>5:00 pm</td>
<td>125</td>
<td>Reception: “Art Lives/Art Lives”</td>
</tr>
<tr>
<td>Dec.</td>
<td>5</td>
<td>5:00 pm</td>
<td>65</td>
<td>Gallery Talk: James Crump, (recipient of the F.O.A. Graduate Art History Award) on images and photography</td>
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</tbody>
</table>

#### 1996

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Time</th>
<th>Number</th>
<th>Event Details</th>
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</thead>
<tbody>
<tr>
<td>Feb.</td>
<td>6</td>
<td>5:00 pm</td>
<td>55</td>
<td>Gallery Talk: April Price on her recent works</td>
</tr>
<tr>
<td>Mar.</td>
<td>29</td>
<td>5:00 pm</td>
<td>124</td>
<td>Reception: Annual Juried Graduate Student Exhibition</td>
</tr>
<tr>
<td>April</td>
<td>2</td>
<td>5:30 pm</td>
<td>50</td>
<td>Gallery Talk: Peter Arcidiacono on his sculpture &quot;Rabbit Boy&quot;</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>3:00 pm</td>
<td>82</td>
<td>Reception: UNM Foundation Board reception</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>4:00 pm</td>
<td>101</td>
<td>Reception: President Peck's Dinner Party for new Faculty</td>
</tr>
<tr>
<td>June</td>
<td>7</td>
<td>5:00 pm</td>
<td>69</td>
<td>Reception: “Absolute '50s”</td>
</tr>
</tbody>
</table>

#### Jonson Gallery

5 Gallery Talks: 239
8 Receptions/events: 648
**TOTAL:** 887
University Art Museum

University Art Museum Catalogs, Books, and Videos

A:shiwi A:wan/ Belonging to the Zuni—Eight Contemporary Zuni Painters
Videotape produced by KNME-TV, Albuquerque
Videographer: Michael Kamens
UNM Art Museum, 1996
22 minutes/30 seconds

Jonson Gallery

18 pages, 19 b/w illustrations. November 1995

Annual Juried Graduate Student Exhibition. Essay by Andree Flageolle and statements by artists.
16 pages, 14 b/w illustrations. April 1996
The University Art Museum Shop at the University of New Mexico closed from May, 1995 to April, 1996 due to renovations on the foyer of the Fine Arts Center. We did open a small, but charming, shop at the 516 University Art Museum Downtown location in November of 1995. Downtown visitors can now purchase cards, tee-shirts, saint key-chains, and Corona beer trays. The main museum shop opened in April, and crowds of shoppers could once again buy art ties, silver rings, Cloud Nine chocolates, and pull toys. The runaway best seller this year was the long-tailed wooden cat. The best selling book continues to be THE POTTERS OF MATA ORTIZ. Our museum tee-shirt will go on sale next month. It features the "Our Lady of Sorrows" heart by New Mexico's own Luis Tapia.
6. Outside Sponsored Research

**University Art Museum**

<table>
<thead>
<tr>
<th>Funding Agent</th>
<th>Institute of Museum Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Curatorial Internship, Prints and Photographs</td>
</tr>
<tr>
<td>Dates</td>
<td>October 1, 1995 - December 31, 1996</td>
</tr>
<tr>
<td>Amount</td>
<td>$10,000</td>
</tr>
<tr>
<td>Project Director</td>
<td>Kathleen Howe</td>
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<table>
<thead>
<tr>
<th>Funding Agent</th>
<th>College of Fine Arts</th>
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<tbody>
<tr>
<td>Title</td>
<td>Arts of the Americas - 1996</td>
</tr>
<tr>
<td>Dates</td>
<td>Summer, 1996</td>
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<tr>
<td>Amount</td>
<td>$1,373</td>
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<td>Project Director</td>
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<table>
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<th>Stockman Family Foundation Trust</th>
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<tr>
<td>Title</td>
<td>Art Restoration and Conservation</td>
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<tr>
<td>Dates</td>
<td>July 1, 1995 - June 30, 1996</td>
</tr>
<tr>
<td>Amount</td>
<td>$50,000</td>
</tr>
<tr>
<td>Project Director</td>
<td>Peter Walch</td>
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</table>

<table>
<thead>
<tr>
<th>Funding Agent</th>
<th>Peter Walch</th>
</tr>
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<tbody>
<tr>
<td>Title</td>
<td>University Art Museum, Downtown</td>
</tr>
<tr>
<td>Dates</td>
<td>November 1, 1995 - June 30, 1996</td>
</tr>
<tr>
<td>Amount</td>
<td>$21,282.50</td>
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<tr>
<td>Project Director</td>
<td>Linda Bahm</td>
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</table>

**Jonson Gallery**

<table>
<thead>
<tr>
<th>Funding Agent</th>
<th>Cancer Research and Treatment Center University of Art Lives/Art Lives</th>
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<tbody>
<tr>
<td>Title</td>
<td>November 14, 1995 - March 15, 1996</td>
</tr>
<tr>
<td>Amount</td>
<td>$589.40</td>
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<tr>
<td>Project Director</td>
<td>Joseph Traugott</td>
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<table>
<thead>
<tr>
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<tr>
<td>Title</td>
<td>Annual Juried Graduate Student Exhibition</td>
</tr>
<tr>
<td>Dates</td>
<td>April 2, 1996 - May 17, 1996</td>
</tr>
<tr>
<td>Amount</td>
<td>$329.00</td>
</tr>
<tr>
<td>Project Director</td>
<td>Tiska Blankenship</td>
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<table>
<thead>
<tr>
<th>Funding Agent</th>
<th>Department of Art and Art History</th>
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<tbody>
<tr>
<td>Title</td>
<td>Annual Juried Graduate Student Exhibition</td>
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<tr>
<td>Dates</td>
<td>April 2, 1996 - May 17, 1996</td>
</tr>
<tr>
<td>Amount</td>
<td>$2,000.00</td>
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<tr>
<td>Project Director</td>
<td>Tiska Blankenship</td>
</tr>
<tr>
<td>Funding Agent:</td>
<td>Columbus Museum, Columbus, Georgia</td>
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<tr>
<td>----------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Title:</td>
<td>Women's Work: a Century of Achievement</td>
</tr>
<tr>
<td>Dates:</td>
<td>May 1, 1996 - September 30, 1996</td>
</tr>
<tr>
<td>Amount:</td>
<td>$750.00</td>
</tr>
<tr>
<td>Project Director:</td>
<td>Tiska Blankenship</td>
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7. Professional Activities

Linda Bahm
New Mexico Association of Museums:
Nominating Committee Chair, 1996
Treasurer, 1995
Member
Member, UNM Provost’s Ad Hoc Committee for the Budget Review of smaller units, January - May, 1996
UNM 20-year service recognition award, March 22, 1996

Professional meetings and classes attended:
New Mexico Association of Museums Annual Meeting
Las Vegas, NM
September 6 - 8, 1995

Association of College and University Museums mini-conference:
“Building a New Museum”
Minneapolis, MN
May 4, 1996

American Association of Museums Annual Meeting
Minneapolis, MN
May 5 - 8, 1996

UNM Human Resources classes:
“Introduction to Internet”
August 25, 1995

“E-mail”
August 26, 1995

Microsoft Windows Seminar
Albuquerque
January 25, 1996

Tiska Blankenship
Member, American Association of Museums
Ex-Officio Member of the Friends of Art
Committee member of the New Deal Art Restoration Task Force
Jeanette Entwisle
Board Member, Art in the School, Inc.

Professional meetings and classes attended:
   UNM Employee Training Workshops:
      Interacting Relationships at Work and Home
      E-Mail Training
      Giving Effective Presentations

Kathleen Stewart Howe

Professional meetings and classes attended
   ORACLE - Curators of Photography Annual Meeting
   Daytona Beach, Florida
   November 3-5, 1995

   Reading Outside Art Histories
   Southeast Museum of Photography
   Daytona Beach, Florida
   November 2, 1995

Presentations at professional meetings and conferences
   "Egyptology, Photography and the Geography of the Past,"
   Paper presented at "Representing Egypt: An
      Interdisciplinary Symposium,"
   Carleton University
   Ottawa, Canada
   March 2, 1996

Publications and scholarly projects
   "The Egypt Recovered: The Photographic Surveys of Maxime
   Du Camp, Felix Teynard, and John Beasley Greene and the
   Development of Egyptology," Dissertation
   University of New Mexico
   Ph.D. awarded May, 1996

   "Paul Strand in New Mexico," in Luna Cornea
   Mexico D.F., Mexico
   May, 1995

   Guest Editor, The Tamarind Papers: A Journal of the Fine
   Print, #18
   University of New Mexico Press
   Published, February, 1998
Other

Initial phase of International Partnership Among Museums
Grant: Pierre-lin Renie, Curator of Photography, Musee Goupil, Bordeaux, France in residence at the University Art Museum, May 19 through June 23, 1996

Krista J. Kersh
Member, New Mexico Association of Museums

Professional meetings and classes attended:
- Purchasing and Accounts Payable Policies and Procedures
  April 18, 1996

- Purchasing Procedures
  Bookholder Training
  May 17, 1996

- Preventing Fraud Through Management Control
  June 17, 1996

Kittu Longstreth-Brown
Surveyor, Museum Assessment Program, AAM 1996
Accreditation Visiting Committee, AAM 1996
Section Head for Information Management, revision of Museum Registration Methods, 1995
Vice Chair of Registrars Committee, MPMA 1995, 1996
Publications Committee Chair, MPMA 1995, 1996
Reviewer for Institute of Museum Services General Operating Support Grant, 1996
Member, American Association of Museums
Member, Mountain-Plains Museums Association
Member, Western Museums Association
Member, New Mexico Association of Museums
Member, Oregon Museums Association
Member, Registrars Committees of AAM, MPMA, WMA

Professional Meetings and Workshops attended:
- New Mexico Association of Museums Annual Meeting
  Las Vegas, New Mexico
  September 7-8, 1995

- Mountain-Plains Museums Association Annual Meeting
  Cheyenne, Wyoming
  October 4-7, 1995
Introduction to Internet, A and B  
University of New Mexico

Introduction to Electronic Mail  
University of New Mexico

Negotiating Solutions in the Workplace  
University of New Mexico

Panels and articles
Panel Organizer, "Loan Agreements-What's Really Going On?"  
Mountain Plains Museums Association Annual Meeting  
Cheyenne, Wyoming  
October 6, 1995

Article, "Hazards in your Collection"  
RC-MPMA Newsletter Fall 1995, Vol. 7, No. 4

Carol T. McCusker  
Member, College Art Association

Exhibitions and awards:
- National Endowment for the Arts  
- Prints and Photos Intern  
  May, 1996 - February, 1997

Nancy C. Montoya  
Member, Staff Council, Career Development Committee

Professional meetings and classes attended:
- Sociology, Deviant Behavior  
  University of New Mexico  
  August - December 1995

- Sociology, Introduction to Research Methodology  
  University of New Mexico  
  August - December 1995

- Sociology of New Mexico  
  University of New Mexico  
  August - December 1995

- Sociology, Race and Cultural Relations  
  University of New Mexico  
  January - May 1996
Electronic Mail: Introduction
August, 23, 1995

Internet: Introduction “A”
September 1, 1995

Preventing Fraud Through Management Control
June 17, 1996

Christina Saunders Squire
Member, Friends of Art
Member, New Mexico Association of Museums

Professional meetings and classes attended:
Flamenco I
University of New Mexico
August-December 1995

Playwriting
University of New Mexico
August-December 1995

Flamenco II
University of New Mexico
January-May 1996

Bonnie K. Verardo
Member, Selection Committee, Albuquerque Arts Alliance Bravos! Award
for 1995 Visual Artist

Exhibitions and awards:
Exhibitor, 35th Annual New Mexico Arts & Crafts Fair
June, 1996

Award for Merit, Wingspread Publishers, Inc.
Other:

Curator of "Jean Colona," Exhibit for Explora Science Center, March
Served on Committee for and Coordinated images for the New

Attended "Image Walk," a presentation by Bob Miller, Looking at
University Art Museum/Jonson Gallery Personnel
APPENDICES

A. University Art Museum, Jonson Gallery and University Art Museum, Downtown Personnel
B. University Art Museum, Jonson Gallery and University Art Museum, Downtown Committees
A. University Art Museum, Jonson Gallery and University Art Museum, Downtown
Personnel

Staff:

Linda Bahm, Associate Director December 9, 1985 -
Tiska Blankenship, Curator, Jonson Gallery April 22, 1985 -
Floramae M. Cates, Curatorial Assistant September 19, 1990 -
Jeanette Entwisle, Education and Public Programs Coordinator July 23, 1990 -
Kathryn A. Guscott, Curatorial Assistant July 3, 1995 -
Kathleen S. Howe, Print/Photo Curator July 11, 1994 -
Krista J. Kersh, Museum Shop Manager March 14, 1996 -
Kittu (Kathryn) B. Longstreth-Brown, Registrar May 1, 1990 -
Helen Lucero, Curator of Hispanic Art November 15, 1995 -
Carol T. McCusker, NEA Curatorial Intern May 18, 1996 -
Nancy C. Montoya, Administrative Assistant July 5, 1988 -
Lee Savary, Exhibitions Curator August 3, 1992 -
Christina L. Squire, Museum Shop Manager August 10, 1992 -
Bonnie K. Verardo, 516 Gallery Manager November 1, 1995 -
Peter S. Walch, Director July 1, 1985 -

Work Study and Temporary Part-Time:

Elena Baca January 17, 1995 - May 10, 1996
Geretta G. Chick April 29, 1996 -
Kathy S. Cunningham February 16, 1996 - April 30, 1996
Elizabeth (Leigh) C. Graeber August 21, 1995 -
Charles W. Hellwig May 28, 1996 -
Dennis R. Henson February 9, 1995 - May 9, 1996
Elizabeth K. Herrlinger May 14, 1996 -
Kathleen G. Kloster June 1, 1993 -
Ina R. Kriebel November 6, 1992 - September 22, 1995
Sean McCullough August 21, 1995 - December 15, 1995
Carol T. McCusker October 5, 1995 - May 10, 1996
Dillon McDaniel June 6, 1995 - July 21, 1995
Britt MacQuigg April 30, 1996 -
Joseph F. Messina
Robert Moya September 5, 1995 - May 15, 1996
Jayson Hoyt August 14, 1995 -
Megan Goza August 29, 1995 -
Merry Scully January 17, 1995 -
Bonny Holder April 29, 1996 -
Charlotte Jameson April 29, 1996 -
Doris Wagner April 29, 1996 -
Volunteers:

Georgette Ely, Archivist, Jonson Gallery

Adjunct Curators:

University Art Museum

Clinton Adams
Thomas F. Barrow
David Craven
Christopher Mead
O. J. Rothrock
David Brown

University Art Museum
Advisory Committee - 1995-1996

Clinton Adams, Chair
Peter Walch, Secretary
Thomas F. Barrow
Van Deren Coke
Richard Eribes
Orcilia Zuniga Forbes
Sheila Garcia
Jim Jacob
Christopher Mead
Susan B. Mullins
Jonson Gallery
Committee on Jonson Collections

David McKinney, Vice President for Business and Finance
Julie Weaks, University Budget Director
Susan Mullins, University Auditor
Elen Feinberg, Chairperson, Department of Art and Art History
Joyce Szabo, Assistant Professor, Department of Art and Art History
Richard Holder, Associate Provost

Ex-Officio Members

Tiska Blankenship, Curator, Jonson Gallery
Peter Walch, Director, University Art Museum

At the May 1996 Jonson Gallery Committee meeting, Peter Walch discussed changes to take place with Jonson Gallery programming. The committee agreed that in the near future the Jonson committee would be dissolved and agreed to conduct a final meeting with the University art Museum board in the Fall of 1997 to finalize the decision.
UNIVERSITY OF NEW MEXICO

University Art Museums

Annual Report

1996 - 1997

Peter Walch

Director

September 12, 1997
1. Significant Developments

After a year and a half of reduced operations due to extensive renovations of our Center for the Arts main museum home, in 1996-97 we finally returned to full strength with a normal complement of exhibitions and programs at all three facilities of the University Art Museums. Gratifying increases in attendance, and increased levels of support, came as a welcome result.

At the main museum, some of the highlights of the exhibition year included a survey of recent photography acquisitions with which we heralded the re-opening of our lower gallery and the placing into service of our new Print Study Room, main gallery exhibitions of the Ciechanowiecki Collection of French oil sketches (an exhibition which, under the auspices of the American Federation of Arts, had toured six other museums in the United States and Europe) and an exhibition of color abstractions compared with late nineteenth-century Navajo weavings, jointly organized with the Maxwell Museum of Anthropology. Smaller one-person exhibitions of works by Harry Nadler and Barton Benes were mounted in the West and Coke Galleries, respectively.

The Jonson Gallery undertook a new programming philosophy, pairing one-person exhibitions of dissertation work by UNM Department of Art and Art history graduate students with main gallery shows devoted to the founder, Raymond Jonson, and his contemporaries. A major exhibition, accompanied by a full catalog, of the
Transcendental Painting Group and its importance in the history of American abstraction was the Jonson Gallery's most important contribution.

Our continuing experiment with the running of a community-oriented off-campus gallery remains a popular success. At our Downtown Gallery site, year-to-year attendance figures showed a gratifying double-digit increase for such exhibitions as one devoted to current work by UNM studio art graduates, and exhibitions of Mexican tin retablos and Spanish Colonial paintings from the permanent collection.

As noted above, community support increased in ways other than sheer attendance. Gifts of works of art, participation in public programs, publicity generated by our exhibitions, and the general "buzz" about the University Art Museums all contribute to our sense of a warm reception for our efforts in the larger community. At least as important is the increased number of UNM faculty who base their teaching upon our collections, exhibitions, and programs. Several Study Gallery and Downtown Gallery exhibitions - past, present, and future - have been or will be based upon such faculty/student/museum interaction.

Two community relationships deserve special notice. With and for the nationally-recognized volunteer group Art in the Schools, Inc., we mounted at our Downtown Gallery an exhibition of grade-school student work in photography, the culmination of a teaching unit developed in close conjunction with our collection of photography and carried on throughout the Albuquerque Public School system. Secondly, in conjunction with both the Albuquerque Children's Museum and Art in the School, Inc., we wrote a
successful $50,000 grant application to the Albuquerque Community Foundation, to fund a city-wide celebration of printmaking in Albuquerque. "The Prints of Albuquerque" will take place in October of 1997.

Finally, we note the fifth year of what we hope will be many in which a local foundation (The Stockman Family Foundation) has funded a unique and important program of photo conservation at the University Art Museum. In 1996-97, this program expanded to include for the first time the giving of a course ("The Objects of Art," jointly taught by Susan Barger of UNM's Department of Earth and Planetary Science and Kathleen Howe, the Museums' Curator of Prints and Photographs), offered in the Fall semester through the Museum Studies program in the Department of Art and Art History. As this is written, the Stockman Family Foundation has pledged $80,000 annually for the next three years, a most welcome increase of $30,000 a year over the amounts we have recently been given.
2. Plans and Recommendations

Outmoded and sometimes dangerous facilities continue to threaten our present operations. At the main museum, a concern even bigger than the lack of adequate collections storage is the damaging lack of humidity control. With the understanding of both the Stockman Family Foundation and the University administration, we will use some $10,000 of our 1997-98 Stockman grant to bring to campus an expert surveyor and advisor, William Lull (of Garrison and Lull, based in Princeton, New Jersey, who has successfully created retrofits for HVAC systems in many museums across the country).

At our Downtown Gallery, two major concerns are, first, being able to continue there after the October 31, 1997, expiration of our initial lease period and, second, providing ADA acceptable access (probably through the installation of an elevator) to the second floor. Talks are currently underway with both our landlord and UNM central administration.

No matter how we patch and repair our current facilities, we all recognize the inefficiencies inherent in running museum operations at three different locations. The long-promised new building at the Galles site, in which Jonson and Downtown Gallery operations might be united with those of the main Museum, remains still only a tantalizing prospect. If, as now seems unfortunately clear, that will not come into being relatively soon, then decisive interim measures will be necessary.
3. Staff Appointments

Scott Williams

October 1, 1996

4. Staff Separations

Carol T. McCusker

February 28, 1997
5. Achievements/Products

A. Exhibitions

University Art Museum

Upper Gallery

1996
Aug. 20 - Dec. 20  Landscape, Portrait, Still Life
Curator: Peter Walch

1997
Jan. 26 - May 18  French Oil Sketches and the Academic Tradition
Curator: Peter Walch

Jun. 10 - Sept. 21  Eyedazzlers
Curator: Peter Walch

West Gallery

1996
Aug. 20 - Oct. 13  Enchanted by New Mexico
Curator: Peter Walch

Oct. 22 - Dec. 20  John Willenbecher: Five Paintings
Curator: Peter Walch

1997
Jan. 26 - Mar. 23  Sequences and Series: Prints and Photographs from the
Permanent Collection (also Coke Gallery)
Curators: Kathleen Howe and Floramae Cates

Mar. 30 - May 18  Harry Nadler and the Making of Art
Curator: Peter Walch

Jun. 10 - Sept. 14  Picasso/Picassoid
Curator: Peter Walch
Van Deren Coke Gallery

1996
Aug. 20 - Oct. 13  New Mexico Watercolors  Curator: Peter Walch
Oct. 22 - Dec. 20  Trial Run—Commerce and the Fine Print: Drum Lithographs  Curator: Floramae Cates

1997
Jan. 26 - Mar. 23  Sequences and Series: Prints and Photographs from the Permanent Collection (also West Gallery)  Curators: Kathleen Howe and Floramae Cates
Mar. 30 - May 18  Barton Benes  Curator: Peter Walch
Jun. 10 - Aug. 17  Qiviuq: A Legend in Art  Organized by Carleton University Art Gallery, Ottawa, Canada  Curator: Kathleen Howe

Study Gallery

1996
Sept. 3 - Nov. 3  Following the Fremont Expedition: Daguerreotypes by Robert Shlaer  Curator: Kathleen Howe
Nov. 5 - Dec. 20  The Beats and Their Contemporaries  Curator: Carol McCusker

1997
Jan. 8 - Mar. 9  Mythfits: H. Jack Lieberman and Friends  Curator: Peter Walch
Jun. 10 - Aug. 10  Adams and Porter in New Mexico  Curator: Kathleen Howe
Lower Gallery

1996
Curator: Kathleen Howe

1997
Jan. 8 - Dec. 7 From the Permanent Collection
Curator: Peter Walch
Jan. 8 - Dec. 7 Spanish Traditions
Curator: Peter Walch
Jan. 8 - Aug. 29 An Eye for Art: Gifts from Vernon Nikkel
Curator: Peter Walch
Jonson Gallery

1996
Jun. 4 - Sept. 13  Raymond Jonson's Absolute '50s: Works from the Permanent Collection by Jonson, his Students and Contemporaries
Curator: Tiska Blankenship

Jun. 4 - Sept. 13  Ella Stewart Clayburn: Abstractions
Curator: Tiska Blankenship

Sept. 24 - Nov. 27  Raymond Jonson: A Modernist View of Landscape
Curator: Tiska Blankenship

Sept. 24 - Oct. 18  Clinton Adams: Then and Now - 1940s and 1990s
Curator: Tiska Blankenship

Oct. 22 - Nov. 15  Dog God: Computer Printed Images by MFA candidate Andre Ruesch
Curators: Andre Ruesch and Scott Williams

Oct. 22 - Nov. 15  The New Mexico Portfolio: Photographic suite of "tone poems" by MFA graduate Bill Bradish
Curators: Bill Bradish and Scott Williams

Nov. 19 - Dec. 13  Howard Cook - The Taos Years
Curator: Tiska Blankenship

Nov. 19 - Dec. 13  Excerpts from the Series: The Marietta Robusti Tintoretto Story by Marietta Patricia Leis
Curators: Marietta P. Leis and Tiska Blankenship

1997
Dec. 6 - Jan. 17  Raymond Jonson: Chromatic Contrasts: The Sensation of Color Movement
Curator: Tiska Blankenship

Dec. 17 - Jan. 17  Frank Walker: Enigmatic Forms
Curator: Tiska Blankenship

Jan. 21 - Feb. 14  one if by land, two if by sea, three if by air...: Jonson Gallery Acquisitions since 1985
Curator: Tiska Blankenship
<table>
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<tr>
<th>Date Range</th>
<th>Exhibition Details</th>
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<tr>
<td>Jan. 21 - Feb. 14</td>
<td>Javier Carmona: remake: Photography by MFA candidate Javier Carmona</td>
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<td>Curators: Javier Carmona and Scott Williams</td>
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<td>Feb. 7 - Mar. 21</td>
<td>Raymond Jonson: The Value of Light</td>
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<td>Curator: Tiska Blankenship</td>
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<td>Feb. 18 - Mar. 21</td>
<td>Jennifer Lui: Recent Drawings: Biomorphic drawings by MFA graduate Jennifer Lui</td>
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<td>Curators: Jennifer Lui and Scott Williams</td>
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<td>Curators: Stacy Grega and Scott Williams</td>
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<td>Apr. 1 - May 9</td>
<td>3rd Annual Juried Graduate Student Exhibition</td>
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<td>Jurors: Lucy Lippard and Meridel Rubenstein</td>
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<td>Curator: Scott Williams</td>
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<td>May 27 - Aug. 15</td>
<td>Vision and Spirit: The Transcendental Painting Group</td>
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<td>Curator: Tiska Blankenship</td>
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University Art Museum Downtown

Foyer

1996

Jul. 2 - Jul. 20
- Aaron Karp
  Curator: Peter Walch

Jul. 11 - Jul. 20
- Habitat for Humanity: A Walk through Architectural History
  Curators: Peter Walch and Bonnie Verardo

Jul. 30 - Sept. 28
- Paul Suttman: Encounters in Bronze
  Curators: Peter Walch, Lee Savary and Virginia Bush Suttman

Oct. 11 - Dec. 21
- Antoine Predock: Atlantic Hotel and Casino, Las Vegas, Nevada
  Curator: Bonnie Verardo

1997

Jan. 14 - Mar. 1
- Landscapes: Tapestries by Olga de Amaral
  Curators: Peter Walch and Bonnie Verardo

Mar. 8 - Apr. 19
- John Wenger: Watershed
  Curator: Peter Walch

Apr. 26 - May 31
- A Holocaust Memorial for New Mexico
  Curators: Kathleen Howe and Lee Savary

Jun. 6 - Aug. 20
- Wilson Hurley: Niagara Falls in the Mist
  Curator: Peter Walch

North & Mid Bays & West Wall

1996

Jul. 1 - Jul. 20
- Enchanted by New Mexico
  Curator: Peter Walch

North, Mid & South Bays & West Wall

1996

Jul. 30 - Sept. 28
- Paul Suttman: Encounters in Bronze
  Curators: Peter Walch, Lee Savary and Virginia Bush Suttman
1996
Oct. 11 - Dec. 21 Cinco Pintoras
Curator: Helen Lucero

1997
Jan. 14 - Mar. 29 The School of the U.
Curators: Peter Walch and Bonnie Verardo

Apr. 12 - Apr. 26 Benefit Art Sale of Works on Paper by Harry Nadler
Curator: Peter Walch

Mid & South Bay & West Wall

1997
May 10 - Aug. 23 Everyday Art: Well-designed Objects for Daily Living
Curators: Robert Peters and Peter Walch

North Bay & West Wall

1997
May 10 - Jun. 28 Atmospherics: Mixed Media Works by Charles Castillo
Curator: Bonnie Verardo

Upstairs Bays:
North & Mid Bays & West Wall

1996
Oct. 11 - Dec. 21 Through Children's Eyes: 100 Young Photographers Capture the Community
Curators: Sara Otto-Diniz, Jeanette Entwisle, and Kathleen Howe

North & Mid Bays

1996
Jul. 1 - Sept. 28 Divine Intercessors: Mexican Tin Retablos, Part I
Curator: Helen Lucero

1997
Jan. 14 - Mar. 1 Landscapes: Tapestries by Olga de Amaral
Curators: Peter Walch & Bonnie Verardo

Mar. 8 - May 10 Office Art
Curators: Kathleen Shields and Peter Walch
1997
May 24 - Jan. 31, 1998 Madre de Todos: The Virgin Mary in the New World
Curators: Charlene Villasenor Black, Susan Gandert, Helen Lucero

South Bay & West Wall

1996
Jul. 2 - Aug. 31 Real/surreal: Photographs by Van Deren Coke
Curator: Kathleen Howe

South Bay

1996
Sept. 5 - Dec. 21 Pie Town: Photographs by KayLynn Deveney
Curator: Kathleen Howe

South Bay & West Wall

1997
Jan. 14 - Apr. 12 Cupid and Other Winged Creatures
Curator: Peter Walch

Apr. 26 - Jul. 19 Photographs from Strobe Alley: Harold "Doc" Edgerton
Curator: Kathleen Howe
B. Print Study Room

The Print Study Room supported classes offered through the Department of Art and Art History in Fall semester 1996, and Spring semester, 1997. Faculty scheduled over fifty class meetings in the Print Study Room, and the curator of prints and photographs presented lectures for some of those classes. The Objects of Art (Art History 429), met in the Print Study Room. The Print Study Room logged over 450 individual student visits for courses offered in the history of photography, the history of the graphic arts, German Expressionism, and studio classes in photography and printmaking. The Print Study Room was also used as a resource by the lithography printing program at the Tamarind Institute.

Non-UNM visitors to the Print Study Room included graduate and undergraduate classes from the University of Arizona and New Mexico Highlands University. In addition, the Print Study Room was used as a class resource by Moriarty High School and the Albuquerque Academy Summer Art Camp.
C. Purchases and Gifts

Purchases

<table>
<thead>
<tr>
<th>University Art Museum</th>
<th>ARTIST</th>
<th>OBJECT</th>
<th>PURCHASED THROUGH</th>
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<tr>
<td>Artistas de la Taller de Grafica Popular</td>
<td>Estampas de la Revolucion Mexicana, 1947</td>
<td>Julius L. Rolshoven Memorial Fund</td>
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<td>Offset lithographs 96.22</td>
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<td>Bellmer, H.</td>
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<td>Etching</td>
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<td>Gelatin silver print</td>
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<td>Guidalevitch, Victor</td>
<td>View of Antwerp Harbor, c.1930</td>
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<td>Gelatin silver print</td>
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<td>Cablage, c.1930</td>
<td>96.19.2</td>
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<td>Underwood &amp; Underwood</td>
<td>Crime Scenes, c.1930</td>
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<td>96.19.3-7</td>
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<td>Albumen silver print from collodion negative</td>
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<td>Untitled 1996 (all lithographs unless noted)</td>
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<td>97.1.12</td>
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<td>Un reloj en la oscuridad escena II, 1996</td>
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<td>Caminando alrededor, 1996</td>
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<td>El Arbol, 1996</td>
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<td>Santo Nino de Atocha, 1996</td>
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<td>San Rafael, 1996</td>
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<td>Reverie, 1996</td>
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<td>Vase with Flowers, 1996</td>
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<td>Seated Woman in Grey, 1996</td>
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<td>No. 6, c. 1936-40 Lithocrayon on paper 97.13.6</td>
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<td>No. 7, c. 1936-40 Lithocrayon 97.13.7</td>
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<td>No. 8, c. 1936-40 Lithocrayon 97.13.8</td>
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<td>No. 9, c. 1936-40 Lithocrayon 97.13.9</td>
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<td></td>
<td>Watercolor No. 28, c. 1936-40 Watercolor on paper 97.13.10</td>
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<tr>
<td></td>
<td>Untitled, c. 1936-40 Watercolor on paper 97.13.11</td>
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<tr>
<td></td>
<td>Untitled, c. 1936-40 Watercolor on paper 97.13.12</td>
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</table>
D. Works Deaccessioned

None
### University Art Museum

<table>
<thead>
<tr>
<th>Medium</th>
<th>Artist</th>
<th>Accession Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil on board</td>
<td>Resnick Milton</td>
<td>86.204</td>
</tr>
<tr>
<td></td>
<td>No.8, 1955</td>
<td></td>
</tr>
<tr>
<td>Porcelain</td>
<td>Shaw, Richard</td>
<td>79.11</td>
</tr>
<tr>
<td>Photographs</td>
<td>Target with Coffee Can</td>
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</tr>
<tr>
<td></td>
<td>Seventy-three (73), mostly 20th c., some Atget</td>
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### Jonson Gallery

<table>
<thead>
<tr>
<th>Medium</th>
<th>Artist</th>
<th>Accession Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil on canvas</td>
<td>Pelton, Agnes</td>
<td>82.221.1950</td>
</tr>
</tbody>
</table>
F. Institutions to Which We Have Loaned Work

*University Art Museum*

Center for Southwest Research  
Zimmerman Library, UNM  
Albuquerque, New Mexico

The Harwood Museum  
Taos, New Mexico

Roswell Museum and Art Center  
Roswell, New Mexico

Tamarind Institute, UNM  
Albuquerque, New Mexico

Traveling Exhibition: Beatrice Mandelman Taos Modernist  
University of Kentucky Art Museum  
Lexington, Kentucky

University of Arizona Museum of Art  
Tucson, Arizona

Nora Eccles Harrison Museum of Art  
Utah State University  
Logan, Utah

*Jonson Gallery*

The Jonson Gallery made no loans to other institutions during 1996-1997
G. Programs, Receptions and Other Events

The combined attendance of visitors to all the University Art Museum facilities -- which includes the main Museum in the UNM Center for the Arts, the Jonson Gallery and 516 University Art Museum Downtown -- was 51,756, an increase of 35,074 over 1995-96.

Visitors to the main University Art Museum totaled 35,600, compared to 7,840 during 1995-96 when the Museum was closed for a lengthy renovation of the UNM Center for the Arts. This was an increase of 27,760, reflecting the more normal attendance that preceded the renovation.

Jonson Gallery's attendance was 3,253, an increase of 143 visitors over last year.

516 University Art Museum Downtown's attendance was 12,903, an increase of 7,171 visitors over 1995-96.

Of the total 51,756 visitors at all three locations, the combined attendance at all public programs and special events at all three locations was 11,887, an increase in audience attendance of 6,548 from 1995-96.

Attendance at public programs and events at the main Museum was 4,308, an increase of 1,223 over last year at the main Museum from UNM classes, outside school groups
and tours was 2,111. Attendance at talks, receptions and events was 1,478, and attendance at non-museum sponsored events was 719.

Jonson Gallery attendance at gallery talks and receptions totaled 1,042, an increase of 90 over last year.

516 University Art Museum Downtown attendance at gallery talks, class tours, events and receptions totaled 6,537, an increase of 5,170.

<table>
<thead>
<tr>
<th>University Art Museum</th>
<th>Number Attended</th>
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<tbody>
<tr>
<td>1996</td>
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<td>Sept.</td>
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<td>Date</td>
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<tr>
<td>Jun. 17</td>
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<td>21</td>
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<tr>
<td>24</td>
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</tbody>
</table>

Total 4,308

Program Attendance Recap
University Art Museum, UNM Center for the Arts

- 88 School/other tours 2,111
- 11 Gallery talks 712
- 6 Receptions 350
- 10 Other events 416

TOTAL 3,589

8 Non-UAM events* 719*

TOTAL 4,308 Combined public events attendance
<table>
<thead>
<tr>
<th>Jonson Gallery</th>
<th>Number</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sept. 20</td>
<td>5:00 pm</td>
<td>Reception: A Modernist View of Landscape and Clinton Adams Then and Now exhibitions</td>
</tr>
<tr>
<td>Oct. 1</td>
<td>5:30 pm</td>
<td>Gallery talk: Clinton Adams: Then and Now 1940s and 1990s - Art in Context</td>
</tr>
<tr>
<td></td>
<td>5:30 pm</td>
<td>Reception: MFA Candidates Bill Bradish and Andre Ruesch, New Mexico Portfolio and Dog God exhibitions</td>
</tr>
<tr>
<td>Nov. 5</td>
<td>5:30 pm</td>
<td>Gallery talk: Van Deren Coke: Mountains Shaped, Mountains Recollected and Mountains Given Spiritual Form</td>
</tr>
<tr>
<td></td>
<td>5:30 pm</td>
<td>Gallery talk: Marietta Patricia Leis: Excerpts from the Marietta Robusti Tintoretto Story</td>
</tr>
<tr>
<td>Dec. 20</td>
<td>5:30 pm</td>
<td>Gallery talk: Frank Walker: Enigmatic Forms</td>
</tr>
<tr>
<td>1997</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb. 4</td>
<td>5:00 pm</td>
<td>Reception: MFA candidate Javier Carmona: remake exhibition</td>
</tr>
<tr>
<td></td>
<td>5:30 pm</td>
<td>Reception: Raymond Jonson: The Value of Light</td>
</tr>
<tr>
<td>Mar. 4</td>
<td>5:30 pm</td>
<td>Reception: MFA candidates Jennifer Lui-Recent Drawings and Stacy Postier Grega: Balancing on Eyebeams exhibitions</td>
</tr>
<tr>
<td></td>
<td>5:00 pm</td>
<td>Reception: 3rd Annual Juried Graduate Student Exhibition</td>
</tr>
<tr>
<td>Apr. 1</td>
<td>5:30 pm</td>
<td>Gallery talk: Stephanie Feld-Galbraith and Elena Baca, winners of the Friends of Art Studio prize</td>
</tr>
<tr>
<td>May 6</td>
<td>5:30 pm</td>
<td>Gallery talk: Greta Murphy, winner of the Friends of Art Art History prize for research on contemporary Native American Art</td>
</tr>
<tr>
<td></td>
<td>6:00 pm</td>
<td>Friends of Art Annual Dinner - preview champagne reception for Vision and Spirit: The Transcendental Painting Group exhibition</td>
</tr>
<tr>
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<td>5:30 pm</td>
<td>Reception: Vision and Spirit: The Transcendental Painting Group exhibition</td>
</tr>
<tr>
<td>Date</td>
<td>Time</td>
<td>Number Attended</td>
</tr>
<tr>
<td>-------</td>
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<td>-----------------</td>
</tr>
<tr>
<td>May 27</td>
<td>5:30 pm</td>
<td>16</td>
</tr>
<tr>
<td>Jun. 10</td>
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</table>

10 Gallery talks  | 311  
8 Receptions     | 731  

TOTAL 1,042 Combined public events attendance
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>1:30 pm</td>
<td>18 Gallery talk: Anita Rodriguez for Cinco Pintoras exhibition</td>
</tr>
<tr>
<td>12</td>
<td>11:00 am</td>
<td>23 AIS tour: Longfellow Elementary</td>
</tr>
<tr>
<td></td>
<td>1:30 pm</td>
<td>25 AIS tour: Cottonwood Elementary</td>
</tr>
<tr>
<td>13</td>
<td>11:00 am</td>
<td>25 AIS tour: Alvarado Elementary</td>
</tr>
<tr>
<td>14</td>
<td>11:00 am</td>
<td>20 AIS tour: Longfellow Elementary</td>
</tr>
<tr>
<td></td>
<td>12:15 pm</td>
<td>25 AIS tour: South Mountain Elementary</td>
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<td></td>
<td>1:30 pm</td>
<td>18 AIS tour: Cottonwood Elementary</td>
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<tr>
<td>16</td>
<td>8:30 am</td>
<td>95 Albuquerque Arts Alliance workshop</td>
</tr>
<tr>
<td></td>
<td>1:30 pm</td>
<td>36 Gallery talk: KayLynn Deveney for Pie Town exhibition</td>
</tr>
<tr>
<td>19</td>
<td>11:00 am</td>
<td>22 AIS tour: Zuni Elementary</td>
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<tr>
<td></td>
<td>12:15 pm</td>
<td>22 AIS tour: Monte Vista Elementary</td>
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<tr>
<td></td>
<td>1:30 pm</td>
<td>21 AIS tour: Lew Wallace Elementary</td>
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<tr>
<td>20</td>
<td>11:00 am</td>
<td>36 AIS tour: Zuni Elementary</td>
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<tr>
<td></td>
<td>12:15 pm</td>
<td>32 AIS tour: Mitchell Elementary</td>
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<tr>
<td></td>
<td>1:30 pm</td>
<td>27 AIS tour: South Mountain Elementary</td>
</tr>
<tr>
<td>21</td>
<td>1:30 pm</td>
<td>15 AIS tour: South Mountain Elementary</td>
</tr>
<tr>
<td>23</td>
<td>1:30 pm</td>
<td>22 Gallery talk: Bernadette Rodriguez for Cinco Pintoras exhibition</td>
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<tr>
<td>Dec.</td>
<td>3</td>
<td>11:00 am 23 AIS tour: Petroglyph Elementary</td>
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<td>11:00 am</td>
<td>30 AIS tour: Corrales Elementary</td>
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<td></td>
<td>12:15 pm</td>
<td>30 AIS tour: Corrales Elementary</td>
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<tr>
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<td>2:00 pm</td>
<td>22 AIS workshop: Kids Day</td>
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<td>40 AIS tour: Sombre de Monte Elementary</td>
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<td>11:00 am</td>
<td>20 AIS tour: Inez Elementary</td>
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<td>12:15 pm</td>
<td>22 AIS tour: Zuni Elementary</td>
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<td>1:30 pm</td>
<td>20 AIS tour: Chamisa Elementary</td>
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<td>40 AIS tour: Corrales Elementary</td>
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<td>25 AIS tour: Monte Vista Elementary</td>
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<td>1:30 pm</td>
<td>13 AIS tour: Zuni Elementary</td>
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<td>22 AIS tour: Mitchell Elementary</td>
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<tr>
<td>1997</td>
<td></td>
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</tr>
<tr>
<td>Jan.</td>
<td>17</td>
<td>6:00 pm 105 Reception: School of the U. exhibition</td>
</tr>
<tr>
<td>Feb.</td>
<td>1</td>
<td>1:30 pm 22 Panel discussion: Exhibiting artists for School of the U. exhibition</td>
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<tr>
<td></td>
<td>14</td>
<td>7:00 pm 30 Reception: Friends of Art Valentine party</td>
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<tr>
<td>Date</td>
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<tr>
<td>Jul. 6</td>
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6,537

14 Gallery Talks 447
9 Receptions 1,176
8 Summerfest 3,515
47 Other 1,399

TOTAL 6,537 Combined public events attendance
H. Publications

University Art Museum

Gallery Guides and Other Exhibition Supplemental Materials:

French Oil Sketches and the Academic Tradition.

Eyedazzlers.

The Beats and Their Contemporaries: Texts from the Collection of Lee Bartlett.

Everyday Art/ Art Everyday: Product Information List.

Jonson Gallery

Jonson Gallery of the University of New Mexico Art Museum.
   Essay by Tiska Blankenship. 10 pages; 3 color, 7 b/w illustrations. September 1996.

Excerpts from the Series: The Marietta Robusti Tintoretto Story.

Third Annual Juried Graduate Student Exhibition. Artist statements.

   74 pages; 22 color, 43 b/w illustrations. June 1997.
I. Museum Shop

The University Art Museum Shop continues to have two locations to serve our visitors. The 516 University Art Museum Downtown shop is cozy, filled with colorful items and books. Our main location in the Center for the Arts continues to surprise and amaze shoppers with flying pigs and mermaid coconut masks. Our very own museum tee shirt designed by Luis Tapia is selling well since marked down to $10.00. The books sell modestly. We sold out of the beautiful book entitled French Oil Sketches and the Academic Tradition by our very own Peter Walch. The Potters of Mata Ortiz still added money to our account! We mailed out over $13,000 worth of catalogs last year. Our total revenue for fiscal year 1996-97 year was $42,666. We had a wonderful staff of part-time managers, work/study and student employees, and volunteers. Everyone worked hard to make the shop at both locations a bright spot for museum lovers.
Under President Rab Howden Freeman, the Friends of Art donated $4,000 for the purchase of *Epiphyllum* (1953, oil on canvas, 96.31) by Robert Gribbroek. Gribbroek, instrumental in creating Tweety Bird and Sylvester Cat for Warner Brothers in the early 1940s, was a member of the Transcendental Painting Group formed by Raymond Jonson. This work is a major addition to the Jonson Gallery collections.

There were several very successful membership events this year. In February, the Friends celebrated Valentine’s Day with a special member reception for the exhibition “Cupid and Other Winged Creatures,” at 516 University Art Museum Downtown. A major fund-raising event took place at 516 in April. Through the generosity of Helen Nadler, works on paper by Professor Harry Nadler were offered in a sale benefiting the UNM Cancer Research Center and the University Art Museums. The sale, which grossed $6,575, was held April 12 - 26, with a gala preview reception on April 11. The Friends of Art Evening, May 22, began with hors d’oeuvres and a preview of the exhibition “Raymond Jonson and the Transcendental Painting Group,” at the Jonson Gallery, and continued with dinner set in the middle of the University Art Museum’s exhibition “French Oil Sketches.” Christina Little, former FOA board member and newsletter editor, was presented with the “Best Friend” award at the dinner.

The annual FOA cash awards to students in UNM’s Department of Art and Art History for 1996-97 went to Greta Murphy for her work on contemporary Native American art;
and to Stefanie Feld-Galbraith and Elena Baca (honorable mention) for their work exhibited in the Jonson Gallery "Annual Juried Graduate Student Exhibition." (The Friends also sponsored receptions for the gallery talks given by these students.)

The FOA Fund for acquisition of art works for the University Art Museums continued to grow this year, over a third of the way toward reaching its goal of a $100,000 permanent endowment.

Friends of Art
Board of Directors
1996 - 1997

Rab Freeman Howden, President
Peggy Hino, Vice President
Ann B. Kinscherff, Vice President
Mary Gilstrap, Secretary
Ina Krieble, Treasurer

Beate Boudro
Georgia Catasca
Rosemarie Cowan
Carmine De Vivi
Emily Rembe

Frauke Roth
Keith Roth
Louise St. John
Patricia Saviginac

Friends of Art Ex-Officio Members
1996 - 1997

Peter Walch, Director, University Art Museum
Linda Bahm, Associate Director, University Art Museum
Tiska Blankenship, Curator, Jonson Gallery
Kathleen Howe, Curator of Prints & Photographs
Bonnie Verardo, Curator, University Art Museum Downtown
Dee Trester, Historian
Helen Lucero, Hispanic Arts Consultant
Geretta Chick, FOA Office Secretary
6. Outside Sponsored Research

**University Art Museum**

- **Funding Agent:** Albuquerque Community Foundation
- **Title:** The Prints of Albuquerque
- **Dates:** October 1, 1996 - September 30, 1997
- **Amount:** $50,000
- **Project Director:** Peter Walch

- **Funding Agent:** Stockman Family Foundation Trust
- **Title:** Art Restoration and Conservation
- **Dates:** July 1, 1996 - June 30, 1997
- **Amount:** $50,000
- **Project Director:** Peter Walch

- **Funding Agent:** College of Fine Arts
- **Title:** Arts of the Americas - 1997
- **Dates:** Summer 1997
- **Amount:** $3,619
- **Project Director:** Kathleen Howe

- **Funding Agent:**
- **Title:** Shooting Stars: War Photographers in Hollywood
- **Dates:** February 25, 1997 - May 27, 1997
- **Amount:** $900
- **Project Director:** Carol McCusker

- **Funding Agent:** Anonymous
- **Title:** University Art Museum, Downtown
- **Dates:** July 1, 1996 - June 30, 1997
- **Amount:** $19,936
- **Project Director:** Linda Bahm
Funding Agent: Ed Foundation
Title: Excerpts from the Marietta Robusti Tintoretto Story
Dates: November 19, 1996 - December 13, 1996
Amount: $1,817
Project Director: Tiska Blankenship

Funding Agent: College of Fine Arts Outreach
Title: 3rd Annual Juried Graduate Student Exhibition
Dates: April 1, 1997 - May 9, 1997
Amount: $2,000
Project Director: Tiska Blankenship

Funding Agent: Department of Art and Art History, UNM
Title: 3rd Annual Juried Graduate Student Exhibition
Dates: April 1, 1997 - May 9, 1997
Amount: $2,435
Project Director: Tiska Blankenship

Funding Agent: Graduate Art Association, UNM
Title: 3rd Annual Juried Graduate Student Exhibition
Dates: April 1, 1997 - May 9, 1997
Amount: $500
Project Director: Tiska Blankenship

Funds Received:

- University Art Museum $ 104,519
- Jonson Gallery 6,752
- University Art Museum Downtown 19,936

Total Funds Received $ 131,207
Linda Bahm  
Member, New Mexico Association of Museums  

Professional meetings and classes attended:  
UNM Research Administration  
Grant writing workshop  
September 11, 1996  

New Mexico Association of Museums Annual Meeting  
Taos, New Mexico  
September 19 - 20, 1996  

UNM Human Resources  
Understanding the Americans with Disabilities Act  
October 11, 1996  

Seminar: Introduction to Fundmaster  
Wyndham Garden Hotel  
Albuquerque, New Mexico  
October 29, 1996  

UNM Human Resources  
Ethical Decision Making  
November 5 and 11, 1996  

UNM Human Resources  
Creative Problem Solving  
April 30, 1997  

Presentation:  
UNM Art History 400: Museum Practices (Joyce Szabo)  
June 18, 1997  

Tiska Blankenship  
Member, Friends of Art  
Member, American Association of Museums
Jeanette Entwisle
Board member, Art in the School, Inc.

Professional meetings and classes attended:
Seminar: Introduction to Fundmaster
Wyndham Garden Hotel
Albuquerque, New Mexico
October 29, 1996

Presentations at professional meetings and conferences:
Presentation on University Art Museum's partnership role in education
APS Montgomery Complex, and UNM Continuing Education
Albuquerque, New Mexico
August 29, 1996 and
October 3, 1996

Presenter, National Center for Art Museum/School Collaborations
conference
Dallas Museum of Art
Dallas, Texas
November 7 - 9, 1996

Participant in Art in the School Inc. Annual Planning Retreat
Institute for Environmental Education
Albuquerque, New Mexico
April 5, 1997

Kathryn A. Guscott
Professional meetings and classes attended:
Instructor, Conservation Workshop
Taos, New Mexico
August 6 - 7, 1996

UNM Human Resources
Conflict Management
March 10 & 17, 1997

UNM Human Resources
Computer Literacy
March 27, 1997
Kathleen Stewart Howe
Member, Print Council of America
Member, American Association of Museums
Member, College Art Association
Member, Historians of Nineteenth-Century Art
Member, New Mexico Association of Museums
Member, Society for Photographic Education

Professional meetings and classes attended:
Museums and the Web international conference
The Getty Information Institute
Los Angeles, California
March 16 - 19, 1997

Print Council of American Annual Meeting
Portland/Seattle
May 7 - 11, 1997

Publications:
"Alchemical Researches: The Photoworks of Sigmar Polke," in On Paper,
Vol. 1 no. 2, November - December, 1996

"History of Photography as a Fine Art"
Encyclopedia Americana, on-line edition

"Intersections: Lithography, Photography and the Traditions of Printmaking"
The Tamarind Papers, Vol. 17, (publication date February, 1998)

Volume editor and author of article, "At Play in the Fields of the Lord,
Lithographs by Walton Ford"

Revealing the Holy Land the Photographic Discovery of Palestine
Santa Barbara Museum of Art, distributed by University of California Press
Publication, October 1997

Presentations at professional meetings and conferences, classes, other:
Instructor, Art History 429, The Objects of Art
with M. Susan Barger
January - May 1997

Guest lecturer, Art History 429, Exhibitionism, Curatorial Practices
Panelist, "Figuration in Contemporary Art,"
Museum of Fine Arts, Museum of New Mexico
Santa Fe, New Mexico
May 4, 1997

International Partnerships Among Museums, American Association of Museums
Curatorial Exchange: Musee Goupil, Bordeaux, France and University Art Museum, Albuquerque, New Mexico
June - July, 1996 (in Albuquerque)
October - November, 1996 (in Bordeaux)

Krista J. Kersh
Member, New Mexico Association of Museums
Member, Phi Kappa Phi

Kittu Longstreth-Brown
Member, Accreditation Visiting Committee, American Association of Museums 1996
Museum Assessment Program Surveyor, American Association of Museums 1996-1997
Board Member-at-large for publications, Mountain Plains Museum Association 1996-1997
Vice Chair of Registrars Committee, Mountain Plains Museum Association 1996-1997

Member, American Association of Museums
Member, Mountain-Plains Museums Association
Member, Western Museums Association
Member, New Mexico Association of Museums
Member, Oregon Museums Association
Member, Registrars Committees of AAM, MPMA, WMA

Professional meetings and workshops attended:
Mountain-Plains Museums Association Annual Meeting
Guthrie, Oklahoma
October 3 - 5, 1996

Western Museums Association Annual Meeting
Salt Lake City, Utah
October 16 -19, 1996
Southwest Art History Conference
Taos, New Mexico
October 31 - November 2, 1996

American Association of Museums Annual Meeting
Atlanta, Georgia
April 25 - 30, 1997

Hazardous Chemical Waste Generator Training
University of New Mexico
February 21, 1997

Hazard Communication "Train the Trainer" Program
University of New Mexico
April 18, 1997

Presentation:
UNM Art History 400: Museum Practices (Joyce Szabo)
June 25, 1997

Helen R. Lucero
Member, Capitol Art Foundation Board of Directors, Santa Fe
Member, Fund for the Improvement of Postsecondary Education (FIPSE)
Hispanic Steering Committee, College of Fine Arts, UNM
Member, Hispanic Cultural Center Program Development Team and User Committee, Office of Cultural Affairs, Santa Fe
Member, "La Curandera y Su Jardin" Artwork Planning Committee, City of Albuquerque
Member, Hispanic Women's Council
Member, Latino Network, American Association of Museums
Member, American Association of Museums
Member, Historical Society of New Mexico
Member, National Association of Latino Arts and Culture
Member, New Mexico Association of Museums
Member, New Mexico Genealogical Society
Member, Spanish Colonial Arts Society
Member, Western Museums Association

Professional meetings and classes attended:
Western Museums Association Annual Conference
Salt Lake City, Utah
October 16 - 19, 1996
Retablo Symposium
Las Cruces, New Mexico
February 7 - 9, 1997

Saints and Society in the Spanish Empire
University of New Mexico (Audited)
January - May 1996

Presentations at professional meetings and conferences:
Panel member, "Defining Tradition: A Spanish Market Symposium"
Sponsored by the Spanish Colonial Arts Society
Santa Fe, New Mexico
July 25, 1996

Meeting of the National Advisory Board on Latino Affairs
National Museum of American History
Smithsonian Institution
Washington, D.C.
September 17 - 19, 1996

Panel member and speaker on Catholic portion of
"Museum and Religion: Looking into the Soul of a Community"
Western Museum Association Annual Conference
Salt Lake City, Utah
October 17, 1996

Presenter, "The Origins of Hispanic Textiles in New Mexico"
The Millicent Rogers Museum of Northern New Mexico
Taos, New Mexico
February 20, 1997

Panel member and speaker on suicide, "Death and Dying in Families"
University of New Mexico
June 3, 1997

Other:
Judge, Spanish Market, sponsored by the Spanish Colonial Arts Society
Santa Fe, New Mexico
July 26, 1996

Member, Standards Committee for Spanish Market, Sponsored by the
Spanish Colonial Arts Society
Santa Fe, New Mexico
July 27, 1996
Survey of Hispanic Arts and Culture
University of New Mexico
Co-taught class with Susan Patrick
August - December 1996

On-going consultant, National Museum of American Art for a major
Latino art exhibition
Smithsonian Institution
Washington, D.C.

Carol T. McCusker
Awards:
NEA Prints and Photo Intern
University Art Museum
1996 - 1997

Recipient, Dissertation Fellowship
Department of Art and Art History
1996 - 1997

Nancy C. Montoya
Member, Staff Council, Career Development Committee
Member, Gold Key National Honor Society

Professional meetings and classes attended:
History of the Mexican Revolution
University of New Mexico
August - December 1996

Hispanic and Mexican Cultures
University of New Mexico
August - December 1996

UNM Human Resources
Conflict Management
March 10 & 17, 1997

Other:
Bachelor of Arts Degree
Latin American Studies
December 1996
Christina Saunders Squire
Member, Friends of Art
Member, New Mexico Association of Museums

Professional meetings and classes attended:
  Chaucer
  University of New Mexico
  August - December 1996

  African Dance
  University of New Mexico
  August - December 1996

Bonnie K. Verardo
Other:
  Exhibitor, "Alter Ego"
  Nina Bean Gallery
  Albuquerque, New Mexico
  October 1996

  Exhibitor, Parade of Homes
  Leslie Homes, High Desert Development
  Albuquerque, New Mexico
  October - December 1996

Scott Williams
Board member, Art in the School, Inc.
Appendices

A. Personnel: University Art Museum, Jonson Gallery and University Art Museum Downtown
B. Committees: University Art Museum, Jonson Gallery and University Art Museum Downtown
A. Personnel: University Art Museum, Jonson Gallery and University Art Museum Downtown

Staff:

Linda Bahm, Associate Director  December 9, 1985 -
Tiska Blankenship, Curator, Jonson Gallery  April 22, 1985 -
Floramae M. Cates, Curatorial Assistant  September 19, 1990 -
Jeanette Entwisle, Curator of Education and Public Programs  July 23, 1990 -
Kathryn A. Guscott, Conservation Assistant  July 3, 1995 -
Kathleen S. Howe, Print/Photo Curator  July 11, 1994 -
Krista J. Kersh, Museum Shop Manager  March 14, 1996 -
Kittu (Kathryn) B. Longstreth-Brown, Registrar  May 1, 1990 -
Helen Lucero, Curator of Hispanic Art  November 15, 1995 -
Carol T. McCusker, NEA Curatorial Intern  May 18, 1996 - February 28, 1997
Nancy C. Montoya, Administrative Assistant  July 5, 1988 -
Lee Savary, Exhibitions Curator  August 3, 1992 -
Christina L. Squire, Museum Shop Manager  August 10, 1992 -
Bonnie K. Verardo, 516 UAM Downtown Gallery Manager  November 1, 1995 -
Peter S. Walch, Director  July 1, 1985 -
Scott Williams, Curatorial Assistant, Jonson Gallery  October 1, 1996 -

Work Study, Student and Temporary Part-Time Employees:

Christopher L. Albert  August 27, 1996 - May 23, 1997
Elena D. Baca  October 2, 1996 - May 23, 1997
Jason L. Chavez  October 1, 1996 - January 3, 1997
Geretta G. Chick  April 29, 1996 -
Connie J. Fulwyler  June 16, 1997 -
Paula A. Goler  August 26, 1996 - May 16, 1997
Jesse M. Gomez, Ill  August 28, 1996 - September 12, 1996
Megan Goza  August 29, 1995 - December 20, 1996
Charles W. Hellwig  May 28, 1996 - December 17, 1996
Elizabeth K. Herrlinger  May 14, 1996 - March 14, 1997
Emily A. Hinch  June 3, 1997 -
Neel Holcombe  September 11, 1996 -
Bonnie Holder  April 29, 1996 -
0110

Jason Hoyt
Charlotte Jameson
Brent Johnson
Kathleen G. Kloster
Amy D. Linker
Carol T. McCusker
Britt MacQuigg
Joseph F. Messina
Danielle R. Miller
Merry Scully
Adam Scherer
Catherine E. Smith
Gina M. Tarver
Doris Wagner

August 14, 1995
April 29, 1996
February 13, 1997
June 1, 1993
June 10, 1997
March 3, 1997
April 30, 1996
August 27, 1996
September 3, 1996
January 17, 1995
September 4, 1996
March 3, 1997
June 3, 1996
April 29, 1996

Volunteers:

Heather M. Bertch, Highland High School Mentorship Program, Prints/Photos
Georgette Ely, Archivist, Jonson Gallery
Elizabeth K. Herrlinger, Receptionist and Sales, Museum Shop
Amy D. Linker, Receptionist and Sales, Museum Shop
Sherry Rundell, Registrar’s Office

Adjunct Curators:

University Art Museums

Clinton Adams
Thomas F. Barrow
David Craven
Christopher Mead
O.J. Rothrock
University Art Museum
Advisory Committee
1996-1997

Clinton Adams, Professor Emeritus, Art and Art History, Chair
Peter Walch, Director, University Art Museums, Secretary

Thomas F. Barrow, Professor, Art and Art History
Van Deren Coke, Professor Emeritus, Art and Art History
Richard A. Eribes, Dean, School of Architecture and Planning
Orcilia Zuniga Forbes, Vice President, Institutional Advancement
Sheila Garcia, Community Representative
Jim Jacob, Director Graduate Program, Art and Art History
Christopher Mead, Professor, Art and Art History
Susan B. Mullins, University Auditor

Jonson Gallery
Committee on Jonson Collections

Julie Weaks, University Budget Director
Susan Mullins, University Auditor
Joyce Szabo, Associate Professor, Department of Art and Art History

Ex-Officio Members

Peter Walch, Director, University Art Museum
Tiska Blankenship, Curator, Jonson Gallery

Julie Weaks, Susan Mullins, and Joyce Szabo are the Standing Committee of the University Art Museum's Advisory Committee for the Jonson Collection.

This committee has unofficially merged with the University Art Museum Advisory Committee as of September 1996. A final meeting of Jonson Committee was suggested in order to finalize the merger.
COLLEGE OF ARTS AND SCIENCES

ANNUAL REPORT

July 1, 1996 - June 30, 1997

MICHAEL R. FISCHER, DEAN
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I. OVERVIEW

The 1996-97 academic year in the College of Arts and Sciences saw slight decreases both in the head count of students enrolled and in student credit hours recorded, consistent with the trend of the past three years.

Three departments (Anthropology, Linguistics and Physics and Astronomy) and one program (Religious Studies) successfully completed external reviews of their graduate programs. This series of reviews concluded the second round of reviews for all departments and programs in the College.

The ranks of the tenure-stream faculty in the College decreased by a net of twenty-two as four new faculty were hired and twenty-six resigned or retired. No funds were budgeted for the College in the Spring of 1997 to provide a salary increase for faculty returning in 1997-98. Although all funds available to the College for 1997-98 exceed funds available in 1996-97, this increase is insufficient to support several aspects of the College’s operations which remain seriously underfunded.

II. ADMINISTRATION

The College’s administration in 1996-97 changed compared to 1995-96. Michael R. Fischer, Interim Dean, appointed Susan Tiano, Peter White and Kenneth Frandsen as Associate Deans. Associate Deans of the College accepted individual responsibilities similar to those identified in annual reports covering the previous two years.

Associate Dean Peter White assumed responsibility for the College’s student advisement effort and for validation of curriculum changes and graduation requirements. He continued to serve as the College office’s liaison with the College’s Undergraduate Education Committee and with the College’s Graduate Education Committee, and provide oversight of the
various scholarly publications that the College supports. During 1996-97, he assumed responsibility for coordinating college-wide outcomes assessment.

Associate Dean Kenneth Frandsen continued to provide assistance and information concerning Affirmative Action and Equal Opportunity policies and data sources, liaison with the Equal Opportunity and Faculty Contracts offices, and oversight of search and screening efforts in conjunction with the appointment of regular and temporary part-time faculty in the departments of the College, in the Women Studies Program and in the General Honors Program. Also, he served as Area Coordinator for the College's participation in the University United Way Campaign.

Associate Dean Susan Tiano assumed responsibility for various aspects of College administration related to faculty, particularly oversight of the process by which files of individuals being considered for promotion and tenure are prepared, received and reviewed at the College level. Also, she administered requests for sabbatical leaves, the allocation of College funds to support special faculty travel and the allocation of funds to support visiting lecturers and the expenses of professional publications. Christine Kozojet continued to serve as Development Officer in the College of Arts and Sciences.

New Chairpersons were appointed for AY 1996-97 in Foreign Languages and Literatures (Walter Putnam), Philosophy (Fredrick Schueler), Sociology (Richard Coughlin), and Spanish and Portuguese (John Lipski). At the end of Semester II of the 1996-97 AY, after a national search Michael R. Fischer was appointed Dean.
III. RECENT MAJOR DEVELOPMENTS IN THE COLLEGE OF ARTS AND SCIENCES

Teaching Enhancement Initiatives

Working closely with David Stuart, Associate Vice President for Academic Affairs, Arts and Sciences departments continue to make course schedules more responsive to student demand. To accommodate students who attempt to enroll in closed course sections but fail, departments are raising class caps and adding course sections when appropriate; scheduling classes at the most advantageous times; finding larger rooms for popular class sections; eliminating underenrolled classes and reassigning faculty to courses more in demand. The aim is to make Arts and Sciences scheduling more accountable to enrollment pressures.

Research Enhancement Initiatives

Our College continues to support faculty and student research programs by providing equipment and computer funds to newly hired faculty, by providing matching funds for faculty who submit research grant proposals, and by supporting the establishment of collaborative research centers and institutes within the College. The College also supports several professional journals involving disciplines within the Arts and Sciences, it regularly sponsors regional and national research meetings on the campus, and it provides travel funds for faculty attending professional research meetings elsewhere. The College remains especially concerned with the research initiatives of untenured faculty members. We continue to work with department chairs in keeping service commitments to a minimum for these faculty members and in providing adequate mentoring from senior faculty.
Major Research Developments

The creativity and productivity of Arts and Sciences faculty in combination with the College's support for research efforts has produced numerous increases in highly visible research activities and programs over the past year. In fiscal year 1996, for example, Arts and Sciences faculty members received grant and contract awards totalling $19,917,113. It is notable that the total awards for fiscal year 1996 cited above include only those awards to support work carried out exclusively within the College. Additional awards totalling more than 8.7 million dollars were garnered by Arts and Sciences faculty conducting research in cross-college, interdisciplinary research units. Thus, Arts and Sciences faculty were responsible for obtaining approximately 28.6 million dollars in grant and contract awards during fiscal year 1996.

Among the many major research initiatives launched by the College, one deserves special mention. Over the past year, the College has begun taking important steps toward maximizing the impressive computational power now available to us through the establishment of HPCERC, the High Performance Computing Research Center, directed by Dr. Frank Gilfeather, Executive Director of HPCERC, Professor of Mathematics and Statistics. Although scientists and social scientists have been posing complicated modeling problems for years, until now they have been without the ability to solve them for lack of computational power. With the incredible computational resources available to UNM, our researchers are in the unique position to attack and solve these complex and internationally significant problems. Arts and Sciences has been moving quickly to be a leader in this emerging field. By making several faculty appointments, initially in chemistry and biology, we have paved the way for interdisciplinary work in a key area
in the sciences. Future appointments are expected in physics, mathematics and statistics, and the social sciences.

**Enhancement of Undergraduate Educational Programs**

Over the past few years the College has made significant progress in enhancing the quality of the educational experience it offers to its undergraduate students. Our efforts in this area have focused on the improvement of undergraduate teaching, the expansion of educational and advisement programs and the enhancement of the instructional and laboratory equipment that is available to our students. In particular, departmental honors programs have taken an important step forward over the past year. Using money donated to the College, A&S provided support to bolster undergraduate honors programs in nine departments. Funding supported 110 students involved in various specialized programs. Some students were offered the opportunity to present papers at professional conferences—a key step in preparing for the work force or graduate study. Other students participated in specially designed retreats which provided the unique opportunity to explore their field in greater depth than is possible through regular class and lab sessions. By investing in these programs, the College of Arts and Sciences prepares its graduates for a lifetime of learning.

**Enhancing Graduate Educational Programs**

One of the College's highest priorities remains strengthening its graduate programs. Toward this end, the Dean has begun working with departments to raise TA/GA salaries, improve fellowship opportunities, and make sure that teaching assistant workloads are equitable and reasonable.
IV. AFFIRMATIVE ACTION

The College continued its efforts to increase the cultural and gender diversity among its faculty during the 1996-97 AY. Consistent with Regents' policy concerning diversification of search committee membership, several of the members of search committees were from ethnic groups currently underrepresented in the faculty and many of the search committee members were female.

Appointments resulting from conventional searches, conducted during AY 1996-97, added two new faculty to the College of Arts and Sciences ranks for AY 1997-98, both males, including one Asian male. Of the twenty-six separating faculty, six are female and eleven are members of protected groups. Special recruiting efforts, outside the framework of conventional searches, identified one Asian female and another female who will begin their appointments during AY 1997-98.

During AY 1996-97, the College continued efforts to ensure equity within the faculty salary structure for members of underrepresented groups and to provide support to those faculty for the purpose of career development at the individual level. These efforts to nurture and develop faculty already at UNM will continue during AY 1997-98.

V. RESEARCH AND SCHOLARLY ACTIVITY

The scholarly and creative achievements of Arts and Sciences faculty that resulted in published works during 1996 are thoroughly documented in the annual volume of Faculty Publications and Creative Works issued by the Office of the Associate Provost for Research. The level of activity both in grant expenditures and new grant awards increased in AY 1996-97 compared to AY 1995-96 as detailed in Table 10.
VI. TEACHING

Summary data on various aspects of the College's teaching efforts are presented in Tables 5, 6, 7, 8 and 9. Although classrooms with a better profile of capacities continue to be a requisite for improved efficiency of instructional delivery, the College's numerical productivity has declined only slightly, especially with respect to enrollments in courses offered during evening and weekend hours. This decline is particularly notable in view of only a slight increase in the total FTE budgeted faculty for AY 1996-97 compared to AY 1995-96, as detailed in Table 4. However, our analysis indicates that, in the context of student demand, the College instructional efforts are seriously understaffed, especially in the category, graduate teaching assistants.

VII. SPECIAL PROJECTS AND FUNCTIONS

Advisement and Record Center

Under the supervision of the Associate Dean for Student Academic Affairs, Peter White, the College Advisement Center admits students to the College, advises them and monitors their academic performance (including placing students on probation or suspending them if necessary), and certifies them for graduation. During the report period, seven advisors conducted 13,000 personal advisement sessions and handled an approximately equal number of telephone inquiries.

The Center is open from 8 am until 5 pm Monday through Friday, including the lunch hour. In addition, advisors assist with new admittees and transfer students on Saturdays and after hours. The Advisement Center offers appointments with individual advisors before 10 AM and after 3 PM. All Arts and Sciences athletes are required to make an appointment with an...
advisor in Arts and Sciences and report to athletic advisement to confirm that the appointment was kept.

In addition to routine matters, the Center handles all student petitions for waivers and the first steps in grievance procedures. Advisors are responsible for all pre-professional advisement. The Associate Dean upon request from pre-med students, conducts mock interviews with an advisor.

The advisors continue to assist Kathleen Sena, Assistant Registrar, in implementing the Computerized Degree Audit System--DARS. The Associate Dean and advisors meet periodically with Ms. Sena to clarify the rules and academic regulations in the College of Arts and Sciences so that Ms. Sena may encode the DARS project for our College. The advisors continue to use computers to provide more consistent and efficient advising. A computer upgrade in 1997-98 will also modernize Freshman Orientation advising.

The advisors in Arts and Sciences took a major role in Summer Freshman Orientation this year by using trained group leaders to assist in advising students. The Freshman students were brought over to Ortega Hall by the group leaders on the morning of registration, having already prepared a tentative schedule. An advisor in Arts and Sciences addressed them as a group in the morning, and then throughout the morning the students were brought to the Advisement Center where they met individually with the advisors in the advisors' offices. There, the advisor used the computer to check on availability of courses and then the advisor assisted the student in actually registering for classes using I-TEL UNM. In this way we have greater control over the student's first university schedule.
The Advisement Center office staff helps in the record keeping in advisement by computerizing all the changes in College Curriculum which have been approved and which will be added to the next university catalog.

One or more advisors and the Associate Dean participated in the following extra-mural or campus wide advising activities this year:

Welcome Back Days
Senior Day
New Faculty Orientation
Evening and Weekend Orientation Advisement
High School Visitation Day
African American Student Day
American Indian Student Day
Pre-Dental Reception
Spring Orientation for Freshman
Transfer Day
Star Scholar Reception
American Indian Graduation Ceremony
Advisors Networking Group
Academic Retention Meeting
American Indian Retention Meeting
College Enrichment Program

This year the advisors made multiple trips to the following campuses for advisement:

Gallup
Santa Fe Community College
TVI-Albuquerque
TVI-Montoya
Los Alamos
Valencia
Taos

The advisement staff this year consisted of:

Peter White, Associate Dean
Ida Padilla, Receptionist
Julie Bustamante, Advisement Co-ordinator
Monique Denzler, Advisement Co-ordinator
Carolyn Beske, Advisor
Mary Lawton, Advisor
Leonor Lucero, Advisor
Mary Lou Wilkerson, Advisor
Susanna Sprague, Advisor

College of Arts and Sciences Curriculum

This year the Committee discussed minor changes in the College curriculum approval process, including formulating a combined College Curriculum Committee consisting of three Undergraduate and Graduate Advisors.

College of Arts and Sciences Graduate Committee

The College Graduate Committee consisted of the following individuals by department:

A&S Chair--Peter White
American Studies--Gabriel Melendez
Anthropology--Carole Nagengast
Biology--Cliff Dahm
Chemistry--Tom Niemczyk
Communication and Journalism--Ken Frandsen
Communicative Disorders--Mary Oelschlaeger
Earth & Planetary Sciences--Karl Karlstrom
Economics--Stuart Burness
English--Gary Harrison
Foreign Languages & Literatures--Diana Robin
Geography--Dave Gutzler
History--Daniel Feller
Linguistics--Alan Hudson
Mathematics & Statistics--Ed Bedrick
Philosophy--John Bussanich
Physics and Astronomy--Sudhakar Prasad
Political Science--Shane Phelan
Psychology--Ron Yeo
Sociology--Beverly Burris
Spanish & Portuguese--Enrique Lamadrid
The Graduate Sub-committee on Curriculum, consisting of Carole Nagengast, Stu Burness, and Ed Bedrick, approved a Masters Degree and Ph.D. in Latin American Studies, as well as a Ph.D. program in French and Romance Languages. The committee also approved 26 Form Bs at the graduate level. Additionally Walter Putnam of Foreign Languages and John Lipski of Spanish and Portuguese surveyed graduate programs in Arts and Sciences in an effort to provide more and better channels for graduate students to complete the foreign language requirements.

College of Arts and Sciences Undergraduate Committee

The College of Arts and Sciences Undergraduate Committee was composed of the following individuals by department:

A&S Chair--Peter White
American Studies--Charles Biebel
Anthropology--Jeffery Froehlich
Biology--William Johnson
Chemistry--Edward Walters
Communication and Journalism--Bob Gassaway
Communicative Disorders--Eiayne Kessler
Earth and Planetary Sciences--Laura Crossey
Economics--Phil Ganderton
English--Cheryl Fresch
Foreign Languages and Literatures--Monica Cyrino
Geography--Jerry Williams
History--Charlie Steen
Linguistics--Eduardo Hernandez-Chavez
Mathematics and Statistics--Ron Schrader
Philosophy--John Taber
Physics and Astronomy--Steve Gregory
Political Science--Ed Fuge
Psychology--Harold Delaney
Sociology--Jane Hood
Spanish and Portuguese--Diana Rebolledo
The Arts and Sciences Undergraduate Committee reviews requests from departments both within and outside the College for curricular degree changes that may impact one or more A&S departments. The Committee also discusses issues of undergraduate curriculum and concerns with instructional support and effectiveness. The Committee surveyed and addressed differing requirements for minors within the College.

The Sub-committee on Curriculum, composed of Charles Biebel, Cheryl Fresch, and Laura Crossey, approved 31 form Bs, a BA track in Psychology, a new major in Latin American Studies, and minor revisions of several programs.

**Dean’s List - College of Arts and Sciences Honor Roll**

The criteria for inclusion on the Dean’s List are a semester GPA of 3.75 or higher while enrolled for 12 or more credit hours with letter grades, and a cumulative GPA for UNM coursework of at least 3.25. In Fall 1996, 385 students achieved this honor; in Spring 1997 the number of students was 437. Students who met the criteria for inclusion on the Dean’s List received a letter of appreciation and congratulations signed by Dean Fischer.

**Human Subjects Committee**

The College of Arts and Sciences Institutional Review Board (IRB) is one of the three IRBs at the University of New Mexico empowered by the U.S. Department of Health and Human Services and UNM to approve and certify all research using human subjects conducted by, for, or with faculty and students; the Arts and Sciences IRB is responsible for all human research conducted under the auspices of the Colleges of Arts and Sciences, Engineering, and Fine Arts, the School of Law, and the School of Architecture and Planning. The goal of the
IRB is to promote and foster all types of human research while ensuring that subjects receive proper care and protection from research risk. Information regarding the board's responsibilities and functions is provided through mailings to deans, department chairpersons, and faculty, and from presentations by the IRB chair to departmental chairpersons and faculty.

The Arts and Sciences IRB, consisting of Mike McKee (Chairperson, Economics), Fall 1996 and Spring 1997, Beatrice Vigil (Secretary, Arts and Sciences), Hank Jenkins-Smith (Political Science), Shannan Carter (Medical Center Counsel), Edward Gilliland (ISR), Hillard Kaplan (Anthropology), and Gary LaFree (ISR/Sociology) reviewed a total of 155 proposals from the following units: American Studies (4), Anthropology (21), Biology (2), Communication/Journalism (21), Communicative Disorders (3), Economics (8), English (1), History (1), Linguistics (6), Political Science (8), Psychology (42), Sociology (19), Spanish and Portuguese (2), and other institutions (18). The majority of proposals were either ruled to be exempt from IRB review or received expedited approval from individual board members within two weeks of submission. Minutes of meetings and records of the actions of the IRB are available in the Office of the Dean, College of Arts and Sciences.

**Summer Session**

The 1997 Summer session allocation to the College was only slightly more than that of 1996, as detailed in Table 12. Our support of unique summer programs - intensive language institutes, study abroad programs and field schools - continued.

**Travel and Special College Funds**

The College disbursed about $22,986 to faculty in the College for travel expenses to
supplement the support provided by departments. It also distributed $13,371 to individual faculty to defray the costs of reprints of their scholarly work. In addition, the College provided $5,143 to departments to support honoraria for guest speakers. A summary of these distributions appears in Tables 13 and 14.

**Research Semester**

The College supported faculty research during 1996-97 through the Research Semester Program, which permits faculty selected on a competitive basis to be relieved of formal teaching responsibilities for one semester. Faculty proposals were evaluated according to the applicant's prior research record, the merit of the proposed research, and the proposed projects benefit for graduate student education. Four faculty members received Research Semester awards for the 1996-97 academic year. Richard Etulain (History) and Minrose Gwin (English) were selected from a pool of 13 applicants to receive the award for Fall 1996, while Bruce Milne (Biology) and Gary Scharnhorst (English) were selected from a group of 9 applicants to receive the award for Spring 1997.

**Arts and Sciences Women’s Caucus**

Under the leadership of Louise Lamphere (Anthropology), the Caucus enjoyed an active and successful year, while expanding its membership to encompass 66 women faculty representing the spectrum of A&S departments. The well-attended monthly meetings featured a variety of topics of interest to A&S women, including post-tenure review, student outcomes assessment, faculty salary compression, and the College's new family leave policy. Invited speakers included Provost Bill Gordon, Interim Dean Michael Fischer, and UNM Regent Barbara
Brazil. The Caucus took pride in the fact that its nominee for the UNM Annual Research Lectureship, Louise Lamphere, received this honor.

**Development Efforts**

The 1996-97 year proved to be an excellent one for fundraising. Gifts totaling $920,291 were received by the College. This is particularly impressive considering the fact that the largest single gift to the College was $90,000. In 1995-96 the final contribution total equaled $956,503 and contained one gift of $300,000. We can therefore assume that a base of support of approximately $900,000 is reasonable for the College and that in any given year the totals will be greater as a result of bequests or single, exceptionally large gifts.

Annual giving increased sharply over 1995-96. Solicitation of annual gifts is now conducted by the UNM Foundation. After re-organizing efforts to solicit gifts from alumni for the general university, first, and the college, second we saw a considerable drop in unrestricted funds in 1995-96. With greater coordination and a targeted approach to the College-based solicitation, A&S realized a $47,000 increase in contributions in the 1996-97 AY. Gifts to the Dean’s unrestricted fund rose from approximately $20,000 to over $32,000. The remainder of the increase consists of contributions made directly to the departments in the College.

In addition to development activities, the office launched a new public relations effort to increase awareness of the College among communities outside the university. Efforts included preparing press releases; clipping and organizing all articles mentioning the College in the local media; and writing and producing two issues of *Inside Arts and Sciences* that were distributed to over 24,000 households per issue.
VIII. DEPARTMENTAL REPORTS

Detailed reports on activities in the twenty departments comprising the College of Arts and Sciences are forwarded along with this College report.
<table>
<thead>
<tr>
<th>Subject</th>
<th>Chairperson</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Studies</td>
<td>Vera Norwood</td>
</tr>
<tr>
<td>Anthropology</td>
<td>Marta Weigle</td>
</tr>
<tr>
<td>Biology</td>
<td>Terry Yates</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Fritz Allen</td>
</tr>
<tr>
<td>Communication/Journalism</td>
<td>Everett Rogers</td>
</tr>
<tr>
<td>Communicative Disorders</td>
<td>Linda Riensche</td>
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<tr>
<td>Earth &amp; Planetary Sciences</td>
<td>Barry Kues</td>
</tr>
<tr>
<td>Economics</td>
<td>David Brookshire</td>
</tr>
<tr>
<td>English</td>
<td>Robert Fleming</td>
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<tr>
<td>Foreign Lang &amp; Literature</td>
<td>Walter Putnam</td>
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<tr>
<td>Geography</td>
<td>Paul Matthews</td>
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<tr>
<td>History</td>
<td>Richard Robbins</td>
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<tr>
<td>Linguistics</td>
<td>Garland Bills</td>
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<td>Mathematics &amp; Statistics</td>
<td>Alex Stone</td>
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<td>Philosophy</td>
<td>Fred Schueler</td>
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<td>Physics &amp; Astronomy</td>
<td>David Wolfe</td>
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<tr>
<td>Political Science</td>
<td>Neil Mitchell</td>
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<tr>
<td>Psychology</td>
<td>Michael Dougher</td>
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<tr>
<td>Sociology</td>
<td>Richard Coughlin</td>
</tr>
<tr>
<td>Spanish &amp; Portuguese</td>
<td>John Lipski</td>
</tr>
</tbody>
</table>
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INTERDEPARTMENTAL PROGRAMS

ASIAN STUDIES (minor, major)
Noel Pugach

BIOCHEMISTRY (major)
Robert H. Glew

COMPARATIVE LITERATURE (minor, major)
Diana Robin

CRIMINOLOGY (major)
Tomas Atencio
Bert Useem

ECONOMICS-PHILOSOPHY (major)
Russell Goodman

ENGLISH-PHILOSOPHY (major)
Barbara Hannan

EUROPEAN STUDIES (minor, major)
Charles McClelland

LATIN AMERICAN STUDIES (Ph.D.)
Linda Hall

ITALIAN STUDIES (minor)
Rachele Duke

RELIGIOUS STUDIES (minor, major)
Andrew Burgess

MEDIEVAL STUDIES (minor)
Helen Damico

SCIENCE, TECHNOLOGY & SOCIETY (minor)
Ron Reichel

PEACE STUDIES (minor)
Ted Sturm

WOMEN STUDIES (minor)
Karen Foss

QUATERNARY STUDIES (minor)
Les McFadden

SOCIAL WELFARE (minor)
Tomas Atencio
Bert Useem

RUSSIAN STUDIES & EAST EUROPEAN STUDIES (minor, major)
Byron Lindsey
TABLE 2

STANDING & SPECIAL COMMITTEES
COLLEGE OF ARTS AND SCIENCES, 1996-97

A&S Graduate Committee

Peter White, Arts and Sciences, Chair
Gabriel Melendez, American Studies
Carole Nagengast, Anthropology
Cliff Dahm, Biology
Tom Niemczyk, Chemistry
Kenneth Frandsen, Communication/Journalism
Mary Oelschlaeger, Communicative Disorders
Karl Karlstrom, Earth & Planetary Sciences
Stuart Burness, Economics
Gary Harrison, English
Diana Robin, Foreign Lang & Lit
Dave Gutzler, Geography
Daniel Feller, History
Alan Hudson, Linguistics
Ed Bedrick, Mathematics & Statistics
John Bussanich, Philosophy
Sudhakar Prasad, Physics & Astronomy
Shane Phelan, Political Science
Ronald Yeo, Psychology
Beverly Burris, Sociology
Enrique Lamadrid, Spanish & Portuguese

A&S Undergraduate Committee

Peter White, Arts and Sciences, Chair
Charlie Biebel, American Studies
Jeffery Froelich, Anthropology
William Johnson, Biology
Edward Walters, Chemistry
Bob Gassaway, Communication and Journalism
Elayne Kessler, Communicative Disorders
Laura Crosse, Earth & Planetary Sciences
Phil Ganderton, Economics
Cheryl Fresch, English
Monica Cyrino, Foreign Lang & Lit
Jerry Williams, Geography
Charlie Steen, History
Eduardo Hernandez-Chavez, Linguistics
Ronald Schrader, Mathematics & Statistics
John Taber, Philosophy
Steve Gregory, Physics & Astronomy
Ed Fuge, Political Science
Harold Delaney, Psychology
Jane Hood, Sociology
Diana Rebolledo, Spanish & Portuguese

A&S Junior Faculty Promotion and Tenure Committee

Diana Robin, Foreign Lang & Lit, Chair
Ruth Salvaggio, American Studies
Sylvia Rodriguez, Anthropology
Les McFadden, Earth & Planetary Sciences
Richard Santos, Economics
Helen Damico, English
Byron Lindsey, Foreign Lang & Lit
Virginia Scharff, History
John Panitz, Physics & Astronomy
Steven Gangestad, Psychology
Bob Fiala, Sociology
Enrique Lamadrid, Spanish & Portuguese

A&S Senior Faculty Promotion and Tenure Committee

Charles Boyer, Mathematics & Statistics, Chair
Gerald Davis, American Studies
Louise Lamphere, Anthropology
Randy Thornhill, Biology
Chris Enke, Chemistry
Minrose Gwin, English
Richard Etulain, History
Joan Bybee, Linguistics
Russell Goodman, Philosophy
Robert Sutherland, Psychology
Beverly Burris, Sociology
Diana Rebolledo, Spanish & Portuguese
<table>
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<tr>
<th>Month</th>
<th>Chair</th>
<th>Secretary</th>
<th>Counsel or Counselor</th>
<th>Anthropology</th>
<th>Political Science</th>
<th>Sociology</th>
<th>Social Research</th>
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<tbody>
<tr>
<td>Fall 1996</td>
<td>Mike McKee, Economics</td>
<td>Beatrice</td>
<td>Shannan Carter, Medical Center</td>
<td>Hillard Kaplan</td>
<td>Hank Jenkins-Smith</td>
<td>Edward Gilliland</td>
<td>Gary LaFree</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vigil, A&amp;S</td>
<td>Counsel</td>
<td>Anthropology</td>
<td>Political Science</td>
<td>ISR/Sociology</td>
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</tr>
<tr>
<td>Spring 1997</td>
<td>Mike McKee, Economics</td>
<td>Beatrice</td>
<td>Shannan Carter, Medical Center</td>
<td>Hillard Kaplan</td>
<td>Hank Jenkins-Smith</td>
<td>Edward Gilliland</td>
<td>Gary LaFree</td>
</tr>
</tbody>
</table>
TABLE 3

Changes in status of tenure-stream faculty in the College of Arts and Sciences: Decisions reached in AY 1995-96 to take effect in AY 1997-98.

**Promotions to Full Professor**

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>M. Jane Young</td>
<td>American Studies</td>
</tr>
<tr>
<td>Hillard Kaplan</td>
<td>Anthropology</td>
</tr>
<tr>
<td>Diane Marshall</td>
<td>Biology</td>
</tr>
<tr>
<td>Manuel Molles</td>
<td>Biology</td>
</tr>
<tr>
<td>Michael Campana</td>
<td>Earth &amp; Planetary Sciences</td>
</tr>
<tr>
<td>Michael McKee</td>
<td>Economics</td>
</tr>
<tr>
<td>Alexandru Buium</td>
<td>Mathematics &amp; Statistics</td>
</tr>
<tr>
<td>Nebojsa Duric</td>
<td>Physics &amp; Astronomy</td>
</tr>
<tr>
<td>Sudhakar Prasad</td>
<td>Physics &amp; Astronomy</td>
</tr>
<tr>
<td>Wolfgang Rudolph</td>
<td>Physics &amp; Astronomy</td>
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<tr>
<td>Hank Jenkins-Smith</td>
<td>Political Science</td>
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**Promotions to Associate Professor and Award of Tenure**

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
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</thead>
<tbody>
<tr>
<td>Gabriel Melendez</td>
<td>American Studies</td>
</tr>
<tr>
<td>Ana Magdelena Hurtado</td>
<td>Anthropology</td>
</tr>
<tr>
<td>Mary Ann Nelson</td>
<td>Biology</td>
</tr>
<tr>
<td>Miguel Gandert</td>
<td>Communication &amp; Journalism</td>
</tr>
<tr>
<td>Patrick Finn</td>
<td>Communicative Disorders</td>
</tr>
<tr>
<td>Louis Scuderi</td>
<td>Geography</td>
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<tr>
<td>Vladimir Koltchinskii</td>
<td>Mathematics &amp; Statistics</td>
</tr>
<tr>
<td>Michael Gold</td>
<td>Physics &amp; Astronomy</td>
</tr>
<tr>
<td>Sally Seidel</td>
<td>Physics &amp; Astronomy</td>
</tr>
<tr>
<td>Wendy Hansen</td>
<td>Political Science</td>
</tr>
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</table>

**Positive Mid-Probationary Reviews**

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert Miller</td>
<td>Biology</td>
</tr>
<tr>
<td>Bopanna Ballachanda</td>
<td>Communicative Disorders</td>
</tr>
<tr>
<td>Robert Himmerich y Valencia</td>
<td>History</td>
</tr>
<tr>
<td>Aladdin Yaqub</td>
<td>Philosophy</td>
</tr>
<tr>
<td>Susan Rivera</td>
<td>Spanish &amp; Portuguese</td>
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</table>
### TABLE 3 (continued)

#### Positive Third-Year Reviews

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Les Field</td>
<td>Anthropology</td>
</tr>
<tr>
<td>James Barker</td>
<td>Communication &amp; Journalism</td>
</tr>
<tr>
<td>Mary Oelschlaeger</td>
<td>Communicative Disorders</td>
</tr>
<tr>
<td>Janet Patterson</td>
<td>Communicative Disorders</td>
</tr>
<tr>
<td>Frank Pazzaglia</td>
<td>Earth &amp; Planetary Sciences</td>
</tr>
<tr>
<td>Robert Berrens</td>
<td>Economics</td>
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<tr>
<td>Janie Chermak</td>
<td>Economics</td>
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<tr>
<td>Charles Paine</td>
<td>English</td>
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<tr>
<td>Sharon Warner</td>
<td>English</td>
</tr>
<tr>
<td>Judy Bieber</td>
<td>History</td>
</tr>
<tr>
<td>Melissa Axelrod</td>
<td>Linguistics</td>
</tr>
<tr>
<td>Phyllis Wilcox</td>
<td>Linguistics</td>
</tr>
<tr>
<td>Kimberle Lopez</td>
<td>Spanish &amp; Portuguese</td>
</tr>
</tbody>
</table>

#### 1997-98 New Appointments

<table>
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<tr>
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#### Resignations/Retirements (effective 1997-98)

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## Resignations/Retirements (continued)

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Data Source: College of Arts and Sciences Instructional Budget, 1996-97
### TABLE 5

**NUMBER OF STUDENTS ENROLLED**

**COLLEGE OF ARTS AND SCIENCES**

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Data Source: Arts and Sciences Registered Students Listing - 21 day report
### TABLE 6

**DEGREES AWARDED**

**COLLEGE OF ARTS AND SCIENCES**

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(a) These figures do not include Master of Arts in Teaching and Master of Education in Science degrees.

Data Sources: Bachelors taken from A&S final graduation lists. Advanced degrees taken from Graduate Studies final graduation lists.
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TABLE 7 (continued)

1. Includes Optical Science Ph.D.s

2. Includes both Spanish and Romance Language Ph.D.s.

3. Bachelor's degrees granted with double majors are counted once in each department, so this total will not agree with Table 6.

* Includes summer, fall and spring graduates.

Data Sources: Bachelors from A&S final graduation lists. Advanced degrees from Graduate Studies final graduation lists.
### TABLE 8

**ACADEMIC PROBATIONS, SUSPENSIONS AND RELEASES**

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<td>Released</td>
<td>57</td>
<td>120.8</td>
<td>78</td>
<td>36.8</td>
<td>59</td>
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**Number of Students Enrolled in Arts and Sciences**

- Semester I, 1996-97: 4056
- Semester II, 1996-97: 4181
**TABLE 9**

**DEGREES GRANTED WITH HONORS***

**Honors in General Studies**

<table>
<thead>
<tr>
<th>Honors in General Studies</th>
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<tr>
<td>Summa Cum Laude</td>
<td>17</td>
<td></td>
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<tr>
<td>Magna Cum Laude</td>
<td>34</td>
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<tr>
<td>Cum Laude</td>
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**Departmental Honors**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>American Studies</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Anthropology</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Biochemistry</td>
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<tr>
<td>Biology</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Chemistry</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Criminology</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Earth &amp; Planetary Sciences</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>French</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>German</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>History</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Linguistics</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Latin American Studies</td>
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<td></td>
</tr>
<tr>
<td>Political Science</td>
<td>7</td>
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</tr>
<tr>
<td>Psychology</td>
<td>5</td>
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</tr>
<tr>
<td>Sociology</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Spanish &amp; Portuguese</td>
<td>3</td>
<td></td>
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</table>

Initiated into Phi Beta Kappa  59
Initiated into Phi Kappa Phi    83

*Requirements completed Summer 1996; Semester I, 1996-97; Semester II, 1996-97
# TABLE 10
NEW RESEARCH AND TRAINING GRANTS, 1996-97

<table>
<thead>
<tr>
<th>Department</th>
<th>Dollars</th>
<th>Number of Faculty</th>
<th>Number of Grants</th>
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<tbody>
<tr>
<td>American Studies</td>
<td>$391,600</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Anthropology</td>
<td>132,508</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>Maxwell</td>
<td>5,750</td>
<td>0</td>
<td>2*</td>
</tr>
<tr>
<td>OCA</td>
<td>2,671,018</td>
<td>0</td>
<td>10*</td>
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<tr>
<td>Biology</td>
<td>5,087,134</td>
<td>21</td>
<td>63</td>
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<tr>
<td>Chemistry</td>
<td>1,470,763</td>
<td>13</td>
<td>29</td>
</tr>
<tr>
<td>Communication &amp; Journ</td>
<td>370,899</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Comm Disorders</td>
<td>120,653</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Earth &amp; PI Sciences</td>
<td>1,208,446</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>IOM</td>
<td>698,542</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Economics</td>
<td>290,546</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>English</td>
<td>14,882</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Geography</td>
<td>78,223</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>History/Vargas</td>
<td>154,498</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Linguistics</td>
<td>6,660</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics &amp; Stats.</td>
<td>719,357</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Physics &amp; Astronomy</td>
<td>4,254,458</td>
<td>21</td>
<td>56</td>
</tr>
<tr>
<td>Political Science</td>
<td>698,023</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Psychology</td>
<td>700,960</td>
<td>6</td>
<td>7</td>
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<tr>
<td>Sociology</td>
<td>97,274</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Inst Soc Research</td>
<td>765,694</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$19,917,113</strong></td>
<td><strong>114</strong></td>
<td><strong>286</strong></td>
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* Research faculty
### TABLE 11

**BUDGETED GAs/TAs, RESEARCH AND PROJECT ASSISTANTS, 1996-97**

<table>
<thead>
<tr>
<th>Departments</th>
<th>GAs &amp; TAs</th>
<th>RAs &amp; PAs</th>
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</thead>
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<tr>
<td>American Studies</td>
<td>24</td>
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<tr>
<td>Anthropology</td>
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<td>6</td>
</tr>
<tr>
<td>Biology</td>
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<td>56</td>
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<tr>
<td>Chemistry</td>
<td>31</td>
<td>43</td>
</tr>
<tr>
<td>Communication/Journalism</td>
<td>29</td>
<td>11</td>
</tr>
<tr>
<td>Earth &amp; Planetary Sciences</td>
<td>22</td>
<td>28</td>
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<tr>
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<td>24</td>
<td>14</td>
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<tr>
<td>English</td>
<td>69</td>
<td>14</td>
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<tr>
<td>Foreign Lang &amp; Lit</td>
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<tr>
<td>Geography</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>History</td>
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<td>12</td>
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<td>IOM</td>
<td>0</td>
<td>1</td>
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<tr>
<td>ISR</td>
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<tr>
<td>Linguistics</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics &amp; Statistics</td>
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<td>12</td>
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<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Physics &amp; Astronomy</td>
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<td>66</td>
</tr>
<tr>
<td>Political Science</td>
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<td>6</td>
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<tr>
<td>Psychology/CASAA</td>
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<td>45</td>
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<td>Sociology</td>
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<td>0</td>
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<tr>
<td>Spanish &amp; Portuguese</td>
<td>46</td>
<td>0</td>
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<tr>
<td>Speech &amp; Hearing Sciences (Com Dis)</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Women Studies</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>595</td>
<td>358</td>
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# TABLE 12

## SUMMER SESSION DATA, 1996 AND 1997

<table>
<thead>
<tr>
<th>Department</th>
<th>Final 1996 Figures</th>
<th>Final 1997 Figures</th>
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<tr>
<td></td>
<td>Allocation</td>
<td>%</td>
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<tr>
<td>American Studies</td>
<td>$ 8,665</td>
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<tr>
<td>Anthropology</td>
<td>48,188</td>
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<tr>
<td>Biology</td>
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<td>Communication/Journalism</td>
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<td>Communicative Disorders</td>
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<tr>
<td>Earth &amp; Plan Sciences</td>
<td>27,497</td>
<td>3.11</td>
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<td>28,160</td>
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<td>61,404</td>
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<td>Foreign Lang &amp; Lit</td>
<td>11,770</td>
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<td>Geography</td>
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<td>History</td>
<td>43,965</td>
<td>4.97</td>
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<td>Mathematics &amp; Statistics</td>
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<td>German</td>
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<tr>
<td>French</td>
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<td>Physics &amp; Astronomy</td>
<td>26,990</td>
<td>3.05</td>
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<td>Sociology</td>
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<td>Spanish &amp; Portuguese</td>
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<td>International Programs</td>
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<tr>
<td>Admin</td>
<td>38,102</td>
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<td>Contingency</td>
<td>9,262</td>
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<td><strong>TOTAL</strong></td>
<td><strong>$884,120</strong></td>
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TABLE 13

A&S TRAVEL DISBURSEMENTS, 1996-97

<table>
<thead>
<tr>
<th>Department</th>
<th>General/Departmental Allocations</th>
<th>Special Request Allocations</th>
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<tr>
<td>American Studies</td>
<td>$3,195.00</td>
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<td>Anthropology</td>
<td>10,650.00</td>
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<td>Biology</td>
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<tr>
<td>Chemistry</td>
<td>10,650.00</td>
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<tr>
<td>Communication &amp; Journalism</td>
<td>8,520.00</td>
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<td>Communicative Disorders</td>
<td>2,130.00</td>
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<td>Earth &amp; Planetary Sciences</td>
<td>5,325.00</td>
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<td>Economics</td>
<td>9,585.00</td>
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<td>English</td>
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<td>Physics &amp; Astronomy</td>
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<tr>
<td>Spanish &amp; Portuguese</td>
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<tr>
<td>TOTAL</td>
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### TABLE 14

**A&S DISBURSEMENTS OF SPECIAL COLLEGE FUNDS**  
1996-97

<table>
<thead>
<tr>
<th>Department</th>
<th>Reprint Funds</th>
<th>Speakers' Honoraria</th>
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<tr>
<td>Arts &amp; Sciences</td>
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<td>00.00</td>
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<td>Earth &amp; Planetary Sciences</td>
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<tr>
<td>Spanish &amp; Portuguese</td>
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<td>300.00</td>
</tr>
<tr>
<td>Speech &amp; Hearing Sci (Com Dis)</td>
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<td>200.00</td>
</tr>
<tr>
<td>Women Studies</td>
<td>00.00</td>
<td>400.00</td>
</tr>
</tbody>
</table>

**TOTAL**  
$13,371.32 $5,143.00
The American Studies Department had two faculty promoted this year, one of whom also received tenure. The faculty continued to operate as a committee of the whole in guiding the graduate and undergraduate programs. Assistant Professor, Gabriel Melendez, succeeded Ruth Salvaggio as graduate advisor this year. Professor Charles Biebel served in his last year as undergraduate advisor.

A. Significant Developments

The department lost our most senior colleague with the retirement, effective Fall 1997, of Charles Biebel. Professor Biebel joined American Studies as its first tenure-track professor in 1972. His research and teaching contributions, particularly in Southwest Studies and social and intellectual history, have been distinguished. His recent work building the undergraduate major and the honors program has greatly strengthened our place in the College.

The faculty as a whole maintained a high level of professional activity. Professor Biebel was awarded continuation of his grant from the Lilly Endowment, entitled "Evaluating Leadership
Education." Professor Jane Caputi, who has been on sabbatical this year, published "Unthinkable Fathering: Connecting Incest and Nuclearism," in Karen J. Warren and Duane L. Cady, eds., Bringing Peace Home: Feminism, Violence, and Nature (Indiana University Press) and was a visiting lecturer in the Ph.D. program in Women's Spirituality at the California Institute of Integrated Studies. Professor Gerald Davis' essay, "Somewhere Over the Rainbow. . .: Judy Garland in Never-Never Land," appeared in the Journal of American Folklore and he has two commissioned articles in preparation, one for a major exhibition on American Folk Art at the Museum of American Folk Art in New York. Assistant Professor Gabriel Melendez received tenure and promotion to Associate Professor. He also published So All is Not Lost: The Poetics of Print in Nuevomexicano Communities, 1834-1958 with the University of New Mexico Press. Vera Norwood Published two biographical articles in John Elder, ed., American Nature Writers and an essay, "Women's Roles in Nature Study and Environmental Protection," in the Magazine of History. Professor Ruth Salvaggio was awarded one of the El Paso Natural Gas Foundation's Faculty Achievement Awards for exceptional teaching. Her book manuscript on the language of feminist theory was accepted for publication by the SUNY press. Assistant Professor James Treat, who was on leave for the spring term this year, is working on an edited volume of essays by Vine Deloria, Jr. and published "Native People and the Interreligious Dialogue in North America: The Indian Ecumenical Conference," in Studies in Interreligious Dialogue. Associate Professor M. Jane
Young, a Regent's Lecturer for 1995-98, was promoted to full professor. She has six articles and a co-edited book in press, covering indigenous astronomical and cosmological traditions of the world, astronomy in Pueblo and Navajo worldviews, and rock art in the Southwest. Professors Biebel, Melendez and Young, with graduate Students Patrick Pynes and Patricia Moore, are publishing an edited collection of writings on the Southwest with the University of Utah Press.

Under the guidance of Professor Biebel, the undergraduate program continued to improve. With the aid of funds from the College, the department sent two honors students, Christine Irvin and Barbara Ritter, to give papers at the Rocky Mountain American Studies Association meeting in Colorado Springs. Thirteen students graduated in American Studies, three with Honors. Prof. Biebel also worked with graduate student, Kathy Friese, to develop a comprehensive outcomes assessment procedure for determining the effectiveness of our undergraduate curriculum.

We continued to attract many more qualified applicants for the graduate program than could be admitted. Seven masters and four doctoral students completed the degree this year. Our Masters candidates were competitive in admission to doctoral programs. For example, David Hernandez was admitted to several nationally ranked programs and accepted a position at the University of California, Berkeley in the Ethnic Studies PhD program. He was also awarded a National Science Foundation Predoctoral Fellowship. Several students presented papers at regional and national conferences and
had papers accepted for publication. Richard Monikowski's dissertation was selected as one of five finalists for the Ralph Henry Gabriel dissertation prize, the national dissertation award of the American Studies Association. Robert Anderson held one of the highly selective Office of Graduate Studies Dissertation Fellowships and Patrick Pynes was awarded the same fellowship for 1997-98 to finish his study of Navajo forestry practices. In a tight job market, most doctoral students have struggled to find jobs, but four students did find full-time positions at excellent institutions this year, the most prominent being Jeff Coleman's hiring as an Assistant Professor at St. Mary's College, a selective public honors college in Maryland.

The Department began publishing an annual newsletter this year. The newsletter is sent to all current graduate students, other departments across the country, and our alumni. It has proved an especially effective way of discovering the on-going worth of the degree to past graduates.

B. Significant Plans and Recommendations for the Future

American Studies will gain a full-time Assistant Professor in fall 1997 with the transition of James Treat from Native American Studies. In addition to his on-going teaching and research contributions in Native American culture, Professor Treat will be developing new courses in American religion for our emphasis in Culture Study. He will also be working with Professors Davis and Melendez on the development of our offerings in race, class and ethnicity.
The faculty began work this year revising our policies and procedures for granting financial aid. This work will continue next year as we strive for an equitable way to make aid decisions in a situation where we have many qualified students and too little aid. We will be discussing whether to add the Research Methods seminar to our list of required courses for the graduate degree and will be revising our new outcomes assessment plan with input from the Provost's office.

Finally, with the retirement of Professor Biebel, the Department will be considering how to fill this vacant line, taking up in particular the question of future curriculum needs in the context of our relatively new faculty complement.

C. Appointments to Staff

None

D. Separations from Staff

None

E. Sponsored Research

Professor Biebel continued his multi-year grant from the Lilly Endowment. Professor Gabriel Melendez was awarded a grant from the Recovering the U.S. Hispanic Literary Heritage Project, at the University of Houston, for his work on Neo-Mexicano biographical narrative.
Significant Developments during the Academic Year, 1996-97

We colleagues in the Department of Anthropology have experienced a difficult year. The most significant blow to the Department and to the University was the loss of Professor Alfonso Ortiz, who died on January 28, 1997. His passing drew national attention; tributes and condolences came from many quarters. The memorial service held in the Anthropology lecture hall on February 7, 1997, was well attended by members of the Ortiz family, faculty, students, staff and administrators from throughout the University, scholars from other universities and museums, and community people from New Mexico and elsewhere. A memorial fund for Professor Alfonso Ortiz has been established to help Native American students studying anthropology.

The major part of the academic year was spent readying for, undergoing, and responding to an October 1996 external unit review, the first since Spring 1989, mandated by the Faculty Senate Graduate Committee. A 325-page Self-Study: Fall 1989-Spring 1996, submitted in September 1996, was prepared by Marta Weigle (Chair); Carole Nagengast (Graduate Director); Jeffery W. Froehlich (Undergraduate Director); Advisory Council members Robert Leonard, Erik Trinkaus, Louise Lamphere and Jane Lancaster; staff Mimi Stephens, Karen Marty, and Erika Geredy; and work-study students Kirsten Campbell, Ann Hendry, Ronald Peck, and Rowena Peck.

The Review Committee of Jane F. Collier (Stanford University), Michael A. Little (Binghamton
University, SUNY, who chaired the team), Kathryn G. Vogel (UNM, Department of Biology), and Henry T. Wright (University of Michigan) did not submit their report until January 12, 1997. They concluded: “It is our general impression, that few departments in the nation have the combination of breadth of subfield expertise and depth of world-class scientist/scholar as does UNM... and agree, that despite the failure to include UNM in the NRC ranking, that the Department of Anthropology ranks among the very best departments in the U.S.” In their introduction the reviewers characterized the Department as follows:

New Mexico’s Anthropology Program is strong in unique ways and it has long been nationally and internationally recognized. It was founded as a program with a focus on the peoples—ancient and living—of the greater Southwest, a region in which anthropological study has produced a wealth of insight into cultural processes and the human condition. Our committee came to Albuquerque fully aware of the distinguished past of the program, but not certain of its current circumstance. We knew that it had chosen to focus on its southwestern strengths, building on its privileged location within the region, rather than to seek a broad (and necessarily thin) coverage of all the planet’s peoples. We knew that this focus was strongly grounded in active field studies and in the continuing use of the Maxwell Museum’s premier collections. We knew it was the home of one of anthropology’s most influential journals, the Journal of Anthropological Research. We also knew that recent decades had seen the building of other strengths such as the study of our Pleistocene ancestors, the building of perspectives in Human Evolutionary Ecology, and an ethnological focus on transnational flows of people and ideas. However, we have learned that far more was notable in Albuquerque’s Anthropology Program, not the least being strong moves toward self-integration and a rededication of its teaching and research missions.

The external reviewers concluded their report with “A Summary of Critical Needs”:

* Critical gaps in faculty teaching skills must be filled as quickly as possible. When the search for a human geneticist is completed, the search for a cultural ecologist, and planning for future replacements should be initiated.
* Graduate student funding must be improved; that is, both the number of assistantships and the number of years that students are eligible need to be increased.
* Faculty mentors should be more available in support of graduate students to reduce the time required to complete the PhD.
* Teaching aids must be upgraded and modernized: audio-visual equipment, maps, modernized classrooms for presentations.
* Computers and software must be upgraded for faculty to conduct their teaching and research adequately. Computers are infrastructure, and must be upgraded regularly.
* Faculty salary adjustments should be made in accordance with other universities’ income scales.
* Some further reintegration of the subfields of anthropology should be carried out at the undergraduate and the masters levels.
* Attention should be addressed to hiring of minority faculty and recruitment of minority undergraduate and graduate students. This is particularly important in the State of New Mexico with such large Native American and Hispanic populations.
* More formal ties should be established between the Office of Contract Archaeology and the Maxwell Museum and the Department of Anthropology.

The Department Response to the “External Review of the Anthropology Program at The University of New Mexico, October 1996” was submitted on February 24, 1997. By that time we had experienced significant setbacks in addition to Ortiz’s death. Besides budget stringencies, a hiring freeze meant that for the second year in a row we were forced to cancel the search underway for a
human biologist/geneticist. Associate Professor Anita Alvarado, who resigned from the Ethnology subfield in Fall 1993 to join the Human Evolutionary Ecology subfield full-time, had retired at the end of Fall 1996. In February Professor Erik Trinkaus announced that he was seriously entertaining an offer from Washington University. (He eventually accepted that offer and left the faculty after the Spring semester.) Nevertheless, the subfields and department committees worked effectively throughout the semester to address issues raised in the external review.

The articulation of Ethnology and Linguistic Anthropology was accomplished, and the Department now operates with four subfields: Archaeology, Biological Anthropology, Ethnology, and Human Evolutionary Ecology. The Advisory Council worked with staff Mimi Stephens and Elma Edwards to better manage the budget, and significant progress was made in reducing the deficit. The Graduate Committee developed a procedure and policies for awarding TA/GA/RAships and regularized such assignments, all part of the effort toward better subfield integration. The Undergraduate Committee worked on a handbook and on Outcomes Assessment. Under the direction of Undergraduate Director Jeffery Froehlich working with Department Administrator Mimi Stephens, Graduate Director Carole Nagengast, and subfield conveners, the Department has worked successfully to manage and improve enrollments. In the Spring the Dean conducted a mid-term review of Chair Marta Weigle, and there was general agreement that she should continue and complete her four-year term of office.

Standing committees made significant progress in inventories, policies, and procedures related to Computer Use, Instructional Media, and Space. In the Spring, through sustained and intense efforts by Professors Jeffery Froehlich and Lawrence Straus, Clark Field Archive and Library acquired and accessioned a valuable gift: the anthropological and related books of the late Professor James N. Spuhler, donated by his widow. They are a splendid living legacy of our former colleague.

A highlight of the Spring was the first Undergraduate Anthropology Conference, sponsored by the UNM Anthropology Society on April 5, 1997. Seven undergraduates from UNM and elsewhere presented papers. The Anthropology Graduate Student Union sponsored the annual Anthropology Symposium at the Albuquerque Convention Center on April 25 and 26, 1997. Professor Steve Lekson delivered the keynote address, and twenty-five graduate students from across the subfields presented papers.

The 1997 Summer Field School in Archaeological Research was led by Associate Professor Wirt Wills at the James Young Ranch, UNM’s research property in north-central New Mexico between Bandelier National Monument and the Pueblo of Cochiti. The 30th Annual Bioarcheological Field School, the second under the aegis of UNM, was led by Professor Jane Buikstra at the Center for American Archeology, Kampsville, Illinois, in the lower Illinois River Valley.

Several Department members were honored during the academic year. Professor Keith Basso received the 1996 Western States Book Award for Creative Nonfiction for his book, *Wisdom Sits in Places: Language and Landscape Among the Western Apache*. Professor Louise Lamphere was selected to deliver the University’s prestigious Forty-Second Annual Research Lecture, “From Mill Town to Multinational: Gender, Family and Policy in Working-Class Communities,” on April 30, 1997. Associate Professor Carole Nagengast was appointed one of four Regents Lecturers in the
College of Arts and Sciences, 1997-2000. Professor Marta Weigle and Donna Pierce’s co-edited, two-volume Spanish New Mexico: The Spanish Colonial Arts Society Collection received the 1997 Ralph Emerson Twitchell Award for “a significant contribution to the field of history” from the Historical Society of New Mexico. Staff member Erika Gerety received an Outstanding Staff Award at the Eighth Annual University of New Mexico Provost’s Outstanding Staff Awards on March 14, 1997. The Department was the home one for the College’s PNM Distinguished Visiting Professors Margo Wilson and Martin Daly of the Departments of Psychology and Biology at McMaster University.

**Significant Plans and Recommendations for the Near Future**

In the February 24, 1997, Department Response to the external review report we declared ourselves “satisfied with the reviewers’ ‘Summary of Critical Needs’” (above). The following were listed as “Department Priorities”:

Under the present fiscal stringencies it is difficult to prioritize our “needs” since most require support from College and University sources outside Department control. Underfunding is chronic, if not axiomatic, and we are doing everything possible to work within the budget, plan carefully, and develop reasonably equitable procedures for distributing such funds and equipment as we may get. Beginning in 1997-98, we would like at least to be recognized in the College as a lab department by an increase in our operating budget.

Besides the budget, the Department considers its three top priorities to be: (1) Hiring, (2) Graduate student support, and (3) Minority balance. All three require extra-departmental support, but we will direct our best ongoing efforts and such resources as possible into these three areas. At a second level, three areas of concern can and will be addressed within the Department. These areas, presented in order of importance, are: (1) Better integration with the Office of Contract Archaeology, (2) Reintegration of subfields at undergraduate and masters levels, and (3) Post-Masters mentoring.

All these plans and recommendations remain in effect. We are particularly concerned about hiring. The plan presently before the Dean lists as priorities: (1) human biologist/geneticist (Biological Anthropology), (2) equally: replacements for Trinkaus (Biological Anthropology) and Ortúz-quau- (junior)-ethnologist (Ethnology), and (3) cultural ecologist (Ethnology). A special priority of ours shared by various members of the University is to establish an Alfonso Ortúz Native American position in Anthropology.

The hiring plan will be discussed and modified as appropriate during the coming year. There will also be work on the Department’s evaluation of teaching for annual reviews, Code 3, tenure/promotion, merit/productivity points, and post-tenure review.
Appointments

Faculty

Assistant Professor David W. Dinwoodie, a linguistic anthropologist with a University of Chicago Ph.D., joined the faculty in August 1996. He participates in the Ethnology subfield.

Visiting Assistant Professor Joel D. Irish, an Arizona State University Ph.D. who joined the faculty in 1995-96, continued temporarily in the position vacated in June 1995 by Associate Professor Jeffrey Long in the Biological Anthropology subfield. A second search for a tenure-track assistant professor in human biology/genetics was conducted in 1996-97, but, like the previous year’s search, this too was aborted due to budget constraints.

PNM Distinguished Visiting Professors Margo Wilson and Martin Daly taught a Spring-semester course in the Human Evolutionary Ecology subfield (see above).

Staff

Elma Edwards was hired as a 1.00 Accounting Technician on July 8, 1996.

As of June 4, 1997, due to UNM pact job (re)assignments, the six Department staff members hold the following titles, grade, and status: Mimi Stephens (Department Administrator II, grade 11, exempt), Margaret Colclough (Administrative Assistant III, grade 8, non-exempt), Elma Edwards (Accountant I, grade 8, exempt), Karen Marty (Academic Advisor, grade 8, non-exempt), Erika Gerety (Administrative Assistant II, grade 7, non-exempt), Carla Sarracino (Administrative Assistant II, grade 7, non-exempt).

Separations

Faculty

Associate Professor Anita Alvarado retired on December 31, 1997.

Professor Alfonso Ortiz died on January 28, 1997.

Professor Erik Trinkaus announced his resignation during this reporting period but did not make it official until July 1997.

Staff

Elma Edwards resigned on June 13, 1997. A search for her replacement was underway during the reporting period.
Sabbatical and Other Leaves

Associate Professor Ann Ramenofsky was on sabbatical leave for the 1996-97 academic year. Professor Lawrence Straus was on sabbatical leave during the Fall 1996 semester.

Publications

There were neither Department nor staff publications during this time, but the faculty continued its notable productivity. Eighteen different tenure-stream faculty members (of twenty-six) produced five books, six edited volumes, fifty-two book chapters/journal articles, and twenty-four comments/notes/reviews.

The 1996 books and edited volumes follow:


Steven Feld and Keith H. Basso, eds., *Senses of Place*, School of American Research Press

Garth Bawden, *The Moche*, Blackwell Publishers

Les Field, ed., "Ma' catu'ya' zanu-we see each other: The Politics of Zapotec and Anthropological Undertakings," special issue of *Identities* 3 (1&2)


Robert Santley with Alba Guadalupe Mastache, Jeffrey R. Parsons, and Mari Carmen Serra Puche, eds., *Arqueología Mesomericana: Homenaje a William T. Sanders I*, Instituto Nacional de Antropología e Historia, Mexico City

Robert Santley with Alba Guadalupe Mastache, Jeffrey R. Parsons, and Mari Carmen Serra Puche, eds., *Arqueología Mesomericana: Homenaje a William T. Sanders II*, Instituto Nacional de Antropología e Historia, Mexico City

Lawrence G. Straus with B. Eriksen, J. Erlander, and D. Yesner, eds., *Humans at the End of the Ice Age*, Plenum Publishing

Marta Weigle and Barbara A. Babcock, eds., *The Great Southwest of the Fred Harvey Company and the Santa Fe Railway*, Heard Museum, Phoenix


Outside Professional Activities

In 1996, among twenty-five faculty members (no report from Trinkaus), fifteen gave one or more meeting papers, four participated in one or more international symposia, six delivered one or more keynote/plenary addresses, and sixteen gave one or more invited lectures. No staff members were professionally active outside the University.

Other reported faculty professional activities (excluding editorial boards) include:

Buikstra: American Anthropological Association, Finance Committee and Search Committee for editor of American Anthropologist; American Association for the Advancement of Science, Section Chair/Past Chair, Section H; American Board of Forensic Anthropologists, Ethics Committee; Bioanthropology Foundation, Peru, Board member; Center for American Archaeology, President of Board; National Research Council, Committee on the Status of Women in Science

Field: Consultant, Esselen Nation of Costanoan Indians

Froehlich: Primate Specialists Group, IUCN

Hill: Fundacion Moises Bertoni, scientific advisor; National Science Foundation Graduate Fellowship Committee

Hurtado: Ethnopediatrics, Social Sciences Research Council

Kaplan: Catron County mediation; Manu Park consultant

Lamphere: Association for Feminist Anthropology, Chair.

Lancaster: Human Behavior and Evolution Society, Board and Publications Committee; Society for the Study of Social Biology, Board of Directors

Nagengast: American Anthropological Association, Committee for Human Rights; Amnesty International, Trustee for Bob Marley Fund and Committee on International Development

Powell: Consultant for Torrance County District Attorney and New Mexico State Police; expert witness for U.S. District Court, Oregon

Ramenofsky: Archaeological Conservancy, Review Board, Tsana

Rodriguez: Consultant for NMEH, Taos Valley Acequia Association, and U.S. Forest Service

Straus: INQUA, Committee on Human Evolution and Palaeoecology, President, and Working Group on Archeology of the Pleistocene-Holocene Transition, Chair

Weigle: Consultant for Heard Museum, Phoenix

Outside Sponsored Research

Kim R. Hill and Ana Magdalena Hurtado, National Science Foundation: Ecological Studies of Ache Foragers, $128,090

Jane B. Lancaster and Sara Johnson, L.S.B. Leakey Foundation: Modeling the Trade-off between Energy Acquisition and Predation Risk: Effects on Individual Variation in Growth and Mortality among Baboons, $6,006

Jane B. Lancaster and Sara Johnson, National Science Foundation: Modeling the Trade-off between Energy Acquisition and Predation Risk: Effects on Individual Variation in Growth and Mortality among Baboons, $11,910

Lawrence G. Straus, L.S.B. Leakey Foundation: Paleolithic Settlement of the Cantabrian Cordillera: El Miron Cave, $10,000

Attachments

Public Lectures

Journal of Anthropological Research Distinguished Lecture Series:

L. L. Cavalli-Sforza, Stanford University Emeritus, "Genetics, Archeology and Languages," February 20, 1997

Annual Snead-Wertheim Lecture, co-sponsored by Departments of Anthropology and History:

Sylvia Rodríguez, "Fiesta Time and Plaza Space in Taos: A Native Ethnography," April 8, 1997

Frieda D. Butler Memorial Lecture:

Erica Hill, Archaeology M.A. Student, "The Art of Transformation: Painted Pottery from the Peruvian North Coast," November 18, 1996

Ruth Kennedy Memorial Lecture:

Wendy Bustard, Archaeology Ph.D. Student, "If These Walls Could Talk: Chaco Houses Great and Small," May 6, 1997

Conferences

Conference on the Archaic Prehistory of the North American Southwest, co-sponsored by the Department, Maxwell Museum, New Mexico Archeological Council, October 24-26, 1996
Undergraduate Anthropology Conference, sponsored by the UNM Anthropology Society, April 5, 1997:

Papers by: Amy Van Deven, Sheilla Allen, Mark McCoy, Rebecca Kiracofe, Robert Stallman, Bryant Furlow/Tara Armijo-Prewitt, William LaRue

Anthropology Symposium, sponsored by the Anthropology Graduate Student Union at the Albuquerque Convention Center, April 25-26, 1997:

Keynote address: Prof. Steve Lekson, "Magic Numbers and Emergent Order: Agency and Process in the Archaeology of Southwestern Societies"

Papers by: Karl Benedict, Shawn Penman, Caroline Todd, Alexa Lawrence, Angelle Khachadoorian, Joe Kinsella, Mariela Nuñez-Janes, Julia Meredith, Garnett McMillan/Karen Krauer, Yarimar Bonilla, Leslie Lopez, Marcel Harmon, Bettina Behrens, Linda Banks, Abbie Adams, Erik Wilker, Nancy Burke, Steve Martinez, Tresa Thomas, Philip Laverty, Marta Henricksen, Lisa Hogan, Beth Bagwell, David Margolin

Bachelor of Arts Degrees Conferred

Forty B.A. degrees were awarded in 1996-97. (Those graduating with honors are indicated by an asterisk.)


Bachelor of Science Degrees Conferred

Nineteen B.S. degrees were awarded in 1996-97. (Those graduating with honors are indicated by an asterisk.)


Master of Arts Degrees Conferred

Sixteen M.A. degrees were awarded in 1996-97. (Those graduating with distinction are indicated by an asterisk.)

Kirsten Campbell, Clinton Hicks, Tamara Jager, Angelle Khachadoorian, Lance Lundquist, Elizabeth Martinson, Molly McColgan, *Julia Meredith, Mariela Nuñez-Janes, Tijahjono Prasodjo, Gordon Rakita, Gerry Raymond, Jenny Sanborn, Rebecca Schwendler, Holly Slonaker, Erik Wilker
Master of Science Degrees Conferred

Four M.S. degrees were awarded in 1996-97. (Those graduating with distinction are indicated by an asterisk.)


Doctor of Philosophy Degrees Conferred

Ten Ph.D. degrees were awarded in 1996-97. (Those graduating with distinction are indicated by an asterisk.)

Wendy Bustard, "Chacoan Space as Place: Small and Great House Spatial Organization, A.D. 1000-1150" (Wirt Wills, Chair)

Russell Greaves, "Ednoarchaeological Investigation of Subsistence Mobility, Resource Targeting, and Technological Organization among Pume Foragers of Venezuela" (Lewis Binford, Chair)

Charles Hilton, "Comparative Locomotor Kinesiology in Two Contemporary Hominid Groups: Sedentary Americans and Mobile Venezuelan Foragers" (Erik Trinkaus, Chair)

Virginia Laadt, "Impact of Preterm Birth and Child Condition on Maternal Reproductive Behavior" (Jane Lancaster, Chair)

Todd McCabe, "Implications of Intermixture on Human Cranial Morphology" (Jeffery Froehlich/Stanley Rhine, Co-Chairs)

Mary Jane McReynolds, "Hitting the Mountain: Educational Success among Native American Women in Albuquerque, New Mexico" (Louise Lamphere, Chair)

Thomas M. Morales, "Glazeware Pottery Production and Distribution in the Upper-Middle Rio Grande Valley, New Mexico" (James Boone/Richard Chapman, Co-Chairs)

Willow Roberts Powers, "The Harvard Five Cultures Values Study and Post War Anthropology" (Karl Schwerin, Chair)

*Lisa Rappaport, "Food Sharing in Golden Lion Tamarins (Leontopithecus rosalia): Provisioning of Young, Maintenance of Social Bonds, and Resource Constraints (Jane Lancaster, Chair)

*Atsushi Sumi, "Competition or Cooperation: Organizational Practices and the Relations of Power in Japanese Transplants in the United States" (Louise Lamphere, Chair)

Letters of Academic Title

Affiliated Faculty

Joseph C. Winter, Part-time Professor of Anthropology; Director, Office of Contract Archeology (Archaeology subfield and faculty voting rights; no presumption of tenure)

Bruce B. Huckell, Research Assistant Professor of Anthropology; Senior Research Coordinator, Maxwell Museum of Anthropology (Archaeology subfield and faculty voting rights; no presumption of tenure)
David E. Stuart, Part-time Associate Professor of Anthropology; Associate Vice President for Academic Affairs/Evening and Weekend Degree Programs (no voting rights; no presumption of tenure)

Richard C. Chapman, Part-time Assistant Professor of Anthropology; Associate Director, Office of Contract Archeology (no voting rights; no presumption of tenure)

Patrick F. Hogan, Part-time Assistant Professor of Anthropology; Assistant Director, Office of Contract Archeology (no voting rights; no presumption of tenure)

Adjunct Faculty

Adjunct Professor: Ines Arenas de Hurtado

Adjunct Associate Professors: John M. Fritz, Grace E. Kissling, David A. Phillips, Jr.

Adjunct Assistant Professors: John A. Bock, Steven N. Byers, Eileen L. Camilli, Anthony B. Falsetti, Michel P. Guilbaud, Trenton W. Holliday, Ronald R. Kneebone, Nancy Marie Mithlo, Christopher Musello, Joerg Opherk, Lynne Sebastian, Kathryn M. Trinkaus

Lecturer II: Suzanne Robyn Oakdale

Associates in Anthropology: Darlene Evans, Richard G. Holloway, Bradley J. Vierra
In calendar year 1996 I received, read and sent out for review (normally 3-4 reviewers per ms.) 61 article manuscripts. In the same period, in the four issues of Volume 52, JAR published 19 articles (equating to a rejection rate of 69%, although I often encourage resubmission with specific guidance to authors & the forwarding of anonymous reviewer comments). In Volume 52 JAR published 53 book reviews, a dramatic increase over the numbers published before I took over the Editorship with Volume 51 (I am doubling as Book Review Editor for Archaeology & Paleoenthropology, while Prof. Emeritus Bock handles Cultural & Social Anthropology and Prof. Froehlich covers Physical & Biological Anthropology). Volume 52 totalled 554 pages—also a major increase vis à vis earlier volumes. We have already published numbers 1 & 2 of Volume 53, and I took the proofs of No.3 (a Special Issue on "Universal Human Rights versus Cultural Relativism" guest-edited by Prof. T. Turner of the University of Chicago & Prof. C.Nagengast of UNM) to Printing Services this morning. My goal is to bring JAR back to a schedule of publishing its for annual issues within the calendar year; hence we are assembling the Winter issue now. The Fall issue will be the subject of a story in the Sept. Anthropology Newsletter and will also be advertised in American Anthropologist.

Advertising in FY 1996-97 consisted of a full page ad in American Antiquity, a direct mailing to 1800 purchasers of UNM Press anthropology titles and booth representation at the American Anthropological Association and Society for American Archaeology meetings, as well as distribution of fliers in other venues. Despite the rate increase necessitated by steep (and ongoing) increases in printing costs (unjustified by the unreliability of UNM Printing Services), JAR is holding its own in subscribership. There are 1290 subscribers (50 of whom are free—mainly UNM faculty & administrators), of which 335 are foreign.

Revenues from subscriptions, offprints & reprinting rights totalled $55,801 in FY 1996-97, producing a "profit" to A&S of $7,358 beyond the $47,443 which was advanced to JAR by the College.

Authorship is increasingly international (the latest issue, 53/2, for example, has an American who is a Professor in Germany, 2 Argentines, a Spaniard, and 2 South Africans who teach at the University of Chicago as co-authors) and topics are eclectic, spanning much of the diversity of anthropological topics, time periods and world regions. JAR is one of only a very few anthropological journals to cover such a breadth and diversity of subjects.

In academic year 1996-97, the JAR Distinguished Lecturer was Prof. L.L.Cavalli-Sforza, whose lecture on genes, language and archaeology in Europe will be published in the Winter issue. This year's Lecturers will be Profs. Sherry Ortner of Columbia & F.Clark Howell of Berkeley.

The skilled, dedicated, hard-working JAR Staff consists of Dr. Patricia Nietfeld (contract Copy Editor), Margaret Coleclough (Administrative Assistant III—de facto Business Manager, despite the fact of being undersalaried per UNMPact III—given her responsibilities & 16 years of service), Mary Kay Day (On-call Staff, equivalent to Administrative Assistant I—Manuscript Processing Specialist), and Ariane Oberling (Student Assistant in charge of JAR Web Page & book review correspondence + data base). Besides Profs. Bock & Froehlich, the Editorial Board includes Profs. Louise Lamphere & Robert Santley. The list of Associate Editors has grown.
ANNUAL REPORT OF

THE OFFICE OF CONTRACT ARCHEOLOGY

JULY 1, 1996 – JUNE 30, 1997

by

Joseph C. Winter, Director
Richard C. Chapman, Associate Director
and Patrick F. Hogan, Assistant Director

A. Review of Activities and Achievements

Fiscal Year 1995-1996 was another year of severe challenges, for the Office of Contract Archeology. Most involved finances, primarily due to the effects of UNMPact. Details of our research accomplishments, financial problems, goals, and staff changes are presented below.

1. Description of Research

The majority of projects headed by Richard C. Chapman (Associate Director) as principal investigator were in analysis or report preparation stages during this year. Publications during FY 97 included the following:

*Data Recovery Along the Alameda Boulevard Improvement Project, Bernalillo County, New Mexico,* by Marie E. Brown, was published in June, 1997 (OCA/UNM Report No. 185-468). This summarizes results of research conducted under the general direction of Richard Chapman as principal investigator at three sites along Alameda Boulevard (including the vicinity of Alameda Pueblo, and the historic Alameda Plaza), and was sponsored by the New Mexico State Highway and Transportation Department and the Office of Archaeological Studies, Museum of New Mexico.

*Survey and Excavation in the Hidden Mountain Area: The Tri-Sect Landfill Road Project* by William H. Doleman was published in September 1996 (OCA/UNM Report No. 185-521). This report documents the excavation of two sites, and stabilization monitoring of another two sites along the Tri-Sect Landfill access road west of the Rio Puerco in Valencia County, NM. Richard C. Chapman served as principal investigator.

*San Elizario Historic District, San Elizario, El Paso County, Texas,* a National Register of Historic Places nomination prepared by David Kammer, was entered on the Register in February, 1997 (OCA/UNM Report No. 185-545A). Background and archeological data supporting this nomination were gathered during the fieldwork and analysis stages of the San Elizario excavations conducted in 1995-1996 under the direction of Bradley J. Vierra.
Jeanne A. Schutt (project director) with Richard C. Chapman as principal investigator, completed excavations at two multicomponent Archaic/Navajo sites (LA 101903, LA 101906) located on a ridge overlooking the Milk Ranch Canyon drainage at the Fort Wingate Depot Activity near Gallup, New Mexico. The work was sponsored by the U.S. Army Corps of Engineers, Albuquerque District. A suite of radiocarbon dates from hearth features at the two sites indicate intermittent occupation of the ridge from 3800 (+/- 170) B.P. to 160 (+/- 50) B.P. (conventional radiocarbon age). Analyses have been completed and the draft report for this project is in preparation.

Analysis and preparation of the draft final report documenting results of excavation of three sites in the Navajo Nation’s proposed Church Rock Industrial Park, located on the floodplain of the Rio Puerco of the West immediately north of the Fort Wingate study area, was completed by Jeanne A. Schutt (project director) with Richard C. Chapman as principal investigator. Two sites date to the early - mid Pueblo II period, with one exhibiting evidence of four occupations beginning with seasonally occupied pitstructures. The third site represents a 1930-1940s hobo camp. Review comments were received in fall of 1996, and production of the final report is ongoing.

Under the general direction of Richard C. Chapman as principal investigator, cultural resource monitoring activities on the Fort Wingate Depot Activity near Gallup, New Mexico, continued in 1996 and 1997 for the U.S. Army Corps of Engineers, Albuquerque District. Monitoring activities involved inspection of areas associated with removal of unexploded ordnance, installation of telephone lines, seismic exploration grids, and borrow pits. Fieldwork for the monitoring was conducted at different times by Chapman, Jeanne A. Schutt, Timothy McEnany, and Carolyn L. Daniel.

Monitoring of water and sewer line construction in the vicinity of the historic mission town of Socorro, Texas was undertaken by Robert Estes, under the direction of Richard Chapman (principal investigator). Results of the construction monitoring are being added as an appendix to the final report documenting excavations in the vicinity of the Old Socorro Mission archeological site, historically documented as the first location of Piro Pueblo refugee
settlement during the Pueblo Revolt of 1680-81. This project was sponsored by the El Paso County Lower Valley Water District Authority, and production of the final report is in progress.

William H. Doleman and Richard Chapman initiated preparation of a research design and data recovery plan for three sites along the Rio San Jose near Grants, New Mexico for the Museum of New Mexico Office of Archaeological Studies and the New Mexico State Highway and Transportation Department. One of the sites may contain a Folsom stage paleoindian component.

William H. Doleman completed analysis and preparation of the draft final report summarizing results of excavations at three sites along NM 26 near Hatch, NM. Fieldwork and preliminary analysis of artifacts and features for this project was completed over two years ago, but the project had to be mothballed until legal instruments between UNM and the Museum of New Mexico could be put back in place. The project was restarted in March of 1997, with production of a final report scheduled for completion in December, 1997.

Patrick Hogan continued his work on the large MAPCO Pipeline project, which involves carrying out all cultural resource management work along a pipeline that cuts diagonally across New Mexico. Excavations were started at the final site in May of 1997, and continued into July of FY 97–98. Analyses and draft report preparation also continued. In addition, Hogan completed two reports on other projects: the Restless Fence Remediation, and the Phase II Butterfield Trail Survey.

Joseph Winter served as principal investigator on a number of small projects, including the Tomé Hill Phase II project at Tomé, New Mexico; test excavations at Galisteo Reservoir near Bajada Hill; test excavations at Santa Rosa Reservoir near Santa Rosa; a survey at Alamogordo; and preparation of a data recovery plan for five sites along Highway 44. Excavations at the Highway 44 sites will occur this fall. The final reports for the Belen RR Yard test excavations and the data recovery report for the Valencia Pueblo excavations were produced, as were the draft brochures and trail sign designs for the Tomé Hill Phase II project. The Valencia report (project 185-400D) was edited by Kenneth Brown and Bradley Vierra; titled Excavation at Valencia Pueblo (LA 953) and a Nearby Hispanic Settlement (LA 67321), in Valencia County, N.M., it describes the results of excavations at a medium-sized Pueblo IV village site that was probably one of the ancestral villages for Isleta Pueblo. Several other final reports were also produced. In addition Winter continued the Huichol Research and Assistance Project, and his other tobacco-related research, described below under "Scholarly Accomplishments" and "Public Outreach".

Table 1 lists the status of all OCA projects, as of 6/30/97.
<table>
<thead>
<tr>
<th>PROJECT</th>
<th>SPONSOR</th>
<th>BRIEF DESCRIPTION</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>185-372</td>
<td>Office of Military Affairs</td>
<td>Hawk Missile Excavations</td>
<td>Final report in preparation</td>
</tr>
<tr>
<td>185-400A, C</td>
<td>Office of Archaeological Studies, Museum of New Mexico</td>
<td>Valencia Excavation</td>
<td>Completed</td>
</tr>
<tr>
<td>185-412, B</td>
<td>Wilson &amp; Company</td>
<td>Belen RR Yard Testing</td>
<td>Completed</td>
</tr>
<tr>
<td>185-468, B</td>
<td>Office of Archaeological Studies, Museum of New Mexico</td>
<td>Alamada Boulevard Data Recovery</td>
<td>Completed</td>
</tr>
<tr>
<td>185-492</td>
<td>Bureau of Land Management</td>
<td>Boyd Data Recovery, Phase I</td>
<td>Draft report in preparation</td>
</tr>
<tr>
<td>185-509</td>
<td>Safe-Waste, Inc.</td>
<td>Data Recovery at LA 98670</td>
<td>Completed</td>
</tr>
<tr>
<td>185-509A</td>
<td>Safe-Waste, Inc.</td>
<td>Supplemental Data Recovery at LA 98670</td>
<td>Completed</td>
</tr>
<tr>
<td>185-509B</td>
<td>Safe-Waste, Inc.</td>
<td>Cut-Bank Stabilization and Monitoring at LA 100659 and LA 100669</td>
<td>Completed</td>
</tr>
<tr>
<td>185-511</td>
<td>Office of Archeological Studies, Museum of New Mexico</td>
<td>Data Recovery along NM 26 near Hatch</td>
<td>Draft final report completed, final report in production</td>
</tr>
<tr>
<td>185-517</td>
<td>New Mexico National Guard</td>
<td>Excavations at 3 Sites on Hawk Battalion Facility Near Bernalillo</td>
<td>Final report in preparation</td>
</tr>
<tr>
<td>185-519</td>
<td>Bureau of Land Management</td>
<td>Restless Fence Remediation Program</td>
<td>Completed</td>
</tr>
<tr>
<td>185-520</td>
<td>Bureau of Land Management</td>
<td>Boyd Land Exchange Data Recovery, Phase II</td>
<td>Final report in preparation</td>
</tr>
<tr>
<td>185-525</td>
<td>U.S. Army Corps of Engineers</td>
<td>Fort Wingate Depot Activity Survey - 4817 Acres</td>
<td>Final report in production</td>
</tr>
<tr>
<td>185-533</td>
<td>U.S. Army Corps of Engineers</td>
<td>Fort Wingate Depot Activity Testing</td>
<td>Final report in production</td>
</tr>
<tr>
<td>185-537</td>
<td>U.S. Army Corps of Engineers</td>
<td>Ft. Wingate Additional Survey (1743 Acres)</td>
<td>Final report in production</td>
</tr>
<tr>
<td>185-537A</td>
<td>U.S. Army Corps of Engineers</td>
<td>Fort Wingate Additional Survey Extension</td>
<td>Final report in production</td>
</tr>
<tr>
<td>185-541</td>
<td>Bureau of Land Management</td>
<td>Butterfield Trail Survey – Phase II</td>
<td>Completed</td>
</tr>
<tr>
<td>185-543A</td>
<td>Navajo Nation</td>
<td>Data Recovery of 3 Sites in Church Rock Industrial Park</td>
<td>Final report in preparation</td>
</tr>
<tr>
<td>PROJECT</td>
<td>SPONSOR</td>
<td>BRIEF DESCRIPTION</td>
<td>STATUS</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>-------------------</td>
<td>--------</td>
</tr>
<tr>
<td>185-545A</td>
<td>El Paso County Lower Valley Water District Authority</td>
<td>Phase III Archeological Testing at Socorro and San Elizario</td>
<td>Final report in preparation</td>
</tr>
<tr>
<td>185-547 C, D, E</td>
<td>Mid-America Pipeline Company</td>
<td>Data Recovery Field Work Phase - Four Corners Pipeline Loop project</td>
<td>Field work completed, analysis in progress</td>
</tr>
<tr>
<td>185-549</td>
<td>El Paso County Lower Valley Water District Authority</td>
<td>Phase II/IB Data Recovery and Monitoring, Socorro, Texas</td>
<td>Final report in preparation</td>
</tr>
<tr>
<td>185-550</td>
<td>U.S. Army Corps of Engineers</td>
<td>Trinidad Colorado 1995 Survey</td>
<td>Completed</td>
</tr>
<tr>
<td>185-555</td>
<td>U.S. Army Corps of Engineers</td>
<td>Corrales Levee Historical Documentation</td>
<td>Completed</td>
</tr>
<tr>
<td>185-555B</td>
<td>U.S. Army Corps of Engineers</td>
<td>Corrales Levee Historical Documentation; Supplemental funding</td>
<td>Completed</td>
</tr>
<tr>
<td>185-555C</td>
<td>U.S. Army Corps of Engineers</td>
<td>MRGCD Levee Historical Documentation; Belen and San Acacia Reaches</td>
<td>Completed</td>
</tr>
<tr>
<td>185-560A</td>
<td>U.S. Fish and Wildlife Service</td>
<td>Test Excavations at Bosque del Apache</td>
<td>Completed</td>
</tr>
<tr>
<td>185-561</td>
<td>U.S. Army Corps of Engineers</td>
<td>BMDO Monitoring, Ft. Wingate</td>
<td>Field work and reporting in progress</td>
</tr>
<tr>
<td>185-562</td>
<td>CAMI</td>
<td>Tijeras Arroyo Survey</td>
<td>Completed</td>
</tr>
<tr>
<td>185-571</td>
<td>Maestas and Associates</td>
<td>Taos Test Excavations</td>
<td>Final report in preparation</td>
</tr>
<tr>
<td>185-572A</td>
<td>Valley Improvement Association</td>
<td>Tomé Hill Phase II Survey and other work</td>
<td>Final deliverables in preparation</td>
</tr>
<tr>
<td>OCA-046</td>
<td>Koll Telecommunications</td>
<td>Socorro and Las Cruces Surveys</td>
<td>Completed</td>
</tr>
<tr>
<td>185-580</td>
<td>U.S. Army Corps of Engineers, Albuquerque District</td>
<td>Santa Rosa Reservoir Test Excavation</td>
<td>Fieldwork completed—other work will be in separate contracts</td>
</tr>
</tbody>
</table>
Table 1

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>SPONSOR</th>
<th>BRIEF DESCRIPTION</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>185-598</td>
<td>Museum of New Mexico, Laboratory of Anthropology</td>
<td>Highway 44 Data Recovery Plan</td>
<td>Completed</td>
</tr>
<tr>
<td>185-604</td>
<td>Office of Archeological Studies, Museum of New Mexico</td>
<td>Data Recovery plan for 3 sites along NM 117</td>
<td>Draft plan in preparation</td>
</tr>
</tbody>
</table>

2. Financial Statement

Table 2 lists the direct costs contracted for in new projects and the new indirect costs represented by them, in FY 96-97. When compared with the previous 10 years (Table 3) FY 96-97 was lower than average, but still good enough so that the IDC budgeted in new contracts was almost twice the amount of our general operating budget. There are several reasons for this lower than average amount of return in FY 96-97:

1. The amount of new projects and the IDC budgeted in them fluctuates from year to year, depending on how many potential contracts are available each year and the nature of the competition. A low year in FY 96-97 following two good years in FY 94-95 and FY 95-96 is not surprising, since there was also a low in FY 92-93, following six good years from FY 86-87 to FY 91-92. The overall 11 year average is still quite good, and the university administration should realize that there will be occasional poor years, following a number of good years. Also, FY 97-98 appears to have started out well, with the field work for the proposed Highway 44 excavation project alone worth $224,665.00 in a new delivery order that we will probably receive since it is in our open-ended State of New Mexico contract, so we do not necessarily anticipate another lower-than-average year.
<table>
<thead>
<tr>
<th>PROP. #</th>
<th>ACCOUNT #</th>
<th>AGENT</th>
<th>PROJECT</th>
<th>AMOUNT</th>
<th>OVERHEAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>185-545B</td>
<td>3-43711-</td>
<td>El Paso Lower Valley Water District</td>
<td>Phase III Archeological Testing - Revised</td>
<td>(-)$17,785.00</td>
<td>(-)$7,785.00</td>
</tr>
<tr>
<td>185-547D</td>
<td>3-43021-</td>
<td>Mid America Pipeline Company</td>
<td>MAPCO Pipeline remaining work</td>
<td>$730,086.04*</td>
<td>$236,784.60*</td>
</tr>
<tr>
<td>185-547E</td>
<td>3-43023-</td>
<td>Mid America Pipeline Company</td>
<td>MAPCO Pipeline remaining work</td>
<td>$185,000.00 in lieu of bond**</td>
<td>$60,000.00**</td>
</tr>
<tr>
<td>185-580</td>
<td>3-45595-</td>
<td>U.S. Army Corps of Engineers, Albuquerque District</td>
<td>Santa Rosa Reservoir Test Excavations</td>
<td>$8,685.00</td>
<td>$2,691.00</td>
</tr>
<tr>
<td>185-598/598A</td>
<td>3-33115-</td>
<td>State of New Mexico</td>
<td>Highway 44 Data Recovery Plan</td>
<td>$7,934.78</td>
<td>$2,573.44</td>
</tr>
<tr>
<td>185-601/a,b,c,d</td>
<td>3-48811-</td>
<td>U.S. Army Corps of Engineers, Albuquerque District</td>
<td>Alamogordo Survey</td>
<td>$32,987.52</td>
<td>$10,221.00</td>
</tr>
<tr>
<td>185-604</td>
<td>3-33116-</td>
<td>Museum of New Mexico, Office of Archeological Studies</td>
<td>Data Recovery Plan for 3 Sites Near Grants, New Mexico</td>
<td>$6,801.00</td>
<td>$2,206.00</td>
</tr>
<tr>
<td>185-584A</td>
<td>3-43718-</td>
<td>U.S. Army Corps of Engineers, Albuquerque District</td>
<td>Data Recovery at 4 Sites on Fort Wingate Depot Activity, Fieldwork, Analysis, and Draft Report</td>
<td>$124,852.78</td>
<td>$38,888.00</td>
</tr>
<tr>
<td>185-584B</td>
<td>3-43718-</td>
<td>U.S. Army Corps of Engineers, Albuquerque District</td>
<td>Data Recovery at 2 Sites on Fort Wingate Depot Activity, Final Report</td>
<td>$10,193.60</td>
<td>$3,158.00</td>
</tr>
<tr>
<td>185-584C</td>
<td>3-43718-</td>
<td>U.S. Army Corps of Engineers, Albuquerque District</td>
<td>Deletion of Fieldwork and Draft Report at 2 Sites at Fort Wingate Depot Activity</td>
<td>(-)$10,351.90</td>
<td>(-)$3,207.00</td>
</tr>
<tr>
<td>OCA-045</td>
<td>1-23490-</td>
<td>Central New Mexico Electric Cooperative, Inc.</td>
<td>Class I Records Search, Powerline Project</td>
<td>$675.00</td>
<td>N/A</td>
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<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td>$1,079,078.80</td>
<td>$345,330.04</td>
</tr>
</tbody>
</table>

Notes:  
* About half of what was requested in 185-547D  
** 185-547E also included $250,000.00 remaining from 3-43021-, and $374,378.60 in new money. Only the $250,000.00 and $185,000.00 was agreed to. Since the $250,000.00 was already counted in the 185-547D proposal, it is not repeated.
Table 3 11 Year Revenue Record for CCA

<table>
<thead>
<tr>
<th>FY</th>
<th>TOTAL NEW CONTRACTS</th>
<th>IDC BUDGETED IN NEW CONTRACTS</th>
<th>OPERATING BUDGET</th>
<th>DIFFERENCE BETWEEN BUDGETED IDC AND YEARLY BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>86-87</td>
<td>$1,333,621.00</td>
<td>$349,380.00</td>
<td>$667,166.00</td>
<td>$282,664.00</td>
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<tr>
<td>87-88</td>
<td>$1,216,618.00</td>
<td>$275,696.00</td>
<td>$731,640.00</td>
<td>$202,532.00</td>
</tr>
<tr>
<td>88-89</td>
<td>$1,153,364.00</td>
<td>$289,678.00</td>
<td>$100,706.00</td>
<td>$188,972.00</td>
</tr>
<tr>
<td>89-90</td>
<td>$1,054,198.00</td>
<td>$298,364.00</td>
<td>$100,175.00</td>
<td>$188,193.00</td>
</tr>
<tr>
<td>90-91</td>
<td>$7,937,994.00</td>
<td>$2,490,000.00</td>
<td>$178,437.00</td>
<td>$2,311,563.00</td>
</tr>
<tr>
<td>91-92</td>
<td>$3,269,546.00</td>
<td>$962,027.00</td>
<td>$122,484.00</td>
<td>$839,543.00</td>
</tr>
<tr>
<td>92-93</td>
<td>$547,045.00</td>
<td>$80,299.00</td>
<td>$118,918.00</td>
<td>$38,619.00</td>
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<tr>
<td>93-94</td>
<td>$1,221,245.00</td>
<td>$347,698.00</td>
<td>$169,550.00</td>
<td>$178,198.00</td>
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<tr>
<td>94-95</td>
<td>$1,805,014.00</td>
<td>$572,558.00</td>
<td>$176,330.00</td>
<td>$397,228.00</td>
</tr>
<tr>
<td>95-96</td>
<td>$2,296,554.00</td>
<td>$734,631.00</td>
<td>$176,722.00</td>
<td>$557,909.00</td>
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<tr>
<td>96-97</td>
<td>$1,079,078.82</td>
<td>$345,330.04</td>
<td>$182,049.00</td>
<td>$163,281.04</td>
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<tr>
<td>TOTAL</td>
<td>$22,914,277.82</td>
<td>$5,745,661.04</td>
<td>$1,464,251.00</td>
<td>$5,281,400.04</td>
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<tr>
<td>YEARLY AVERAGE</td>
<td>$2,083,116.10</td>
<td>$613,241.91</td>
<td>$133,114.63</td>
<td>$480,127.28</td>
</tr>
</tbody>
</table>

* Salary charges figured in

Table 4 Summary of Year End Balance In Account 1-18065 and Effect of UNMPact

<table>
<thead>
<tr>
<th>FY</th>
<th>YEAR END BALANCE ACCOUNT 1-18065</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993-1994</td>
<td>+$52,649.96</td>
</tr>
<tr>
<td>1994-1995</td>
<td>+$30,357.97</td>
</tr>
<tr>
<td>1995-1996</td>
<td>+$30,879.39</td>
</tr>
<tr>
<td>1996-1997</td>
<td>-$48,394.56</td>
</tr>
</tbody>
</table>

2. The imposition of the UNMPact new and retroactive salary raises had a severe effect on OCA. As shown by Table 4, we had to pay $79,000.00 out of our General operating account (1-18065) to cover these raises, since they were not covered in our already signed contracts and pre-UNMPact proposals. Table 4 demonstrates how our FY 96-97 end of the year carry over in this account went from + $30,879.39 at the end of FY 95-96, to - $48,394.56 at the end of FY 96-97. This loss of $79,000.00 was, we believe, totally due to our having to pay the new salary increases and retroactive increases out of our general account.
In addition, these raises and other cost increases have raised our costs to the point that we are almost non-competitive, and are the main reason that our most of FY 96-97 proposals have not been successful. In contrast to our private competitors, which do not appear to pay the fringe and leave benefits and high overhead that we do, we were already in a very tight competitive position prior to UNMPact, since our leave benefits in FY 96-97 were 21% of salaries, our fringe benefits were 24% of salaries and leave benefits, and our overhead rates were 26% - 48% of all direct costs. With the imposition of the UNMPact salary rates, this placed us in an even tighter financial position, and cost us a number of projects due to our very high costs. This is reflected by the Natural Bridges National Monument proposal (#185-583), which was submitted to the National Park Service before the UNMPact raises. After it was turned down, the Park Service told us that we scored the highest number of points of any organization in our technical proposal, but the lowest number in our cost proposal, due to our high costs.

Fortunately, in FY 96-97 we had a number of long term clients such as the U.S. Army Corps of Engineers, State of New Mexico, and MAPCO, which previously agreed to our high leave and fringe benefits and overhead. All three also agreed to the UNMPact raises in our new proposals, though they did not agree to the retroactive raises for past work, or for the UNMPact raises in proposals that had already been accepted. It remains to be seen if we will be able to overcome this challenge.

One final financial problem that is not reflected by these figures involves the retroactive overtime we had to pay as a result of a U.S. Department of Labor review of our accounts. Until September of 1995, our standard operating procedure for field work was to pay straight pay for a 10 day work period, followed by 4 days off. On several occasions we had checked with Human Resources, and were told that it was appropriate. However, in August of 1995 one of our workers challenged the policy, and after a detailed review the Labor Department decided that we have to start paying 1 day of overtime for the 10 day work period. It also calculated that we owed our workers approximately $25,000.00 for the previous two year period. This money was paid by the UNM administration, out of a separate account.

3. Scholarly Accomplishments

OCA staff continued to make a number of scholarly accomplishments. Joseph C. Winter continued his research with Native American tobacco, and with the Huichol Indians of Mexico. With regard to the latter, in November 1996 he completed an International Travel and Planning Grant project funded by the National Science Foundation, to visit Mexico to develop a larger research grant. Later he received a UNM Faculty Research Allocation Grant to begin the research. He left for Mexico in late June of 1997 with one student, and while he had to cut short his visit due to permit problems, he was able to collect some data, and he hopes to return for two to three more years, with proposed NSF funding.
Winter also served on the planning committee for the 1997 Navajo Studies Conference, which was hosted by UNM and partially funded by a New Mexico Endowment for the Humanities grant. In addition he organized and ran a symposium at the conference on the Navajo uses of tobacco, and he presented his own paper in the symposium. Winter also presented a paper on the MicMac Indian uses of tobacco, at the International Conference on Traditional Medicine and Healing, in Newfoundland.

Richard Chapman served again as Chair of the UNM Board of Archaeologists. Chapman gave lectures for the UNM Archaeology Field School held at the Young Ranch, and for the University of Chicago Archaeology Field School held at Paa-ko. Chapman also gave an illustrated talk concerning Fort Wingate archeology and ethnographic studies at an intergovernmental meeting at the U.S. Army Corps of Engineers Albuquerque District offices.

Jeanne Schutt coordinated survey of portions of Las Huertas Canyon for the Las Placitas Association, Albuquerque Open Space, and the Archaeological and Historical Research Institute, all non-profit organizations who are using New Mexico Historic Preservation Department matching funds to create open space in the Placitas area.

Ronald Stauber contributed illustrations for a biography by Rudolfo Anaya.

William Doleman gave a paper “Of Late Holocene Luaus: Comparison of Archeological and Simulated Hot-Rock Assemblages from an Archaic Site in Southern New Mexico”, at the 1997 Society for American Archaeology Meetings in New Orleans, and was a guest lecturer in an Anthropology 120-L section.

4. Public Outreach

Joseph C. Winter continued developing the Traditional Native American Tobacco Seed Bank and Education Program (TNAT), which collects, preserves, grows, and distributes sacred tobacco seeds to any Native American requesting them, as long as the resulting tobacco is used only for traditional purposes (i.e., ceremonies). TNAT also provides free tobacco leaf for ceremonies and offerings, especially to Native Americans who have lost access to traditional tobacco. As of 6/30/97, monthly leaf distribution programs had been set up at over 120 prisons, halfway houses, substance abuse treatment centers, AIDS counseling programs, and similar organizations in the U.S. and Canada, where Native Americans are in need of this sacred substance.

Through TNAT Winter also made a number of tobacco health education presentations, at powwows, conferences, and other occasions. These included presentations at the 1997 Gathering of Nations Powwow in N.M., the 1997 Blackjack Mountain Powwow in Georgia, the 1997 Keepers of the Treasures Conference in Alaska, and the 1997 UNM Diversity Celebration. He also made presentations at the Native American Preparatory School in N.M., the Southwest regional annual meeting of the American Indian Sciences and Engineering Society, and a fundraiser for
Native American prisoners, also in N.M. Health presentations were additionally made to Native American prisoners at the maximum security prison in Santa Fe and the medium security prison in Los Lunas. Finally, an article on TNAT appeared in the spring 1997 issue of UNM’s Quantum magazine, while other articles appeared in a number of newspapers in the U.S. and Canada.

B. Plans, Problems, and Recommendations

The major challenge in FY 96-97 will be to improve our level of funding for OCA, especially in light of the UNMPact raises. We also need to have Anthropology graduate students take on one or more of our projects as dissertation research. Finally, we need to work with the department in developing a cultural resource management faculty position and program. A detailed proposal for this program was submitted to the archeology faculty in the spring of 1997, and we hope that it can be acted on this year. This would also foster a continued integration of OCA with the rest of the Anthropology Department.

C. Staff Appointments and Separations

See Table 5 attached.
### OCA FULL-TIME EMPLOYEES — FY 1996–1997

<table>
<thead>
<tr>
<th>EMPLOYEE</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bargman, Byrd</td>
<td>Crew Chief</td>
</tr>
<tr>
<td>Brown, Kenneth L.</td>
<td>Project Administrator</td>
</tr>
<tr>
<td>Brown, Marie E.</td>
<td>Project Director</td>
</tr>
<tr>
<td>Chapman, Richard C.</td>
<td>Associate Director</td>
</tr>
<tr>
<td>Daniel, Carolyn L.</td>
<td>Crew Chief</td>
</tr>
<tr>
<td>Doleman, William H.</td>
<td>Project Director</td>
</tr>
<tr>
<td>Elyea, Janette</td>
<td>Project Director</td>
</tr>
<tr>
<td>Eschman, Peter N.</td>
<td>Computer Analyst</td>
</tr>
<tr>
<td>Gerow, Peggy A.</td>
<td>Project Director</td>
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<tr>
<td>Hogan, Patrick F.</td>
<td>Assistant Director</td>
</tr>
<tr>
<td>Lasusky, Donna K.</td>
<td>Administrative Assistant</td>
</tr>
<tr>
<td>McEnany, Timothy G.</td>
<td>Crew Chief</td>
</tr>
<tr>
<td>Polk, Harding</td>
<td>Crew Chief</td>
</tr>
<tr>
<td>Schutt, Jeanne A.</td>
<td>Project Director</td>
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<tr>
<td>Stauber, Ronald L.</td>
<td>Cartographer</td>
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<td>Vierra, Bradley J.</td>
<td>Project Director</td>
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<tr>
<td>Walth, Charle</td>
<td>Crew Chief</td>
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<tr>
<td>Ward, Donna</td>
<td>Data Entry</td>
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<tr>
<td>Winter, Joseph C.</td>
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### OCA EMPLOYEES THAT WERE FULL-TIME STATUS AND SWITCHED TO ON-CALL STATUS — FY 1996–1997

<table>
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<tr>
<th>EMPLOYEE</th>
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<tr>
<td>Arms, George</td>
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<tr>
<td>Brown, Stanley</td>
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<td>Donaldson, Cindy</td>
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<td>Hughes, Patricia</td>
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<td>Martin, Jana</td>
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<td>Mudd, Patricia</td>
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<tr>
<td>Pena, Hugo</td>
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<td>Rhoades, Randall</td>
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<td>Roberts, Tod</td>
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<td>Romero, Louis</td>
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<tr>
<td>Sheppard, John Mark</td>
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<tr>
<td>Spence, Nicolas</td>
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**OTHER OCA CURRENT ON-CALL EMPLOYEES — FY 1996–1997**

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<tr>
<td>Albertson, Van</td>
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<td>Corbett, Charles</td>
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<td>Franklin, Hayward</td>
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<td>Gevock-Delahaye, Cecile</td>
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<td>Gustafson, Hansene</td>
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<td>Huckell, Lisa</td>
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<td>Knepler, Michael</td>
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<td>Kramer, Kathy</td>
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<td>Martin, Deborah</td>
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<tr>
<td>Perlman, Susan</td>
<td>Ethnographer</td>
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<tr>
<td>Peywa, Fernando</td>
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<td>Shaffrey, Colleen</td>
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<tr>
<td>Andrews, Paul</td>
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<td>Banks, Linda</td>
<td>Editor</td>
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<tr>
<td>Chavez, Cynthia</td>
<td>Registration Assistant</td>
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<td>Estes, Bob</td>
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<td>Kessler, Karen</td>
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<tr>
<td>Myers, Wendy</td>
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<tr>
<td>Pierce, Kathy</td>
<td>Laboratory Director</td>
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<tr>
<td>Saxe, Victoria</td>
<td>Assistant Crew Member</td>
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<tr>
<td>Topaha, Carmelita</td>
<td>Crew Member</td>
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OCA WORK STUDY EMPLOYEES — FY 1996–1997

<table>
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<th>EMPLOYEE</th>
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<tr>
<td>Allen, David</td>
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<td>Dzurec, Alexander</td>
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<td>Garrett, Alan</td>
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<tr>
<td>Montoya, Michael</td>
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<td>Nunnery, Jon</td>
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OCA EMPLOYEE SEPARATIONS — FY 1996–1997

<table>
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<th>EMPLOYEE</th>
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<td>Backer, Ana</td>
<td>August 1, 1996</td>
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<td>Bradley, Ronna J.</td>
<td>September 30, 1996</td>
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<tr>
<td>Donaldson, Cindy</td>
<td>June 6, 1997</td>
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<td>Gish, Jennifer</td>
<td>October 21, 1996</td>
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<tr>
<td>Hubley, Patricia</td>
<td>June 10, 1996</td>
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<tr>
<td>Kramer, Kathy</td>
<td>March 17, 1997</td>
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<td>Polk, Harding</td>
<td>August 30, 1996</td>
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<td>Spence, Nicolas</td>
<td>August 16, 1996</td>
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<td>Viarra, Bradley</td>
<td>January 1, 1997</td>
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<td>Walth, Cherio</td>
<td>October 24, 1996</td>
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<td>Ward, Donna</td>
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</table>
MAXWELL MUSEUM OF ANTHROPOLOGY

ANNUAL REPORT

Garth Bawden
Director
A. GENERAL

This year was primarily one of planning and consolidation. Late in 1995 the Maxwell Museum initiated a long-term review process with a primary view of: (1) ensuring that its mission appropriately reflects and furthers its potentials as a part of the educational purpose of the University of New Mexico, (2) that the Maxwell is able to meet the challenges posed by changing economic times and scholarly concepts as they relate to research museums, and (3) that it maintains an organizational structure which maximizes its efficiency in furthering this mission. This continued throughout the year and was supplemented by two external reviews. In addition the Maxwell continued to support a range of public programs and collections research and maintenance agencies, and made some substantive improvements in both these areas.

B. INTERNAL REVIEW PROCESS

During 1996-7 the initial stage of this process, which enabled the entire staff to participate in a series of theme-oriented committees, was completed. This phase produced detailed information on the museum's present needs and available organization, the strategies used by other peer institutions for administration, collections care, research, program development, and public involvement, and preliminary suggestions as to how the Maxwell can better address these issues. The second phase, which commenced in May of 1997 is one in which a smaller working group of senior staff under the chairmanship of the Director, uses this data to develop specific organizational and mission-related initiatives that will be taken to the Dean of the College of Arts and Sciences for approval and implementation by the end of the current academic year.

C. EXTERNAL REVIEWS

The Museum received the culminating segments of two external reviews in the past year. In Fall 1996 the research programs and educational support activities of the museum, which work closely with the UNM Department of Anthropology, were assessed by a team of visiting scholars as an accompaniment to the regular review of this academic department. The Maxwell was highly praised for its progress and achievement in these areas and assessed to be among the top 10 research museums of Anthropology in the United States. The team suggested that, in addition to expanding its inadequate storage space, the museum create a body of associated scholars, drawn from resident Anthropology faculty and outside scholars who use the collections and facilities of the museum. Creation of this associated title will enhance the ability of both Museum and Anthropology Department to conduct research and add to their
prestige by bringing eminent outside scholars into close working relationship with UNM.

In March 1997 the Museum received a second visiting review, appointed by the American Association of Museums as the ultimate phase of a year-long reaccreditation process. Accreditation is granted to those museums who are superior in carrying out their mission of collections curation and use, research, and public education. Only 750 museums are accredited out of approximately 10,000 applicants in the US, of which only a small number are university institutions. Reaccreditation is required every ten years. The visiting team of university museum scholars/directors recommended in August that the Maxwell should be reaccredited (for the third time), again with some suggestions as to how improvements, primarily to storage space, should be addressed.

These external reviews clearly indicate that the intensive internal efforts of the museum staff to improve the structure and operations of the museum, and especially to develop its research capability, are paying off. This in turn gives added confidence to continue the process during the coming year.

D. SPECIFIC RE-ORGANIZATION INITIATIVES

Several important components of the ongoing re-organization process were either commenced or completed during 1996-7.

a. Education Division

The public education division was fundamentally re-organized in conjunction with the imminent termination of its director due to permanent disability. This event opened the opportunity for thorough assessment and change. The new coordinator has instituted a new structure that brings the academic expertise of the museum curators into play as a permanent research support body for the division, while at the same time ensuring the scholarly integrity of its teaching content. Reorganization of the teacher training structure, implemented this summer, also guarantees enhanced academic input. This reorganization phase will continue to develop through the next year.

b. Museum Stores

After a close review of the store's operation in 1995-6 the Director realized in conjunction with UNM central administrative authorities, that the division's policies, procedures, and selling
ability was no longer adequate to meet its needs. With the help of Internal Audit and the UNM Accounting department he initiated a two-year period of internal re-organization. This continued through the 1996-7 year with emphasis on updating financial controls and policies, staff re-organization, and eliminating the surplus inventory. The process will continue through the coming year and widen to include retail inventory and marketing improvement. Also the viability of the Maxwell's San Felipe Old Town store is in question and must be resolved in the coming year and a plan developed to resolve any associated deficits.

c. Exhibition Development Committees

In 1997 the existing structure of the Maxwell's standing exhibit committee, the body of staff responsible for generating and implementing the public exhibition program, was seen to be inefficient in 1997 with too great a variety of tasks being undertaken by the same group. Reorganization divided the tasks between a small planning group and a larger implementation committee. The former includes the heads of the curatorial and research activities as well as a senior public programmer. This will ensure that the exhibits closely reflect the fundamental educational mission of the museum. The implementation group contains professional museum specialists who control the necessary expertise to design, fund and build the selected exhibits.

d. Museum Accountant

The Museum took a very important step toward improving its administrative efficiency with the hire of a senior accountant who is in overall charge of all financial issues. Given the significant expansion of the Maxwell's responsibilities in the last decade, its central financial ability has become clearly inadequate. Creation of this position provides the assurance that all museum departments will be well supported in the vital area of financial control.

e. Reorganization and Update of Museum Collections Database

The Database Coordinator position was created as part of the internal reorganization process and filled in October 1997. The express purpose of the position was to centralize the previously dispersed anthropology computerized collections records and to establish a new basic collections maintenance system. During the balance of the year the existing documentation was reviewed and procedures developed for this endeavor together with evaluation of future needs that may remove the need to depend on the overly
expensive ARGUS system. This preliminary work will continue throughout the coming year.

E. SPECIFIC PROJECTS

These projects fall beyond the confines of planned reorganization but carried important implications for the museum and thus are highlighted.


The Museum's continuing efforts to comply with the NAGPRA requirements reached a new phase this year. With the end of the university-funded part of the process the Maxwell obtained a major grant from the Department of the Interior for special staff and for support of the consultation phase. This requires the museum to contact all native groups associated to its extensive North American and Hawaiian collections with a view to identifying specific cultural connections and to prepare a process for return of materials of cultural import to those groups. The NAGPRA staff, in addition to visiting numerous tribes and bringing their representatives to the museum for consultation, also held two conferences at UNM. These involved most southwestern tribes and collections agencies and successfully addressed general issues of affiliation and cooperation. The NAGPRA process continues next year.

In addition the Maxwell submitted its suggested guidelines for research use of the collections in the light of NAGPRA restrictions, to the UNM University Counsel's office for review. This is now complete and appropriately brings the university's legal authorities into this complicated issue. Further work on effective policies in accord with the university's research needs and the native community's rights under NAGPRA will continue.

b. Dr. Frank Hibben Donation

Dr. Hibben is continuing to develop plans to donate a major sum of money to support collections facilities and related research. During the past year the negotiations for the first time included the UNM Administration and will continue into the coming year.

c. New Storage Facility

In March of 1997 a new archaeological collections facility
(the converted carwash building of the Old Galles property) was released for use by the UNM Physical Plant. This building, although far from ideal, is sufficient for the storage of the large segments of the archaeology collections that do not need environmental controls. It thus represents a major step toward resolving the immediate storage needs. However, given the steady expansion of the archaeological collections under the terms of contractual agreement with UNM and Federal agencies this can only be viewed as an short-term solution. Long-range solution still awaits.

F. OTHER SIGNIFICANT DEVELOPMENTS, PROJECTS AND EVENTS.

a. Museum Sponsored Research 1996-7

i. Archaeology

- Conference on Archaic Prehistory of Southwest, October 1996. (Dr. Huckell)
- International South Seas Symposium, June 1997. (Dr. Bawden)
- Field Project at the Rio Rancho, ongoing. (Dr. Huckell)
- 22 Outside researchers used collections (Ms. Dorr - Curator)

ii. Ethnology

- 10th Navajo Studies Conference, May 1997 (Dr. Huckell)

iii. Human Osteology

- Forensic Anthropology Analysis, continuing (Dr. Powell)
- 25 researchers used collections (Drs. Powell and Hilton)
- Preliminary research in Brazil (Dr. Powell)

b. Outside Sponsored Research

1. Dr. Garth Bawden (Director)

- Southern Peru Copper Corporation funding for the Ilo Project in Southern Peru. This is an ongoing program of research under the auspices of the multi-institutional Programa Contisuyu, to date funded to the level of $400,000.

2. Dr. Bruce Huckell (Senior Research Coordinator).
- Hearst Museum funding for one week test excavation at McEuern Cane, Arizona.

- Arizona State Museum funding for site survey in Chevalon Canyon, Arizona.

3. Dr. Joseph Powell (Curator of Human Osteology)

- $5000 NAGPRA compliance funding. Dept. of Interior NAGPRA grant.

- $8000 grant from the Fundacao de Amparo a Perquisa de Estado de Sao Paulo, Brazil and the UNM Research Allocation Committee for palaeoindian research in Eastern Brazil.

c. Public Exhibitions with Opening Dates.

1. Pilgrimage to Chimayo, August 2nd 1996.
2. Monos de Cochiti: Historic Clay Figure and Their Present Day Counterparts, November 23rd 1996.

Also the Maxwell Museum's traveling exhibit "Cuando Hablan Los Santos" has been displayed at the Fowler Museum of Culture History at the University of California, Los Angeles throughout the year and smaller displays at the Old Town San Felipe Gallery included lithic technology, historic pueblo photographs, and textiles.

G. PLANS AND RECOMMENDATIONS FOR COMING YEAR

This is a summary of the items mentioned in previous sections and basically involves the staff of the Maxwell Museum, especially its senior members, devoting much of their efforts to the continuing process of self-assessment and, where necessary, restructuring. On the heels of last year's two positive national peer reviews this is clearly the time to move ahead in this direction and major strides can be taken in the 1997-8 period. The Museum will address the following goals:
1. Continue the re-structuring process and have recommendations for the Dean of the College of Arts and Sciences by June 1998.

2. Complete re-organization of and future planning for the Stores.

3. Complete construction of workable guidelines for collections research within the constraints of NAGPRA.

4. Create affiliated research positions as recommended in the Departmental review.

5. Implement a recommended joint coordinating committee with the Department of Anthropology.

6. Continue negotiations with Dr. Hibben for establishment of his research trust.

H. STAFF CHANGES

a. Terminations

- Laura Valdez, Assistant Curator, 16th July 1996.
- Mary Lee Moeny, 1st April 1997.
- Karina Dawson, Archaeology Assistant, 16th May 1997.

b. Appointments

- Dorothy Larson, Data Base Coordinator, 28th October 1996.
- David Gutierrez, Store Assistant, 31st October 1996.

I. STAFF PROFESSIONAL ACTIVITIES AND PUBLICATIONS

a. Garth Bawden, Director and Professor.


b. John Campbell, Research Professor.

- Book: The Magnificent Failure, University of New Mexico Press, 1996

- Exhibit Curator: Life on the Tundra and The Magnificent Failure (see above, Section F, part c), Maxwell Museum of Anthropology.


c. Brenda Dorr, Curator of Archaeology.

- Symposium Organizer: NAGPRA Southwestern Region Conferences, UNM. Albuquerque, June and July 1997.

d. Bruce Huckell, Senior Research Coordinator and Research Assistant Professor.

- Conference Organizer: The Archaic Prehistory of the Southwest, UNM, October 1996.


e. Joseph Powell (Curator of Human Osteology and Assistant Professor).

- Attended Annual Meetings of the American Association of Physical Anthropology Meetings and presented paper, St. Louis, April 1997.

- Supervised the analysis of 35 forensic cases for the Office of the Medical Investigator, the Federal Bureau of Investigations, and various New Mexico law enforcement agencies.

f. Marian Rodee (Curator of Ethnology and Lecturer).

- Exhibit Curator: Eyedazzlers, Maxwell Museum of Anthropology and UNM University Art Museum.


g. Mari Lyn Salvador, Chief Curator and Associate Professor.

- Exhibit Curator: Cuando Hablan Los Santos, Maxwell Museum Traveling exhibit displayed at the Fowler Museum of Culture History, University of California, Los Angeles.

- Exhibit Curator: The Kuna. In preparation for the Smithsonian Institution, Washington, D.C.
ANNUAL REPORT
of the
DEPARTMENT of BIOLOGY

FY 1996–97
Annual Report
by:

Terry L. Yates, Chair
Department of Biology
The University of New Mexico
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EXECUTIVE SUMMARY

The Department had another exceptional year despite the budgetary problems experienced by the University. The number of faculty returned to 34 with the addition of Drs. Scott Carroll and Gretchen Hoffman. The department also experienced increased enrollment, increased extramural funding, continued research productivity, and expanded success in development and enhancement of our core facilities. The department finished the year first in the college in number of outside grant dollars and generated almost 20% of the student credit hours for the college of Arts and Sciences, both while the University, as a whole, was experiencing a decrease in these areas.

The number of undergraduate majors in the Department of Biology continued to spiral upwards, now approaching 1,100. Response by the department has been to continue our efforts to re-engineer undergraduate education by expanding opportunities for biology students in the research arena, thus further integrating formal instruction with hands-on experience. During the past year, major outside funding continued for programs that involve the integration of students into research. Dr. Ellen Goldberg, biologist Dr. John Trujillo, and a number of associate investigators on the Main Campus and in the UNM Medical School were successful in obtaining funding for a new MBRS grant that involves numerous minority undergraduate and graduate students in research. Funding for this program was acquired from the National Institutes of Health (NIH). Drs. Donald Natvig, Mary Anne Nelson, Margaret Werner Washburne and Robert D. Miller previously received a three-year National Science Foundation (NSF) award called the "Neurospora Genome Project" that supports primarily undergraduates. These projects, along with the previously awarded Howard Hughes Medical Research grant awarded to Dr. Kate Vogel, programs associated with the Museum of Southwestern Biology, the Sevilleta LTER, and numerous student additions to other existing research grants, all serve to engage our undergraduate students in biological research early in their education.

Outside funding for programs in Biology also maintained an upward trajectory during the past academic year. Total number of grant dollars increased by 16.3% with actual expenditures almost exceeding five million dollars from outside sources alone. Unfortunately, the staff needed to process this increased workload remained constant. Major new funding was received in almost all areas of the department. Among our new projects was funding received by Dr. Gosz for the National Long-Term Ecological Research Network office. Not only does this represent a significant monetary award (almost six million dollars) but, more importantly, it brings considerable additional visibility to UNM as a national and international leader in long-term ecological research. The department's reputation as an international center for the study of emerging infections was enhanced again with funding (to Dr. Yates and UNM Medical School collaborator Dr. Fred Koster) for a national center for emerging viruses (one and a half million dollars) from the NIH. Dr. Yates also acquired a five-year cooperative direct
agreement with the Centers for Disease Control and Prevention (CDC) for just under $1.3 million to support the department’s research on Hantavirus, and, with Drs. Robert Parmenter and Howard Snell, received $960,000 from the NSF to support the department’s renovation of the old campus bookstore.

Products resulting from these research activities were also numerous. During the past year biology faculty authored, edited or contributed five chapters to books and published 46 articles in scholarly journals. In addition, these faculty authored four popular articles and 53 abstracts, most of which involved a scholarly presentation at a national or international meeting. Invited seminars and plenary presentations were given by these same scientists at 45 additional institutions during this same time period.

Three departmental core facilities—The Sevilleta Field Station, The Museum of Southwestern Biology, and the Molecular Biology Facility—experienced major new developments during the year beyond the unprecedented productivity all experienced through normal research and teaching activities. The Museum of Southwestern Biology (MSB) received several major grants in the area of emerging infections and has become the national repository for specimens and tissues resulting from research related to public health issues centered around zoonotic diseases. Collaborative research with the CDC, the Indian Health Service (IHS), the state Department of Health, and now the NIH resulted in the MSB Division of Mammals accessioning more mammalian research specimens than any North American museum except the Smithsonian. The MSB also achieved major enhancements to its computer facilities and frozen tissue collections, the latter of which are now the largest in the world.

The Molecular Biology Facility experienced major successes as well. The Facility supported the research and teaching activities in more than 15 different laboratories, which collectively ran more than 7,000 sequencing reactions. During this same period, more than 50 undergraduates received research experiences in the facility. More than 15 research papers were published in refereed journals based on molecular data produced here.

INTRODUCTION

The Department of Biology experienced another exceptional year by almost any measure. The past fiscal year saw high levels of productivity by all sections of the department and major increases in outside funding (Appendix A), core facility development (Appendices B, C and D), research productivity (Appendix E.III.), and graduate and undergraduate education (Appendices I, J and K). The department had an exceptional year and FY 1998 promises to be even better.

The Biology Department currently employees more than 460 individuals if the student payroll is included, has more than 120 graduate students, more than 100 adjunct faculty, 74 staff, and approximately 1,100 undergraduate majors. The department again led the college in number of outside grants. Despite these numbers, the department currently employees only 34 FTE faculty, whose salaries are below the average for the College of Arts and Sciences. These individuals, however, along with the department’s exceptional staff and students, managed another incredible year, the details of which are provided below. This narrative, however, provides only the highlights of the diverse and numerous accomplishments achieved and the reader is referred to the appendices for more details.
DEVELOPMENTS & ACHIEVEMENTS

GRADUATE PROGRAM—Degrees Awarded (1996–97)

The graduate program, like the undergraduate program, continued to expand during the previous year. We received 180 applications (compared to 81 in 1990) for our graduate program but were only able to accept 20 (11%) new students into our program. At the same time, the department awarded 19 graduate degrees to the following students.

Master Degrees.
Toby Bennett—Dr. D.L. Marshall
Paul M. Cryan—Dr. J.S. Altenbach
Ben Hanelt—Dr. E.S. Loker
Lara Hays—Dr. J.L. Trujillo
Kelly A. Howe—Dr. M.A. Nelson
Peter T. Hraber, III—Dr. B.T. Milne
Steven P. Huckett—Dr. C.N. Dahm
Howard D. Passell—Dr. J.H. Brown
Brett C. Pickering—Dr. D.W. Duszynski
Heather A. Pratt—Dr. M.C. Molles, Jr.
Mary C. Stuever—Dr. C.S. Crawford
Celina M. Stumpp—Dr. J.T. Trujillo

Doctoral Degrees.
Patricia D. Ashby—Dr. E.C. Toolson
Sandra L. Brantley—Dr. C.S. Crawford
Edward L. Braun—Dr. M. Werner Washburne
William Gannon—Dr. James S. Findley
Sandra Merino—Dr. M.A. Nelson
Deborah A. Potter—Dr. M.C. Molles, Jr.
Kenneth Sylvester—Dr. D.O. Natvig

GRADUATE STUDENT AWARDS & ACCOMPLISHMENTS

Honors & Awards. Biology graduate students received numerous awards and honors during the past year (see Appendix E, section I.A.5). Kevin Rich was awarded Outstanding Teaching Awards by the department for the Spring semester of 1996. In addition, Dawn Kaufman was awarded the prestigious Shadle Fellowship by the American Society of Mammalogists, making UNM the national winner for the second year in a row. UNM Biology now has more Shadle winners than any other university in the U.S. Kelli Sapp was awarded the Best Student Paper Award at the annual meeting of the American Society of Parasitologists in June 1997, and Ben Hanelt was awarded the Best Student Paper Award at the annual meeting of the Southwestern Association of Parasitologists in April 1996 and the Best Student Paper Award at the annual meeting of the Society for Integrative and Comparative Biology in December 1996.
Outside Funding. Several graduate students received outside funding; see Appendix E, section I.A.5.

Professional Accomplishments. In addition to sharing numerous accomplishments with their major professors, our graduate students were again highly productive on their own. During FY 1996 our students published an additional 13 scholarly papers in refereed journals and gave 23 presentations at meetings. These are probably minimal estimates, however, given these data are not reported commonly by all faculty.

GRADUATE PROGRAM REVIEW

During the Spring semester 1995 the department underwent an outside review of our graduate program; the outside review committee's full report is included in 1995 departmental annual report. The committee was highly complementary of the department and rated almost all aspects of our graduate program as nationally competitive.

The areas recognized as being most in need of improvement and the progress made toward improving these areas during the year include:

1) Faculty salary support, especially for associate and full professors. No progress.
2) Faculty were over-burdened. Still a problem but the department hired two new faculty and a new lecturer, who joined the department in January 1997.
3) Lack of space. Still critical but the department has made significant progress towards acquiring space vacated in the old UNM bookstore.
4) Limited staff support. No progress.
5) Lack of a strategic plan. The department developed a strategic plan at a retreat at the field station during the fall 1995 semester. Major items of this plan are summerized in Appendix P of the 1995-96 departmental annual report.

UNDERGRADUATE PROGRAM

Enrollment in biology courses and the number of declared majors continued to increase during the past year, but the ratio of students to FTE faculty improved somewhat (Fig. 1). Departmental efforts to re-engineer undergraduate education also continued during FY 96. Four major externally-funded programs again served to integrate our undergraduates into the mainstream of the biological sciences. Thanks to a Research Improvement in Minority Institutions (RIMI) grant from the NSF, support from the Howard Hughes Medical Institute, and an REU site grant from the NSF, and an MBRS grant from the NIH, large numbers of undergraduates have been introduced to basic research as part of the educational experience at UNM. In addition to these specific program, many additional undergraduates were actively involved in research projects in the department.

![Graph](image-url)
through support from the dozens of regularly funded research projects that were active in the department. Many more gained research experience through the departments core facilities such as the MSB, the Molecular Biology Facility, and the Confocal Microscope Facility.

**FACULTY**

**Scholarly Activities.** During the past calendar year, Biology faculty authored 51 scholarly works and presented more than fifty papers at scientific meetings. Invited talks were given at 45 institutions by our faculty, who also served as editors for six scientific journals and served on 13 journal editorial boards during 1996.

**Sponsored Research.** Departmental success at obtaining outside funding continued during the past fiscal year with FY 96 funds increasing by 16.4%. The department registered $7 million in outside grant support for FY 96 and, as of September 1997, had more than $23 million in current outside research support.

**Faculty Honors.** Several Biology faculty received special honors during 1996; these are detailed in Appendix E, sections I.C. and VII. Of special note are the following: Drs. Cliff Dahm (awarded the Director's Award for Program Management Excellence by the National Science Foundation); Manuel Molles (The Teacher of the Year Award for the Academic Year, 1995–96); Kate Vogel (Kappa Delta Elizabeth Winston Lanier Award for Outstanding Orthopaedic Research [Basic Research], American Academy of Orthopaedic Surgeons, 1996); and Terry Yates (Recipient of the Robert C. Packard Outstanding Educator Award, Southwestern Association of Naturalists).

**CORE FACILITIES**

**Museum of Southwestern Biology (MSB).** The Museum of Southwestern Biology, like the department in general, had another productive year (Appendix D). Material from the various museum divisions was used in more than one-third of the department's classes and close to that percentage of graduate students used the various MSB facilities in their research. These important facilities formed the basis for 170 research papers published last year by UNM researchers and those from other institutions worldwide.

During the past fiscal year, the MSB served as a repository for all Sevilleta LTER voucher material and was designated the national repository for the Centers for Disease Control and Prevention. All of these activities have served to solidify the MSB's position as one of the most significant such University facilities in the world and, in fact, the Division of Mammals accessioned more material during FY 96 than any other similar facility excluding the Smithsonian.

The MSB experienced significant success in attracting outside funding during this period (Appendix B). Research grants were received from the NSF, CDC, IHS, Forest Service, Fish and Wildlife Service, Bureau of Reclamation, and BLM, to name only a few. Of particular note was a grant from the NSF to Drs. Terry Yates, Robert Parmenter and Howard Snell for more than $960,000 (plus equal matching from UNM) to renovate space in the old campus bookstore. Museum research teams were active on most continents and were especially active in Latin America.
In addition, significant support was provided by MSB divisions to APS, the Rio Grande Zoo, and the State of New Mexico.

Long-Term Ecological Research Program (LTER). The Sevilleta LTER Program has received its tenth-year renewal grant of $560,000 from the National Science Foundation. The new Principal Investigator, Professor James R. Gosz, is leading the research group in integrating the many databases collected by the Sevilleta LTER faculty, staff and students. Dr. Gosz and Dr. Bruce Milne also are leading the effort to edit a synthesis book volume of the first nine years of research at the Sevilleta. The LTER Program continued its programs in student research training (e.g., the Sevilleta REU and UMEB Programs), and has published a large number of recent papers on the ecology of central New Mexico (see listing in Appendix C). In addition, the data and spokespersons from the Sevilleta LTER Program have been featured on local and national television and in newspaper/magazine articles in regard to the upcoming El Niño event and potential environmental influences on social, economic and health impacts to New Mexico.

Molecular Biology Facility. The department's newly established molecular biology facility had an outstanding year in terms of education, research and external funding. More than 60 students conducted research in the facility in FY 96 and 12 papers were published based on research made possible by the facility. See Appendix D.

Sevilleta Field Station. Biology's new field station in the heart of the Sevilleta National Wildlife Refuge continued to develop and prosper during the past year. Hundreds of students and faculty utilized the stations facilities, including visitors from numerous other countries and institutions (Appendix C). A third facilities support grant was received from the NSF in 1995 to support of the purchase of high-end computer equipment, field vehicles, GPS enhancements, and other station equipment. These have now been added to the station. In addition, the field station has been instrumental in supporting field research projects on Hantavirus and rodent populations. Grants from the Centers for Disease Control and the National Institutes of Health to Dr. Terry Yates (UNM Department of Biology), Dr. Fred Koster and Dr. Brian Hjelle (UNM Medical School) are based at the field station and the surrounding Sevilleta National Wildlife Refuge.

FINANCIAL CONTRIBUTIONS

The department owns a variety of restricted and unrestricted accounts at the UNM Foundation. We also have established several endowments there. All did well during the past fiscal year.

PERSONNEL

Faculty. Drs. Diane L. Marshall and Manuel Molles, Jr. were each promoted to full professor. Dr. Mary Ann Nelson was granted tenure and was promoted to associate professor. Drs. Scott Carroll and Gretchen Hofmann began their appointments as assistant professors in January 1997.

Staff. See Appendix G for staff hires and terminations.

Adjunct Faculty. A complete list of Biology adjunct faculty is provided in Appendix H.
Museum Associates. A list of MSB associates is provided at the end of each Division's report in Appendix B.

CURRICULA

A complete list of Biology course offerings for FY 96, along with a summary of student credit hours, is provided in Appendix I.

SPECIAL EVENTS

Research Day. The department held its sixth annual research day on April 18, 1997; see Appendix J. The event was made possible by funding from the MBRS Program in addition to help from UNM Biology. The day-long event focused on undergraduate and graduate research being conducted at UNM and was attended by hundreds of students and faculty. Biology students presented 14 papers and 33 posters. This year's featured speaker was Dr. Judy A. Stamps of the Evolution and Ecology Section of the University of California at Davis.

Departmental Seminar Series. The primary seminar series for the department again featured an outstanding group of scientists. A complete listing of invited seminars for last year is provided in Appendix K. The department also hosted numerous other more specialized series in cell/molecular biology, ecology, botany and systematics.

AFFIRMATIVE ACTION

It is the policy of the Department of Biology to provide equal opportunity in all personnel actions, institutionally-sponsored education, training, tuition assistance, social and recreational programs and advancement, without regard to race, color, religion, national origin, sex, handicap, age, weight or veteran's status.

Hiring procedures for Biology Department faculty and staff are conducted within Affirmative Action guidelines with respect to advertising, search committees, interviewing and selection. Student employee, work-study and other job opportunities are advertised on campus and within the department.

Job descriptions are periodically reviewed and revised for accuracy in relation to actual functions and duties. Employees are also encouraged to upgrade their skills through participation in university-sponsored seminars and training programs.

CONCLUSIONS

The Department of Biology continued its previous trend of growth in almost all areas of scholarly activity. Given the continuing increases in students requesting access to the department's programs, both at the graduate and undergraduate levels, the continued lack of parity in faculty salaries relative to other less productive A&S units, and the difficulty obtaining funds for laboratory renovation, there may be cause for concern. These data strongly suggest that the department may be close to or beyond the limit at which the current faculty and staff can functionally operate. Strong support for the department
by the state of New Mexico at this time in terms of human and other resources will help ensure that the Department of Biology at The University of New Mexico will continue to be a world leader in this field.
APPENDICES

FY 1996–97
ANNUAL REPORT
DEPARTMENT OF
BIOLOGY
APPENDIX A

ACTIVE CONTRACTS & GRANTS, as of Sept. 1997
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<th>Account ID</th>
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<td>BARTON, L</td>
<td>1997 MBRS Budget</td>
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<td>BROWN, J</td>
<td>Long-Term Monitoring/Manipulation Of Desert Granivore System (ID</td>
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<td>BROWN, J</td>
<td>Anatomy Of Geographic Range: Spatial Variation In Abundance</td>
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<td>BROWN, M</td>
<td>Habitat Requirements of Bell's Vireo: an landscape analysis of South</td>
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<td>Effects Of Annual Flooding On Rio Grande Bosque (Note: Preaward f</td>
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<td>Measurement of Evapotranspiration in Mixed Cottonwood Bosque at</td>
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<td>Biogeochemical Cycling of Redox-Sensitive Metals during Surface-Su</td>
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<td>CRYAN, P</td>
<td>Investigations Inspired By The Roost-Changing Behavior Of The Frin</td>
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<td>Acoustic Survey Of The Bats In New Mexico (Year Two - Approved A</td>
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<td>Sevilleta Field Station: Enhancements - Computation/Info./Trans (Cost</td>
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<td>$12,372.00</td>
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<td>Ecology of the River Otter and other wetland furbearers of the Upper R</td>
<td>$20,000.00</td>
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<td>ROWLAND,D</td>
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<td>$200.00</td>
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<td>Microevolutionary Responses Of Woodrats To Climate Change Since</td>
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<td>SYNDER,A</td>
<td>Coop. Agreement: Ichthyofaunal Studies Fed. Listed Species, Pecos Ri</td>
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<td>Regents' Professorship</td>
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<td>$24,995.00</td>
<td>$0.00</td>
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<td>Biogeochemical Cycling Of Redox-Sensitive Metals During Surface-S</td>
<td>$130,116.00</td>
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<td>3-15454</td>
<td>VOGEL,K</td>
<td>Proteoglycan Structure, Metabolism And Role In Tendon.</td>
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<td>Begin Date</td>
<td>End Date</td>
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<td>8/20/96</td>
<td>7/31/98</td>
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<td>WERNER,M</td>
<td>RIMI: Establishment of Molecular Biology Facility</td>
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<td>3-25939</td>
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<td>Yr. 2 - UNM Cost Share</td>
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<td>3-47151</td>
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<td>Dev. Regulation Signal Transduction: Bcy1p in Stationary-Phase Yeast</td>
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<td>2/1/97</td>
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<td>3-23924</td>
<td>WHITE,C</td>
<td>Coop. Agmt, Subagmt 4, Mod. 1: Nitrogen Cycling - Bandelier Monu</td>
<td>$55,641.00</td>
<td>$0.00</td>
<td>9/18/92</td>
<td>7/31/96</td>
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<td>3-44241</td>
<td>WHITE,C</td>
<td>Assessment Current Water Quality</td>
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<td>3-46321</td>
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<td>Ecosystem &amp; Soil Studies Of Native American Runoff Agric</td>
<td>$15,887.00</td>
<td>$5,375.00</td>
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<td>3-65511</td>
<td>WHITE,C</td>
<td>Summer 1996 Field Course: Eval Of Protocols To Assess Watershed C</td>
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<td>YATES,T</td>
<td>Resonse of SW Mt. Mammal Community - Global</td>
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<td>YATES,T</td>
<td>Intern'l Workshop (Mexico):Collaborative Long-Term Res. Across B</td>
<td>$27,180.00</td>
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<td>4/1/96</td>
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<td>YATES,T</td>
<td>Relocation &amp; Compactorization of MSB</td>
<td>$313,200.00</td>
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<td>3-40512</td>
<td>YATES,T</td>
<td>Prof./Tech.Svs.Contr:Monitoring 4-Corners Hanta Virus In Mammals (</td>
<td>$389,852.00</td>
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<td>3-42431</td>
<td>YATES,T</td>
<td>Biogeography &amp; Systematic Relationships Of S.A. Murid Rodents</td>
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<td>3-44281</td>
<td>YATES,T</td>
<td>Longitudinal Studies Rodent Carriers Hanta Virus</td>
<td>$128,251.00</td>
<td>$16,601.00</td>
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<td>3-47191</td>
<td>YATES,T</td>
<td>National Inst of Allergy &amp; Infectious Diseases</td>
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<td>$360,420.00</td>
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<td>3-47391</td>
<td>YATES,T</td>
<td>Longitudinal Studies of Hantavirus in Rodent Populations of the Ameri</td>
<td>$66,404.00</td>
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<td>9/30/96</td>
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<td>3-47401</td>
<td>YATES,T</td>
<td>Longitudinal Studies of Rodent Resevoirs of Hantaviruses in the South</td>
<td>$188,989.00</td>
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<td>3-48121</td>
<td>YATES,T</td>
<td>Replacement and Consolidation of Research and Research Training Fa</td>
<td>$960,000.00</td>
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<td>3/15/97</td>
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<td>3-48851</td>
<td>YATES,T</td>
<td>Biol. Diversity of NM State Trust Land</td>
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$23,472,850.00  $7,293,858.00  $262,285.00 (FY '97-98 to date)
APPENDIX B

ANNUAL REPORTS:
MUSEUM OF SOUTHWESTERN BIOLOGY
&
U.S. GEOLOGICAL SURVEY—
BIological RESEARCH DIVISION
The Fiscal Year 1996-1997 was particularly successful for the Museum of Southwestern Biology. Collection use continues to increase. During this period nearly 40,000 specimens were added to collections, 17,808 specimens were sent on loan, 64 papers were published and more than 1400 people visited and used the collections. A number of courses utilize the MSB collections in their curricula. The faculty and staff have been tremendously successful in their grantsmanship having been awarded over 1.1 million dollars during this fiscal year. A number of highly visible and important research projects are centered in the MSB including Hanta Virus Research (Division of Mammals), Rio Grande Bosque Invertebrates (Division of Arthropods), San Juan Drift Research (Division of Fishes), and Flora of the Sandias (Herbarium). Other important projects are detailed in each division’s report. We anticipate even greater success for the MSB once the move into the renovated Campus Bookstore is completed next year.
1. DIVISION HIGHLIGHTS.

The focus of this year's museum activity was the development of contacts with other entomologists and botanists around New Mexico and across the U.S. These contacts provided us with taxonomic expertise, records of New Mexico specimens housed in out-of-state collections and a wealth of new material to be added to the collection. In addition, Cliff Crawford donated his books and papers to the Museum, greatly increasing our information resources to provide public and academic support.

2. TABLE OF COLLECTION USE. Fill in the blanks with the correct statistics. Collection growth should be the number of cataloged specimens added to the division. Loans (outgoing) should include the number of loans and the number of lots or specimens separated by a "/". Loans (incoming) same format as for Loans (outgoing). # of Visitors should include the number of researchers and general public separated by a "/".

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<tr>
<th>Collection Growth</th>
<th>Loans (outgoing)</th>
<th># Visitors</th>
<th># Data Requests</th>
<th># of Publications</th>
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<td>1/2</td>
<td>3/3000</td>
<td>10/5</td>
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</table>

3. COURSES USING THE COLLECTIONS.

BIOL 110 Biology for Non-majors, loan of specimens for diversity studies.

4. COLLECTION MANAGEMENT.

The Museum TAs expanded the collection into new drawers, labeled specimens within series, updated synonymies and began incorporating recent acquisitions into the collection.

5. AWARDS, GRANTS, AND CONTRACTS. Grants submitted, Faculty


Grants received, Faculty


Grants in force from previous years, Faculty


6. PUBLICATIONS.

A. Publications by Museum staff, students and Associates.

BOOKS

JOURNAL ARTICLES


REPORTS


B. Publications and reports based on museum specimens by researchers excluding Museum staff, students and Associates.

7. ACTIVITIES IN LEARNED SOCIETIES.

A. Invited or plenary talks.

B. Contributed talks or posters.


Carroll, S.P.: Department of Biology, University of California - San Diego Department of Biological Sciences, University of California - Santa Barbara Session on evolutionary genetics and behavior, International Society for Behavioral Ecology, Canberra (co-organizer).


C. Attendance at professional meetings.

As above.

D. Service as editor or on editorial board of a journal.

Sandra Brantley on editorial board for the Occasional Papers series of the Museum of Southwestern Biology, University of New Mexico

Manuel Molles Associate editor of the Journal of the North American Benthological Society

E. Service as officer of professional society or organization.

Manuel Molles, Trustee for The Nature Conservancy of New Mexico Volunteer Training, Rio Grande Nature Center

8. OTHER PROFESSIONAL ACTIVITIES. List alphabetically under each category.

A. Seminar or colloquium presentations.

Richard Fagerlund - 4 pest control seminars for the New Mexico Department of Agriculture.

Molles, M.C., Jr. Managed floods: restoration of riparian forest ecosystem structure and function along the Rio Grande. Flathead Lake Biological Station, Polson, Montana.

B. Presentations in a scholarly capacity at hearings, workshops, legislative committees, etc.

Scott Carroll - State Senate Education Committee - evolution curriculum hearing

C. Presentation to general audience in a scholarly capacity.

Richard Fagerlund and Sandra Brantley - several television news segments about the "moth infestation" of spring 1997

Jenella Loye - newspaper article in the Corrales Comment on the cottonwood leaf beetle

D. Service in a scholarly capacity as a member of a local, state, regional or national committee, panel etc.

Scott Carroll - Animal Behavior Society Student Research Award Committee

E. Journal referee.


Scott Carroll - Behavioral Ecology, 1 paper
   Ecology, 2 papers

Richard Fagerlund - Coleopterist's Bulletin, 1 paper
   Proceedings of the Entomological Society of Washington, 1 paper
   Journal of the Lepidopterists' Society, 1 paper

Manuel Molles - Hydrological Processes, 1 paper
   Regulated Rivers, 1 paper
   Journal of the North American Benthological Society, 6 papers

9. SERVICE.

A. Symposia, workshops, conferences, etc. sponsored, organized, held etc.

Scott Carroll - Session on evolutionary genetics and behavior, International Society for Behavioral Ecology, Canberra, Australia.

B. Public Service.

Dick Fagerlund and Sandra Brantley - Insect survey for the Nature Conservancy at their Mimbres site.

Sandra Brantley - Several visits to Albuquerque public schools to talk about insects and biodiversity
   Mentor in the Celebrate Youth program.
   Ecology concepts and field techniques for summer programs of the New Mexico Natural History Museum (Young Explorers, water ecology).
10. ADVANCED STUDY, HONORS, AWARDS, FELLOWSHIPS, ETC.

11. DONATIONS AND GIFTS RECEIVED.

Elizabeth Milford, specimens (arthropods from bosque near Belen)
Reed Watkins, specimens (lycaenid butterflies)
Rich Cunningham/Josef Beierl, specimens (tenebrionid beetles from southern California and Baja)
Dewey Meyer, specimens (lepidopterans from Costa Rica)
Dan Sundberg, specimens (beetles from area around San Antonio, Texas)
Robert Sivinski, specimens (beetles collected from plants in New Mexico)
Richard Worthington, specimens (beetles from Texas and New Mexico, U.S. aquatic beetles)
Vladimir Gustav, specimens (tenebrionids from Russia)
George Hangay, specimens (tenebrionids from Chile)
Richard Fagerlund, specimens (beetles and lepidopterans from New Mexico), books
Sevilleta Long-Term Ecological Research program (arthropods from Sevilleta Nat. Wildlife Refuge)
M.J. Mund, specimens (canopy insects from Bosque del Apache Nat. Wildlife Refuge)
Linda DeLay, specimens (canopy and surface insects from Bosque del Apache)
David Lightfoot, specimens (the Pippin and Pippin collection from Bandelier Nat. Monument)
David Lightfoot and Robert Parmenter, specimens (Capulin Mt. National Monument)
Anna Tuttle, specimens (odonates and beetles from the Rio Grande Nature Center)
Brett Pickering, specimens (arthropods from Surinam)
Cheryl Parmenter, specimens (from Tiburon Island, Mexico)
Natalie Runyan, specimens (from the Gray Ranch, New Mexico)
Teruhisa Ueno, specimens (beetles from Japan, Borneo, Malaysia)
Greg Forbes, specimens (insects from southern New Mexico)
Carl Olson and W. Gene Hall, books
Jenella Loye and Scott Carroll, John Endler's collection of 1200-2500 lepidopteran specimens (1 museum case with 12 drawers)
Sandra Brantley, books

12. CURRENT STAFF. List faculty, staff, students and volunteers.

Manuel Molles, Ph.D., Professor, Curator. Riparian ecology
Cliff Crawford, Ph.D., Emeritus Professor, Emeritus Curator. Riparian ecology, desert ecology
Scott Carroll, Ph.D., Asst. Professor, Associate Curator. Insect behavior and evolution
David Lightfoot, Ph.D., Research Associate, Associate Curator. Arthropod ecology, grasshopper systematics, desert ecology
Robert Parmenter, Ph.D., Program Director Sevilleta LTER, Associate Curator. Desert ecology
Jenella Loye, Ph.D., Research Assistant Professor, Associate Curator. Ectoparasites of birds
Sandra Brantley, Ph.D., Post-doctoral Associate, Sevilleta LTER. Arthropod communities
Brett Pickering, M.A., Museum Teaching Assistant spring 1997. Rodent parasites, invertebrate ecology
Jen Parody, Ph.D. student. Museum Teaching Assistant summer 1997. Landscape ecology

13. MUSEUM ASSOCIATES.

Richard Fagerlund, UNM staff, Environmental Services. NM arthropods, particularly beetle taxonomy.
1. DIVISION HIGHLIGHTS

The entire MSB cryogenic collection has been computerized thanks to Gabor Racz and Matthew Garcia. Cheryl Parmenter averaged 2 weeks per month in the field between webs and VLMA (very large mouse array). She was mostly responsible for creating, maintaining, backing up and cleaning all data files for the webs plus extraneous sites and projects. Hanta data was analyzed for the six-month reports and grant renewals. The reports included densities by species for all sites, graphs, pivot tables for all web sites, and various other graphs and analyses. The nine ultra-low freezers and Ln2 tanks are maintained (constant attention required). Sorted all blood from all sampling sites plus all other incoming samples from bat projects and projects from other divisions such as the USGS-BRD. Maintained records of incoming and outgoing tissue samples and Processed many loans (see below).

2. TABLE OF COLLECTION USE. Fill in the blanks with the correct statistics. Collection growth should be the number of cataloged specimens added to the division. Loans (outgoing) should include the number of loans and the number of lots or specimens separated by a “/”. Loans (incoming) same format as for Loans (outgoing). # of Visitors should include the number of researchers and general public separated by a “/”.

<table>
<thead>
<tr>
<th>Collection Growth</th>
<th>Loans (outgoing)</th>
<th>Loans (incoming)</th>
<th># Visitors</th>
<th># of Request</th>
<th># of Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>14,222</td>
<td>38/12050</td>
<td>3/400</td>
<td>see mammals</td>
<td>256</td>
<td>see mammals</td>
</tr>
</tbody>
</table>

3. COURSES USING THE COLLECTIONS.
Biology 489,
Biology 405,
Biology 502,
Systematics

4. COLLECTION MANAGEMENT.

Two new PC computers were purchased and installed for the computerization of the collection. A nunc tube Locator system was developed by Gabor Racz (with consult by Gannon and Dragoo) to find specimen samples. ALL TUBES IN THE COLLECTION WERE ENTERED AND ARE ON-LINE. That tremendous task, approximately 200,000 tubes, was completed by Spring, 1997 with the efforts of Matt Garcia and Howe Davis. Future plans include finishing up several other management programs for the tissue collection and linking tables of the NK numbers with the other databases containing voucher specimens (mammals mostly).

5. AWARDS, GRANTS, AND CONTRACTS.
[THIS SECTION COVERED BY MSB-MAMMALS]

6. PUBLICATIONS.
[THIS SECTION COVERED BY MSB-MAMMALS]
A. Publications by Museum staff, students and Associates.
B. Publications and reports based on museum specimens by researchers excluding Museum staff, students and Associates.

7. ACTIVITIES IN LEARNED SOCIETIES.

[THIS SECTION COVERED BY MSB-MAMMALS]

A. Invited or plenary talks.
B. Contributed talks or posters.
C. Attendance at professional meetings.
D. Service as editor or on editorial board of a journal.
E. Service as officer of professional society or organization.

8. OTHER PROFESSIONAL ACTIVITIES.

· A. Seminar or colloquium presentations.
B. Presentations in a scholarly capacity at hearings, workshops, legislative committees, etc.
C. Presentation to general audience in a scholarly capacity.
D. Service in a scholarly capacity as a member of a local, state, regional or national committee, panel etc.
E. Journal referee. List journals and number of papers refereed by each division member in alphabetical order.

9. SERVICE.

[THIS SECTION COVERED BY MSB-MAMMALS]

A. Symposia, workshops, conferences, etc. sponsored, organized, held etc.
B. Public Service.

10. ADVANCED STUDY, HONORS, AWARDS, FELLOWSHIPS, ETC.

[THIS SECTION COVERED BY MSB-MAMMALS]

11. DONATIONS AND GIFTS RECEIVED.

[THIS SECTION COVERED BY MSB-MAMMALS]

12. CURRENT STAFF. List faculty, staff, students and volunteers.

Dr. Terry L. Yates, Curator
Dr. William L. Gannon, Collections Manager
Dr. Jerry Dragoo, Genetics Projects Coordinator
Cheryl Parmenter, Division Data Manager and Safety Officer
Gabor Racz - Geospatial Project and Collection Support
Matt Garcia - Divisional Technician

13. MUSEUM ASSOCIATES.

No Associates
1. DIVISION HIGHLIGHTS.

Two small collections are the highlights of this fiscal year.

In the early 1990s we requested specimens of the Whooping Crane from mortalities among the Fish and Wildlife Service’s captive flock. This year we received two bobcat-killed adults from birds released in Florida. One was prepared as a skin for educational purposes, and one was prepared as a skeleton. Later we received and prepared four chicks 1 to 7 days of age and a five-month-old juvenile. All of these birds had been heavily posted, but tissue samples were preserved when possible. Arrangements have been made for us to receive additional young. This will be the only developmental series in any museum collection.

From the U.S. National Museum we received, in exchange for Old World raptor, vulture and corvid skeletons from the Amadeo M. Rea collection, 27 New Mexico record specimens deposited in the USNM by the New Mexico Department of Game and Fish during the period 1952 to 1985. Included were first specimens from New Mexico of 11 species, second specimens of four species and third specimens of four additional species! Other specimens documented important distributional records.

2. TABLE OF COLLECTION USE.

<table>
<thead>
<tr>
<th>Collection Growth</th>
<th>Loans (outgoing)</th>
<th>Loans (incoming)</th>
<th>No. of Visits</th>
<th>No. of Data Requests</th>
<th>No. of Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>517</td>
<td>20</td>
<td>6</td>
<td>60</td>
<td>11</td>
<td>2</td>
</tr>
</tbody>
</table>

3. COURSES USING THE COLLECTIONS.

Biol. 110,
Biol. 386,
Biol. 379.

4. COLLECTION MANAGEMENT.

We are current with cataloging and computerization of incoming material. An external, portable “JAZ” drive was acquired for data base backup. MSB and USGS staff completed the replacement of gaskets in specimen cases and regularly monitored insect activity inside and outside cases.

5. AWARDS, GRANTS, AND CONTRACTS. None.

6. PUBLICATIONS.

Much of the year was devoted to the compilation and publication of The Era of Allan R. Phillips: A Festschrift. Dr. Phillips was the preeminent ornithologist of the southwest since the 1940s and the preeminent ornithologist of Mexico since the 1950s. In addition to the usual biography, bibliography, and overview of his contributions to ornithology, it contains 20 contributed papers and an annotated list of the 160 taxa he described with the current locations of the type material. The book was privately published, subsidized by his colleagues and friends, but distributed through the Museum of Southwestern Biology. R.W. Dickerman was the compiler.


7. ACTIVITIES IN LEARNED SOCIETIES.
   J.D. Ligon and R.W. Dickerman attended Meeting of American Ornithologists' Union, Boise ID, August 1996.

8. OTHER PROFESSIONAL ACTIVITIES
   Journal referee: List journals and number of papers refereed by each division member in alphabetical order.

   J.D. Ligon:
   American Naturalist (2)
   Condor (2)
   Journal of Avian Biology (1)
   Journal of Raptor Research (1)
   Proceedings of the Royal Society: Biological Sciences (1)

9. DONATIONS AND GIFTS RECEIVED.
   Collection of bird slides and books from John Durrie.

10. CURRENT STAFF.
   Dr. J. David Ligon, Curator of Ornithology
   Ms. Julie Hagelin, Graduate Student
   Mr. Scott Norris, Curatorial Assistant
   Mr. Patrick Zwartjes, Graduate Student
   Ms. Jennifer Hill, Graduate Student

11. MUSEUM ASSOCIATES.
   Dr. Robert W. Dickerman, Curatorial Associate, Acting Curator
   Dr. John P. Hubbard, Curatorial Associate
1. DIVISION HIGHLIGHTS.

FY96/97 was a significant period for staff of the Albuquerque Arid Lands Field Station because it was during this time that employees were transferred from the National Biological Service to the USGS-Biological Resources Division (BRD). Despite the administrative changes, personnel at the Field Station had a particularly successful year relative to its publication output. One of the more noteworthy publications was the station's contribution, "The Southwest", to the "National Status and Trends Report", a comprehensive two-volume compendium produced by the BRD which describes regional ecosystems and the factors that affect them. Staff provided technical support to Department of Interior agencies, and continued research on a variety of natural resources topics. The Station was successful in obtaining funding for a variety of projects ranging from the development of a GIS-database for New Mexico plant species of concern to studies of bat ecology in New Mexico and South Dakota. Several of these projects funded graduate research and culminated in the successful completion of M.S. degrees by two students in 1997. Significant museum activities were associated with monitoring established integrated pest management practices in the USGS and MSB holdings of birds and mammals, and evaluating their effectiveness. In addition, USGS staff completed a visual inspection of its entire holdings of birds and mammals for potential insect infestations, documented any treatment that was applied, and reinspected all problematic cases. The USGS and MSB museum staff are developing protocols for integrating the mammal collections.

2. TABLE OF COLLECTION USE.

<table>
<thead>
<tr>
<th>Collection Growth</th>
<th>Loans (outgoing)</th>
<th>Loans (incoming)</th>
<th># Visitors</th>
<th># Data Requests</th>
<th># of Publications*</th>
</tr>
</thead>
<tbody>
<tr>
<td>283 catalogued*</td>
<td>3/114</td>
<td>2/20</td>
<td>see MSB</td>
<td>30</td>
<td>19</td>
</tr>
</tbody>
</table>

* plus 13/390 accessioned

3. COURSES USING THE COLLECTIONS.

- Biol 386 (General Vertebrate Zoology)  30 students  specimen-use
- Biol 123L                                28 students  staff participation

4. COLLECTION MANAGEMENT.

- Completed the inspection of all USGS cases in Birds and Mammals for insect infestations;
- Summarized 18 months of insect monitoring data from sticky traps placed within and outside USGS and MSB specimen cases in the Bird and Mammal collections;
- Completed cleaning and numbering the backlog of mammalian osteological material;
- Updated computerized data entry for all specimen records (fishes, herptiles, birds, and mammals);
- Worked with MSB colleagues on developing guidelines and written protocols for integration of the mammal collections.
- Attended the annual meeting of the Society for the Preservation of Natural History collections to discuss collection concerns of mutual interest.

5. AWARDS, GRANTS, AND CONTRACTS.

Faculty.
Habitat use of bats in and near Jewel Cave National Monument, Black Hills, South Dakota, Michael A. Bogan, Principal Investigator. NBS NRPP Competitive Grants Program. Three years at $20K/yr, FY95-97.


Biological survey for mammals at Petrified Forest National Park. Michael A. Bogan, Principal Investigator. Southwest Parks and Monument Association Competitive Grants Program. $7.5K, FY96.

Status and reproductive biology of gypsum scalebroom (Lepidospartum burgessii). Michael A. Bogan and Juanita Ladyman, Co-principal Investigators. BRD Species at Risk Competitive Grants Program. $57K, FY97.


New Mexico plant species of concern: development of a database for the geographic information system of the Ecological Services Office, USFWS. Michael A. Bogan and Patricia Mehlhop, Co-principal Investigators. NBS Species at Risk Competitive Grants Program. $37.5K, FY96.

Impacts of global climate change on Chihuahuan Desert vegetation. Laura Huenneke, Principal Investigator. $370K for five years.


Students:


Post-docs:

Response of southwestern montane mammal communities to global change, Jennifer Frey, Principal Investigator. USGS, Biological Resources Division, $263K for five years.

6. PUBLICATIONS.

A. Publications by Museum staff, students and Associates.

Book Chapters:


Journals:


Reports:


Websites:


B. Publications and reports based on museum specimens by researchers excluding Museum staff, students and Associates.


7. ACTIVITIES IN LEARNED SOCIETIES.

A. Invited or plenary talks.


B. Contributed talks or posters.


Bogan: Jemez Mountains Symposium on Biological Research, "Utility of ultrasonic detectors for determining bat species abundance and distribution", 1996 (with Ellison, Everette, and O'Shea).

Bogan: Los Alamos National Laboratory Symposium, "Status and trends of bat populations in the Jemez Mountains", 1997 (with Cryan and O'Shea).


C. Attendance at professional meetings.


Ramotnik: George Wright Society, Society for the Preservation of Natural History Collections, Jemez Mountains Symposium on Biological Research.

Valdez: Southwestern Association of Naturalists, American Society of Mammalogists.
D. Service as editor or on editorial board of a journal. N/A

E. Service as officer of professional society or organization.

Bogan-- Colorado Bat Society: Regional representative
American Society of Mammalogists: Scientific Collections Committee; Animal Care & Use Committee

Ramotnik -- Society for the Preservation of Natural History Collections: Conservation Committee (Resources Subcommittee).

8. OTHER PROFESSIONAL ACTIVITIES.

A. Seminar or colloquium presentations.

Bogan: Research in the Biological Resources Division, USGS (Biol 123L)

B. Presentations in a scholarly capacity at hearings, workshops, legislative committees, etc. N/A

C. Presentation to general audience in a scholarly capacity. N/A

D. Service in a scholarly capacity as a member of a local, state, regional or national committee, panel etc. N/A

E. Journal referee.

Bogan: Great Basin Naturalist (3); Southwestern Naturalist (3); Journal of Mammalogy (2);
Ramotnik: Society for the Preservation of Natural History Collections (1)

9. SERVICE.

A. Symposia, workshops, conferences, etc. sponsored, organized, held etc.

Bogan: Co-Chair (with Yates) of 1998 annual meeting of Southwestern Association of Naturalists

B. Public Service.

10. ADVANCED STUDY, HONORS, AWARDS, FELLOWSHIPS, ETC.

Paul M. Cryan: M.S. Degree 1997, UNM

Ernie W. Valdez: M.S. Degree 1997, Ft. Hays State University

11. DONATIONS AND GIFTS RECEIVED.

USGS-Patuxent Wildlife Research Center: specimens
San Andres NWR: specimens
Colorado Natural Heritage Program: specimens
Mesa Verde National Park: specimens
Mattson Environmental Consulting: specimens
12. CURRENT STAFF.

Michael A. Bogan -- Project Leader
Paul M. Cryan -- Biological Science Technician
Amy Ditto -- Biological Science Technician
Cate Erbaugh -- volunteer
Cindy A. Ramotnik -- Collections Manager
J.C. Richardson -- Office Manager
Jim N. Stuart -- Wildlife Biologist
Ernie W. Valdez -- Biological Science Technician
Karen Wolfe -- Museum Technician
Gregor Yanega -- Biological Science Technician

13. MUSEUM ASSOCIATES.

Robert B. Finley
1. DIVISION HIGHLIGHTS

The MSB Division of Fishes currently has 35,254 catalogued lots of fishes, a total of 1,749,484 specimens. Specimens are acquired from the ongoing projects on the Rio Grande (Hybognathus amarus population monitoring), Pecos River (fish community structure studies and studies involving Pecos River fish larvae and eggs) and the San Juan River (Xyrauchen texanus and Ptychocheilus lucius population monitoring). All three projects are under the direction of Steven P. Platania, Associate Curator of Fishes and involve the work of nine student and regular employees in the field (collecting) and five student and regular employees in the Division (processing and identification services). New graduate students in the Division: Jonathan A. Rosenfield (A. Kodric-Brown), studying the effects of hybridization on Cyprinodon pecosensis.

2. TABLE OF COLLECTION USE

<table>
<thead>
<tr>
<th>Collection Growth (Catalogued)</th>
<th>Loans Out</th>
<th>Loans In</th>
<th># Visitors</th>
<th># Data Requests</th>
<th># Publications*</th>
</tr>
</thead>
<tbody>
<tr>
<td>6,637 LOTS</td>
<td>28 LOANS</td>
<td>4 LOANS</td>
<td>11/3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>227,282 SPEC</td>
<td>1,523 SPEC</td>
<td>64,169 SPEC</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. COURSES USING THE COLLECTIONS

FALL 1996 General Vertebrate Zoology 40 students; specimen examination; collection manager helped TA with understanding phylogeny of primitive fishes (chondrichthyes and lower osteichthyes) by explaining key characters; set up loans of fishes to fill out a teaching collection that lacks several key families. H.L. Snell, Professor

SPRING 1997 General Vertebrate Zoology 40 students; specimen examination; collection manager helped TA with phylogeny of fishes (all classes) by explaining key family characters and listing important literature; set up loans for class examination. J.D. Ligon, Professor

4. COLLECTION MANAGEMENT

We continue to catalogue specimens using Paradox7 for Windows95. All queries, reports, jar labels and loan invoices are generated with this program.

5. AWARDS, GRANTS, AND CONTRACTS.

Staff

Platania, Steven P. San Juan River Drift Studies, U.S. Bureau of Reclamation, 18 MAR 1992 to 30 SEP 2002  Amt. $447,687.00

Platania, Steven P. San Juan River Larval Fishes Processing, New Mexico Dept. Game and Fish, 3 APR 1997 to 15 MAR 2000  Amt. $20,000.00
6. PUBLICATIONS.
A. Publications by Museum staff, students and Associates.


B. Publications and reports based on museum specimens by researchers excluding Museum staff, students and Associates.


7. ACTIVITIES IN LEARNED SOCIETIES.

A. Invited or plenary talks.
NONE
B. Contributed talks or posters.
American Society of Ichthyologists and Herpetologists 1997 Seattle WA

Altenbach, Christopher S. and Steven P. Platania. Differences between drifting and resident communities of larval Pecos River (NM) cyprinids.

Dudley, Robert K. and Steven P. Platania. Materials that imitate the properties of drifting semi-buoyant cyprinid eggs.

Platania, Steven P. and Christopher S. Altenbach. Spawning periodicity of a reproductive guild of Pecos River (New Mexico) cyprinids.

Snyder, Alexandra M. Documentation of preservation history in wet collections. 1997 ASIH Workshop on Preservation and Curation of Early Life Stages in Fishes, Amphibians, and Reptiles

C. Attendance at professional meetings.

1997 American Society of Ichthyologists and Herpetologists, Seattle WA
Altenbach, Christopher S.
Dudley, Robert K.
Platania, Steven P.
Snyder, Alexandra M.

D. Service as editor or on editorial board of a journal.

Platania, Steven P. Copeia 1996/97
Platania, Steven P. Southwestern Association of Naturalists, 1996/97

E. Service as officer of professional society or organization.

Platania, Steven P. ASIH Board of Governors
Snyder, Alexandra M. Chair of ASIH Curatorial Supplies and Practices Subcommittee

8. OTHER PROFESSIONAL ACTIVITIES.
A. Seminar or colloquium presentations. NONE

B. Presentations in a scholarly capacity at hearings, workshops, legislative committees, etc.

Platania, Steven P. 1996/97 Rio Grande Silvery Minnow Recovery public meetings

C. Presentation to general audience in a scholarly capacity.

Platania, Steven P. 1996/97 Rio Grande Silvery Minnow Recovery

D. Service in a scholarly capacity as a member of a local, state, regional or national committee, panel etc.

Platania, Steven P. 1996/97 Member of two Rio Grande Recovery teams
1996/97 Member of San Juan River Researchers team

E. Journal referee. List journals and number of papers refereed by each division member in alphabetical order.

Platania, Steven P.
Copeia (2 papers)
The Southwestern Association of Naturalists (1 paper)

9. SERVICE.

A. Symposia, workshops, conferences, etc. sponsored, organized, held etc.

Rosenfield, Jonathan A. 1997 Co-organizer of Town Hall Meeting, "Water in the West: Coronado, Cadillacs and Cottonwoods" as part of a Southwest Biodiversity Initiative sponsored activity, Albuquerque NM

Snyder, Alexandra M. 1997 Organized ASIH Workshop on Preservation and Curation of Early Life Forms in Fishes, Amphibians, and Reptiles, Seattle WA

B. Public Service.

Altenbach, Christopher S., Live Fish Research and Identification Services, 1996/97 up to 1 hour a week responding to questions from public on aquarium studies and fish identifications.

Dudley, Robert K., Aquatic Biologist and Program Support, 1996/97 up to 1 hour a week responding to questions from public and research community on New Mexico fishes and scientific studies related to NM ichthyofauna. Advisor: Albuquerque Academy science project on specific gravity problem.

Platania, Steven P., Associate Curator, 1996/97 up to 5 hours a week responding to questions from the public and academic community on fishes, ichthyofaunal ecology and the river systems of New Mexico.

Rosenfield, Jonathan A., Graduate Student UNM Biology, 1996/97 Co-founder of Southwest Biodiversity Initiative (SBI), UNM Biology graduate student organization

Snyder, Alexandra M., Collection Manager, 1996/97 Database Manager of ASIH Supplies List, developed for ASIH website

1996/97 As the Chair of ASIH Supplies and Practices Subcommittee, up to 5 hours a week responding to requests for information on curatorial practices and supplies for wet collections.
1996/97 Organize jar donation to Instituto Nacional de Pesquisas da Amazonia (INPA) in Manaus, Brazil.

10. ADVANCED STUDY, HONORS, AWARDS, FELLOWSHIPS, ETC.

NONE

11. DONATIONS AND GIFTS RECEIVED.

Specimen Donations

<table>
<thead>
<tr>
<th>Accession Number</th>
<th>Source</th>
<th>Specimens</th>
<th>Number of Lots/Specimens</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC1996-VII:1</td>
<td>Utah Division of Wildlife Resources, San Juan River fishes</td>
<td>1500 / 95,000</td>
<td></td>
</tr>
<tr>
<td>ACC1996-VIII:29</td>
<td>Astrid Kodric-Brown-UNM Biology, <em>Cyprinodon pecosensis</em></td>
<td>22 / 2,778</td>
<td></td>
</tr>
<tr>
<td>ACC1996-VIII:30</td>
<td>USFWS Dexter Nat'l Hatchery, <em>Ictalurus</em> &quot;yuqui&quot; n.sp.?</td>
<td>1 / 1</td>
<td></td>
</tr>
<tr>
<td>ACC1996-X:21</td>
<td>Colorado State University, Larval Fish Lab, <em>Xyrauchen texanus</em></td>
<td>1 / 21</td>
<td></td>
</tr>
<tr>
<td>ACC1997-I:27</td>
<td>USFWS Fisheries Resource Office, Pecos River fishes</td>
<td>598 / 21, 377</td>
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</tr>
<tr>
<td>ACC1997-I:28</td>
<td>USFWS Fisheries Resource Office, Pecos River fishes</td>
<td>198 / 7,252</td>
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<tr>
<td>ACC1997-II:3</td>
<td>Robert W. Dickerman, MSB Birds, <em>Dorosoma petenense</em></td>
<td>1 / 1</td>
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</tr>
<tr>
<td>ACC1997-IV:22</td>
<td>J.A. Rosenfield-Graduate Student UNM Biology, voucher collection</td>
<td>2 / 90</td>
<td></td>
</tr>
</tbody>
</table>

12. CURRENT STAFF

Altenbach, Christopher S. Identification Services & Field Worker
Brandenburg, W. Howard Identification Services & Field Worker
Cramer, Ashley Curatorial Assistant (UNM undergraduate student)
Davenport, Stephen R. Field Crew Coordinator and Museum Worker
Davis, Jason E. Field and Museum Worker
Dendy, Jules Field and Museum Worker (UNM undergraduate student)
Dudley, Robert K. Aquatic Biologist and Project Support
Hoff, Katherine M. Field and Museum Worker (UNM graduate student)
Larson, John P. Field and Museum Worker
Muelles, Manuel Curator
Platania, Steven P. Associate Curator and Project PI
Rosenfield, Jonathan A. Curatorial Assistant (UNM graduate student)
Snyder, Alexandra M. Collection Manager

13. MUSEUM ASSOCIATES

Brooks M. Burr, Ph.D. Professor of Zoology, Southern Illinois University
Astrid Kodric-Brown, Ph.D. Professor of Biology, University of New Mexico
David L. Propst, Ph.D. New Mexico Dept. of Game and Fish, Santa Fe
MUSEUM OF SOUTHWESTERN BIOLOGY
UNM DEPARTMENT OF BIOLOGY
FISCAL YEAR 1996/1997
HERPETOLOGY

1. DIVISION HIGHLIGHTS.

PowerMac computer purchased along with software for transfer of catalogue records from Excel into Biota for 4th Dimension.

Collection growth due to ongoing projects: C.W. Painter, State Herpetologist for New Mexico, Sceloporus habitat study, J.N. Stuart turtle research, and D. Sias Cnemidophorus study.

2. TABLE OF COLLECTION USE.

<table>
<thead>
<tr>
<th>Collection Growth</th>
<th>Loans (outgoing)</th>
<th>Loans (incoming)</th>
<th># Visitors</th>
<th># Date Requests</th>
<th># of Publications*</th>
</tr>
</thead>
<tbody>
<tr>
<td>369</td>
<td>23/961</td>
<td>none</td>
<td>18/0</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

3. COURSES USING THE COLLECTIONS.

FALL 1996 MAMMALOGY 489: 25 students, specimens used; collection manager assisted.

FALL 1996 GENERAL VERTEBRATE ZOOLOGY: 30 students, specimens used; assistant curator assisted.

SPRING 1997 HERPETOLOGY 488: 35 students, specimens used in laboratory.

4. COLLECTION MANAGEMENT.

Purchase of PowerMac and Biota software for cataloguing efforts.

5. AWARDS, GRANTS, AND CONTRACTS. List grants applied for and received. Include PI(s), grant title, agency, duration, and award amount. List alphabetically by PI. Please categorize under the following headings: Students, Faculty, Post-docs, Associates.

Faculty
Howard L. Snell: NOT AVAILABLE AT THIS TIME

Associates
Charles W. Painter: NOT AVAILABLE AT THIS TIME

James N. Stuart

Stuart, J.N. "Natural history aspects of the Big Bend slider, Trachemys gaigeae, in New Mexico." New Mexico Dept. Game and Fish, Share With Wildlife Program, 1 year, $7,000.


Stuart, J.N. "BISON-M computer database: update and revision of selected herpetological species accounts." New Mexico Dept. Game and Fish, 1 year, $2,000.
6. PUBLICATIONS.

A. Publications by Museum staff, students and Associates.


Stuart, J.N. 1997. Natural history aspects of the Big Bend slider, Trachemys gaigeae, in New Mexico. Interim report to New Mexico Dept. Game and Fish, Santa Fe.


B. Publications and reports based on museum specimens by researchers excluding Museum staff, students and Associates.


7. ACTIVITIES IN LEARNED SOCIETIES.

A. Invited or plenary talks.

B. Contributed talks or posters.

Snyder, Alexandra M.  Documentation of preservation history in wet collections: Workshop on preservation and curation of early life stages in fishes, amphibians and reptiles. American Society of Ichthyologists and Herpetologists, 1997 Seattle WA.

C. Attendance at professional meetings.

1997 American Society of Ichthyologists and Herpetologists (ASIH) in Seattle WA
Brown, Jennifer
Painter, Charles W.
Snell, Howard L.
Snyder, Alexandra M.

D. Service as editor or on editorial board of a journal.

Snyder, A.M.  1997 ASIH editor of Workshop presentations for ASIH website http://www.utexas.edu/depts/asih

E. Service as officer of professional society or organization.

Snyder, A.M. Chair of ASIH Subcommittee on Curatorial Supplies and Practices

8. OTHER PROFESSIONAL ACTIVITIES.

A. Seminar or colloquium presentations.

B. Presentations in a scholarly capacity at hearings, workshops, legislative committees, etc.

C. Presentation to general audience in a scholarly capacity.


D. Service in a scholarly capacity as a member of a local, state, regional or national committee, panel etc.

E. Journal referee.

9. SERVICE.

A. Symposia, workshops, conferences, etc. sponsored, organized, held etc.

Snyder, A.M.  Organized 1997 Workshop on Preservation and Curation of Early Life Forms in Fishes, Amphibians, and Reptiles for the American Society of Ichthyologists and Herpetologists annual meeting in Seattle WA.

The following respond to queries from both the public and researchers:

W.G. Degenhardt, Curator Emeritus: up to 1 hour a week
C.W. Painter, Associate Curator: up to 1 hour a week
J.N. Stuart, Associate Curator: up to 3 hours a week
D.S. Sias, Curatorial Assistant: up to 2 hours a week
M.A. Altamirano, Curatorial Assistant: up to 1 hour a week
A.M. Snyder, Volunteer Collection Manager: up to 30 minutes a week

Other Public Service:

A.M. Snyder, Volunteer Collection Manager 1996/97 Responding to questions on curatorial practices in wet collections (up to 5 hours a week).

10. ADVANCED STUDY, HONORS, AWARDS, FELLOWSHIPS, ETC.

NO INFORMATION AT THIS TIME

11. DONATIONS AND GIFTS RECEIVED.

A total of 25 accessions were received as donations to the collection (approx. 300 specimens from C.W. Painter, New Mexico Dept. Game and Fish, J.N. Stuart, National Biological Service, and various miscellaneous sources) and to the Division Library (66 reprints from R. Fagerlund, MSB Arthropod Division).

12. CURRENT STAFF.

Howard L. Snell, Curator
William G. Degenhardt, Curator Emeritus
Don S. Sias & Marco A. Altamirano, Curatorial Assistants
Alexandra M. Snyder, Volunteer Collection Manager

Graduate Students
Marco A. Altamirano
Jennifer Brown
Steve Earsom
Mark A. Jordan
Don S. Sias

Undergraduate Student Staff
Tara Armijo-Prewitt
Kelly Chrissinger

13. MUSEUM ASSOCIATES.

Curatorial Associates
Charles W. Painter, New Mexico Department of Game and Fish, Santa Fe NM
James N. Stuart, USGS National Biological Service, Albuquerque NM
Norman J. Scott, Jr., USGS National Biological Service, San Simeon CA

Research Associates
Roger Conant, University of New Mexico Albuquerque NM
Lee A. Fitzgerald, Texas A & M University, College Station TX
Randy D. Jennings, Western New Mexico University, Silver City NM
MUSEUM OF SOUTHWESTERN BIOLOGY
UNM DEPARTMENT OF BIOLOGY
FISCAL YEAR 1996/1997
MAMMALS

1. DIVISION HIGHLIGHTS.
As last year, the Division was very active. The projects driving this activity included the Hantavirus research (and other, related emerging viruses projects), the Long-term Ecological Research Project at the Sevilleta, and the New Mexico Bat Project. Several major grants were awarded (see Grants and Awards below), two MSB publications were published, and the number of grant-funded staff increased. A survey of mammal collections in the Western Hemisphere was published in 1997 that listed the MSB as seventh overall (this list includes American Museum of Natural History and the National Museum of Natural History) and fourth among university-based museum collections. In 1987, the MSB Division of Mammals was 12th largest collection of mammals in North America.

2. TABLE OF COLLECTION USE.

<table>
<thead>
<tr>
<th>Collection Growth</th>
<th>Loans (outgoing)</th>
<th>Loans (incoming)</th>
<th># Visitors</th>
<th># Data Requests</th>
<th># of Publications*</th>
</tr>
</thead>
<tbody>
<tr>
<td>84026 in 1996, now 88044 = 4018</td>
<td>78/1310</td>
<td>14/902</td>
<td>168/970</td>
<td>425</td>
<td>20</td>
</tr>
</tbody>
</table>

Special Summary of the Hantavirus Project:
Accessions from 1 July 1996 to 30 June 1997

New Mexico Hantavirus Survey had 88 species of rodents and many associated tissues that were accessioned into the museum. Mike Morrison from University of Arizona and a survey from the Yavapai College sent tissues from their fieldwork that was into our collection. Bill Irwin from the US Army sent about 200 rodents from various locations throughout the United States. 150 rodent carcasses were donated to the museum and were accessioned into the collection as well. 438 rodents were accessioned to the Museum of Southwestern Biology’s mammal collection. Catalogued Specimens from 1 July 1996 to 30 June 1997 527 specimens from CDC were given Museum of Southwestern Biology numbers and added to our collection. 18 specimens from Yavapai were catalogued into our collection. 100 rodents from the New Mexico Hantavirus survey were catalogued into our collection. 268 rodents from Bill Irwin were catalogued. 616 specimens from various donators were catalogued into the collection. 1529 additional specimens were catalogued into the Museum of Southwestern Biology’s mammal collection.

3. COURSES USING THE COLLECTIONS.

Biology 121: Principles of biology 1 loans
Biology 122: Principles of biology 5 loans
Biology 386: General vertebrate zoology 4 loans
Biology 402/502: Adv Vertebrate Biology 9 loans
Biology 489: Mammalogy 6 loans
Art 412: Museum management 1 loan
Anthro 449: Paleontology 1 loan

The following courses used the collection extensively as part of their coursework:

Biology 489: Mammalogy - 16 students (1996)
Biology 502: Advanced vertebrate biology - 15 students
Biology 502: Topics in Chromosomal Evolution - 6 students
Biology 651: Advanced Field Biology - 3 students
4. COLLECTION MANAGEMENT.

The Division has been running its 90,000 specimen database on a combination of FoxPro and Excel and then converted to Microsoft Access. Recently we have converted to a commercial product market by Sinaur Press and written by Robert Colwell called Biota. The coming year should provide several leaps in database management that includes Biota, bar coding of specimens, web access to the database, and linking of the database to a wildlife law site.

We have been preparing for a merger with the USGS Biological Resources Division collections. As a part of this we have done some trial mergers of specimens and are preparing to write a grant to the National Science Foundation to fund the full merger. As a part of the merger we have converged on types of cases (white Lane type, made by Delta Designs), how to number the BRD specimens, and their placement. All this is in preparation for the new Museum, to which we hope to move to next year.

For details on the New Museum facility and the progress of the USGS-BRD portion of the MSB, please refer to the Directors' Report and the Division report provided by the BRD (respectively) elsewhere in this document.

5. AWARDS, GRANTS, AND CONTRACTS.

Students:
M. Scott Burt:
Graduate research allocations (GRAC) and travel grant, department of Biology, UNM, spring 1996, $400
Morphological and genetic variation in the subspecies of Thomomys bottae in New Mexico, Student research allocations (SRAC), UNM summer 1996, $650
GRAC funding, $350.00
SRAC funding, $500.00
VPGRF award, $150.00

Post-Docs:
Jerry W. Dragoo:
$20,000 to examine the genetics and speciation questions with foxes (Genus Vulpes) in New Mexico. Cost-share project with the US Fish and Wildlife Service and the New Mexico Department of Fish and Game. 1997-1999.

$5000 to analyze Mountain Lion scats from sheep kills using DNA fingerprints. New Mexico Department of Game and Fish; with Eric Rominger.

Jennifer K. Frey:

William L. Gannon:
Awarded: 1997. National Geospatial Data Clearinghouse of State Biodiversity Laws and Policies and the Systematics, Ecology, and Life History of Mammals of the Southwest. The purpose of this project is to adapt the existing data collections of CWL and MSB to the draft National Biological Information Infrastructure (NBII) standards for biological data which are in accordance with the Federal Geographic Data Committee (FGDC)-endorsed Content Standards for Digital Geospatial Metadata. $90,000.

CONTRACTS: 1996 $14,000, in 1997 $42,000
Bat Survey 1997: Bureau of Land Management, Farmington
Bat Survey 1997: New Mexico Department of Game and Fish, Share with Wildlife Program,
Bat Survey 1997: Bureau of Land Management, Socorro,
Bat Survey 1996: Bureau of Land Management, Farmington
Bat Survey 1996: New Mexico Department of Game and Fish, Share with Wildlife Program.

Paul Polecbla:

Research Technologist, Museum of Southwestern Biology "Ecology of the River Otter and other Wetland Furbearers of the Upper Rio Grande" is a $20,000 Challenge Cost Share Agreement with the Bureau of Land Management (U.S. Department of Interior), U.S. Forest Service (U.S. Department of Agriculture), New Mexico Game and Fish Department, Office of War Chief, Pueblo de Taos, and the Regents of the University of New Mexico. The purpose of the grant is to determine the relative abundance of river otters (Lontra canadensis), mink (Mustela vison), raccoon (Procyon lotor), ringtail (Bassariscus astutus), muskrat (Ondatra zibethicus), and beaver (Castor canadensis). In addition the aquatic and riparian habitat will be analyzed. Other aquatic and riparian wildlife will be surveyed incidental to other activities


Faculty:
Terry L. Yates:

The Sevilleta LTER, Cycle II (co-PI with Bruce Milne); National Science Foundation, Division of Environmental Biology, 1 Oct 1994 - 30 Sept. 2000, $3,800,000.


Hantavirus Infections: Ecology, Immunity, and Treatment (co-PI with Fred Koster); Department of Health and Human Services, 1 Apr 1996 - 31 Mar 2000, $2,038,472.


Biological Diversity of New Mexico State Trust Land. PI. New Mexico Land Office, 16 Dec 1996 - 30 June 1999, $10,000.

Replacement and consolidation of research training facilities of the Department of Biology, University of New Mexico. PI. National Science Foundation, 15 Mar 1997 - 31 March 1998, $960,000.

6. PUBLICATIONS.

Publications and Papers:

**Burt, M. S. and R. C. Dowler.** 1997. Allozymic Variation and Gene Flow at a Contact Zone of Three Chromosomal Races of the Geomys bursarius Species Complex in Eastern Texas. *Journal of Mammalogy,*


standards for automatic data processing in mammalogy. American Society of Mammalogists, O'Neil Research Center, CMNH, 5800 Baum Blvd, Pittsburgh, PA. 54 pp.


B. Publications and reports based on museum specimens by researchers excluding Museum staff, students and Associates.

7. ACTIVITIES IN LEARNED SOCIETIES. List alphabetically (by division member) under each category.

A. Invited or plenary talks.

Gannon, W. L. Workshop on the operation of the AnaBat bat detector system (with Chris Corben and Mike O'Farrell), 1996. Attended by 23 participants from across the US. Held in St. George, Utah.

B. Contributed talks or posters.

C. Attendance at professional meetings.

Students:
M. Scott Burt:

Oral presentation given to Mammal meetings in June 1997
Poster presentation at 1997 ITC meetings in Acapulco
Oral presentation at Bat meetings in Tucson, 1997


Post-docs:


Paul Polechla:

November 1996 Coexistence of Large Carnivores With Man, Saitama, Japan. Education program on bear ecology for Alaska Native teenagers.
"Do Short-Term Mammal Surveys Result in Valid Estimates of Species Diversity"-poster with J. L. Dunnum et al.
"Demographics of Small Mammals at 4 Locations in New Mexico with Relation to Hanta Virus Infection"-poster with M.L. Campbell et al.

Luis Ruedas:


D. Service as editor or on editorial board of a journal.


E. Service as officer of professional society or organization.

Burt:
Member of Web committee, ASM

Gannon:
Chair, Systematic Collections Committee (American Society of Mammalogists), 1996 - present
Member. International Regulations Committee (American Society of Mammalogists), 1996 - present
Member, Information Retrieval Committee, (American Society of Mammalogists), 1988 - present Society for the Preservation of Natural History Collections - Supplies Committee, member
Member, Main Campus Animal Care and Use Committee, UNM, 1990 - present

Ruedas:
International Relations Committee, American Society of Mammalogists
Committee for the Conservation of Land Mammals, American Society of Mammalogists
Program Committee, American Society of Mammalogists
Ad hoc Web subcommittee of the Information Retrieval Committee (ASM)
Organizing Committee (Co-chairman), Joint American Society of Mammalogists — European Mammal Society — Spanish Society of Mammalogy Meeting; to be held June 1998, Santiago de Compostela, Spain.

Yates:
Trustee, Southwestern Association of Naturalists, 1992 - present.
Trustee, American Society of Mammalogists, 1996 - present.
Global Environmental Facility - World Bank - Biodiversity Subcommittee.
Latin American Biodiversity Committee - Smithsonian Institution.
Bio Task Force on Environmental Biology, The NSF.
Research Needs Committee - Ecological Society of America.
International Relations Committee, Chair, ASM.
Coordinating Committee for Latin American Exchanges Land use Committee
International Policy Committee
Grants Committee Latin American Institute
Academic Freedom and Tenure Committee
Council on the Americas
Main Campus Animal Care and Use Committee, Chair

8. OTHER PROFESSIONAL ACTIVITIES
A. Seminar or colloquium presentations. None.
B. Presentations in a scholarly capacity at hearings, workshops, legislative committees, etc. None.
C. Presentation to general audience in a scholarly capacity.
D. Service in a scholarly capacity as a member of a local, state, regional or national committee, panel etc.
E. Journal referee. List journals and number of papers refereed by each division member in alphabetical order.

Gannon:
- Journal of Mammalogy
- Bat Research News
- Southwestern Naturalist

Ruedas:
- Fieldiana (Zoology), New Series
- Journal of Mammalogy
- Proceedings of the Biological Society of Washington

9. SERVICE.
A. Symposia, workshops, conferences, etc. sponsored, organized, held etc.
B. Public Service.

10. ADVANCED STUDY, HONORS, AWARDS, FELLOWSHIPS, ETC.

11. DONATIONS AND GIFTS RECEIVED.

Ca. 500 rodent specimens from Dr. Troy Best

12. CURRENT STAFF.

A. Faculty.
Terry L. Yates, Professor and Curator.
Jim S. Findley, Curator Emeritus.

B. Staff.
William Gannon, Collection Manager.
Burt, M. Scott, Grad Asst Curator, Bat Crew 1997
Tagide deCarvalho, prep room supervisor (1996); Bat Crew 1997
Steve Archambault, prep room (1996)
Richard Bailey, prep room (1996)
Becky Folk, (WS); Prep Room Supervisor 1997
Matt Garcia, WS, 20 hrs, Biol Materials
Janie Milner, Hanta Crew
Cheryl Parmenter, Hanta crew, 1994-1997
Rachel Yabeny, HS Student project
John Kendall, Bat Crew 1997
Kat Lamke, Hanta Project 1996-1997
Dave Tinnin, Hanta Project 1997
Paul Plolechla, Hanta Project 1997

C. Students.
Burt, M. Scott (for Ph.D.)
Davis, Forrest W. (for Ph.D.)
Miyashiro, Jennifer B. M. (for M.S.)
Perry, Travis W. (for Ph.D.)
Racz, Gabor R. (for Ph.D.)
Salazar Bravo, Jorge (for Ph.D.)

Postdoctoral Associates:
Dragoo, Jerry W.
Frey, Jennifer K.
Gannon, William L.
Ruedas, Luis A.

D. Volunteers.
Trina Hedrick

13. MUSEUM ASSOCIATES.

Curatorial Associates.
James H. Brown UNM Department of Biology
Robert W. Dickerman Museum of Southwestern Biology
Richard B. Forbes Department of Biology, Portland State University,
William Lopez-Forment UNAM, Mexico (1990)

Research Associates:
J. Scott Altenbach UNM Department of Biology
Sydney Anderson American Museum of Natural History, New York
Robert J. Baker The Museum, Texas Tech University, Lubbock, TX
Troy L. Best Department of Biology, Auburn University
Joseph A. Cook Natural History Museum, University of Alaska, Fairbanks
Scott L. Gardner Dept. Nematology, Curator, University Nebraska.
Sarah B. George Director, Utah State Museum.
Gary L. Graham Bat Conservation International
David J. Hafner New Mexico Museum Nat. History
Bruce J. Hayward Department of Biology, Western New Mexico University
Edward J. Heske Illinois Biological Survey
R. Dewitt Ivey Retired, active in botany, mammals
Clyde Jones The Museum Texas Tech University
Dwight W. Moore Emporia State University
Robert Parmenter Department Biology, LTER coordinator
James L. Patton Museum of Vertebrate Zoology, University of California
Richard A. Smartt New Mexico Museum of Natural History.
1. DIVISION HIGHLIGHTS.

The vascular plant holdings of the herbarium now exceed 91,300 specimens. Work continues on computerizing the collection holdings and approximately 20,000 specimens are in our database (-22%). A significant development has been in the improvement of the specimen-based database in FileMaker Pro (see below for details) and the development of the UNM Herbarium Home Page. The curator, Dr. Lowrey, was awarded $313,000 in grant funds for compactorization of the MSB collections in the renovated bookstore. The herbarium received a major donation of 5 computers from McBride & Associates of Albuquerque.

2. TABLE OF COLLECTION USE. Fill in the blanks with the correct statistics. Collection growth should be the number of cataloged specimens added to the division. Loans (outgoing) should include the number of loans and the number of lots or specimens separated by a “/”. Loans (incoming) same format as for Loans (outgoing). # of Visitors should include the number of researchers and general public separated by a “/”.

<table>
<thead>
<tr>
<th>Collection Growth</th>
<th>Loans (outgoing)</th>
<th>Loans (incoming)</th>
<th># Visitors</th>
<th># Data Requests</th>
<th># of Publications*</th>
</tr>
</thead>
<tbody>
<tr>
<td>941</td>
<td>42/1828</td>
<td>52/2365</td>
<td>212/10</td>
<td>428</td>
<td>7</td>
</tr>
</tbody>
</table>

3. COURSES USING THE COLLECTIONS.

BIOL 123L Health Related Science and Lab (24 students) specimens
BIOL 463L Flora of New Mexico (48 students) specimens, facilities and staff participation
BIOL 360L General Botany/Lab (~30 students) specimens from teaching collection are used
BIOL 523 Advanced Systematics (20 students) specimens
BIOL 563L Advanced Plant Taxonomy (7 students) facilities, specimens, staff participation
BIOL 461 Introduction to Tropical Biology (12 students) facilities, staff participation
BIOL 402 ST/Systematic discussion (10 students) staff participation, specimens
BIOL 402 ST/Plant Biology (10 students) specimens
BIOL 474 Plant Anatomy/Lab (15 students) staff participation, specimens and fruits from teaching collection

4. COLLECTION MANAGEMENT.

During the past year the entire specimen database was transferred from Paradox to FileMaker Pro. In addition to creating many new fields, existing fields were edited and standardized. Many fields, including taxon name, country, state, county, collector and vouchers, have lookup functions to minimize risk of entering errors. It is also possible to generate specimen labels and annotation labels. Work continues in data-entering and approximately 20,000 specimens are in the computer database.

To insure the long-term preservation of the collections, efforts are almost complete in replacing worn and acidic genus folders for the entire collection.

5. AWARDS, GRANTS, AND CONTRACTS.
Students:


Faculty:

Lowrey, Timothy K. Supplement to NSF Grant Genetics of Adaptive Radiation in Tetramolopium. NSF; $17,400; October-December 1996.


6. PUBLICATIONS.

A. Publications by Museum staff, students and Associates.

Newsletters:


Books:


Reports:
Frazier, Christopher K. 1997. Field Survey of the San Andres Mountains for *Polygala rumulicola* var. *mescalorum* and *Penstemon alamosensis*. In fulfillment of contract 97.521.04.118 between the Energy, Minerals and Natural Resource Department of the State of New Mexico and the Department of Biology, University of New Mexico. 18 p.
Lowrey, Timothy K. 1996. Floristic inventory of along Highway 258, Taos County, New Mexico. Included in report by Marron and Assoc. to NM Department of Transportation, 10 p.

Web Publications:
Barlow-Irick, Patricia and T.K. Lowrey. 1997. New Mexico Rare Plants Discussion group (NMRarePlants-L@mail.unm.edu)

Barlow-Irick, Patricia. Carlsbad Caverns National Park Floristic Survey Project.

Barlow-Irick, Patricia. The Biological Phenomena of Species Complexes.

Barlow-Irick, Patricia. Do-It-Yourself Webpage Tutorial for the UNM Biology Department.

Barlow-Irick, Patricia. The Cirsium Webpage.

Barlow-Irick, Patricia. The Chelonian: New Mexico Journal of Environmental Planning.

Barlow-Irick, Patricia. The Controversy of Ecotourism.

Mygatt, Jane. Plant Taxonomists Online (PTO). International e-mail directory of more than 750 plant taxonomists throughout the world, available on the UNM Gopher and the UNM Herbarium homepage (URL: http://biology.unm.edu/~herb/HerbLinks.html#section3

Mygatt, Jane. Herbaria Online (HOL). International e-mail directory of more than 100 herbaria throughout the world, available on the UNM Gopher and the UNM Herbarium homepage (URL: http://biology.unm.edu/~herb/HerbLinks.html#section3

Mygatt, Jane. Collection Managers Online (CMO). International e-mail directory of more than 215 collection managers throughout the world, available on the UNM Gopher and the UNM Herbarium homepage (URL: http://biology.unm.edu/~herb/HerbLinks.html#section3

B. Publications and reports based on museum specimens by researchers excluding Museum staff, students and Associates.

7. ACTIVITIES IN LEARNED SOCIETIES.

A. Invited or plenary talks. None.
B. Contributed talks or posters. None.
C. Attendance at professional meetings.

Lowrey, Timothy K. American Institute of Biological Sciences meeting, University of Washington, Seattle WA, August 1996.


D. Service as editor or on editorial board of a journal.

Lowrey, Timothy K. Member, Editorial Board of Madrona.

E. Service as officer of professional society or organization.
Lowrey, Timothy K. Council Member, American Society of Plant Taxonomists (elected in national election) American Society of Plant Taxonomists representative

8. OTHER PROFESSIONAL ACTIVITIES.

A. Seminar or colloquium presentations.
B. Presentations in a scholarly capacity at hearings, workshops, legislative committees, etc.
C. Presentation to general audience in a scholarly capacity.

Barlow-Irick, Patricia. Participated in Women in Science Workshop, speaking to junior high school girls about careers in environmental biology.

Lowrey, Timothy K. Chamiza Elementary School, Albuquerque Public Schools, April 1996

Lowrey, Timothy K. Teachers In-Service Program, Chamiza Elementary School, Albuquerque Public School, August 1996

D. Service in a scholarly capacity as a member of a local, state, regional or national committee, panel etc.

Barlow-Irick, Patricia. The New Mexico Rare Plant Technical Advisory. Secretary.

E. Journal referee. List journals and number of papers refereed by each division member in alphabetical order.

Barlow-Irick, Patricia:
Rhodora (1)

Lowrey, Timothy:
American Journal of Botany (2)
Systematic Botany (1)
Molecular Ecology (1)
Madrono (1)

9. SERVICE.

A. Symposia, workshops, conferences, etc. sponsored, organized, held etc.

UNM Herbarium personnel:
The New Mexico Rare Plant Technical Advisory. 6 June 1997. (Hosted).

B. Public Service.

Barlow-Irick, Patricia. Carlsbad Caverns National Park Floristic Survey

Barlow-Irick, Patricia. List manager for NMRAREPLANTS-L, an online discussion group for rare plants.

Barlow-Irick, Patricia. Arranged contribution of 5 computer systems to MSB from McBride & Associates.

Barlow-Irick, Patricia. Made collections of phytophagous and pollinating insects from thistle species and contributed to MSB Arthropod collection.
10. ADVANCED STUDY, HONORS, AWARDS, FELLOWSHIPS, ETC.

Sabbatical Leave:
Lowrey, Timothy K. Visiting Fellow, University of New South Wales, Sydney, Australia, September-December 1996.

11. DONATIONS AND GIFTS RECEIVED.

02 Jul 1996. Jane Mygatt. 54 specimens from New Mexico and Colorado. 
22 Jul 1996. Robert Sivinski. 1 specimen from New Mexico. 
13 Sep 1996. Robert Sivinski. 3 specimens from New Mexico. 
27 Sep 1996. Dov Sax. 2 specimens from Mexico. 
02 Oct 1996. Rocky Mountain Herbarium. 6 specimens. 
21 Oct 1996. Robert Sivinski. 15 specimens from New Mexico 
02 Apr 1997. Charles Keller. 2 specimens from New Mexico. 
08 May 1997. Clifford Crawford. 8 specimens from the Bosque. 
17 May 1997. Bill Hevron. 4 specimens from New Mexico. 
06 Jun 1997. Bill Hevron. 2 specimens from New Mexico. 
10 Jun 1997. John Irick. 5 computers and 5 monitors. 
13 Jun 1997. Paul Knight. 7 specimens from New Mexico. 

12. CURRENT STAFF

A. Faculty.
Timothy K. Lowrey, Ph.D. Assoc. Professor, Curator and MSB Director.

B. Staff.
Chris Frazier (Fall 96, Spring 97). Teaching Assistant. Development of specimen database (FileMaker Pro) and creator of UNM Herbarium homepage.

Jane Mygatt. Collection manager. Editor of international electronic-mail databases: Plant Taxonomists (PTO), Herbaria (HOL) and Collection Managers (CMO).

Cheryl Saavedra (Fall 96, Spring 97, Summer 97). Herbarium technician.

Phil Tonne (Summer 1997)- Teaching Assistant.

C. Students.
Chris Frazier. Ph.D. student. Ecological and evolutionary significance of natural hybridization in *Nepenthes*.


13. MUSEUM ASSOCIATES.

Curatorial Associates.
David L. Bleakly, M.S. Botanical Consultant, NM floristics.
William Dunmire, M.S. Nature Conservancy (retired); Author, Ethnobotany of the Southwest.
Robert DeWitt Ivey, M.S. APS (retired); Botanical Author, NM floristics.

Research Associates.
Jack L. Carter, Ph.D. Professor of Biology (Senior Status) The Colorado College, Author, *Trees and Shrubs of New Mexico*
David C. Deardorff, Ph.D. Biologist, NM State Lands Office.
William Hevron, M.S. Botanical Consultant. NM floristics.
Charles “Chick” Keller, Ph.D. Director, Institute of Astrophysics, Los Alamos Scientific Laboratories.
Paul Knight, M.S. Botanical Consultant. NM floristics, T&E species.
Esteban Muldavin, Ph.D. Ecologist, New Mexico Natural Heritage Program.
APPENDIX C

ANNUAL REPORT:
LONR-TERM
ECOLOGICAL
RESEARCH
PROGRAM
1. The Sevilleta LTER Program

The Sevilleta Long-Term Ecological Research Program (LTER) was initiated in October, 1988, and has focused on a suite of ecological hypotheses concerning climate dynamics and the responses of organisms in a biome transition zone in central New Mexico. The Sevilleta LTER research region straddles several major biomes of the Southwest, and the large geographic scale of the Sevilleta region is important for studies that range from genetics and physiology at the organismal level, to the dynamics of biome transition zones. The region is strongly influenced by the El Niño Southern Oscillation (ENSO), with major fluctuations in precipitation on semi-decadal time scales. To date, 100 LTER research papers have been published or are in press.

A. Climate/Meteorology. (Doug Moore)

Climate/meteorological efforts during the past year have focused on maintaining and upgrading the current meteorological network with particular emphasis on installation of soil moisture Time Domain Reflectometry (TDR) instrumentation. There has also been increased effort to directly measure evapotranspiration using Bowen Ratio and Eddy Correlation techniques. Both the soil moisture monitoring and water flux measurements are important in the water balance modeling effort.

Database management continues to be a major part of the meteorological effort and considerable time has been spent making meteorological and climatological information available on the Network. This includes both raw data as well as daily, monthly and annual summaries. This information can be accessed via the Sevilleta - Climate Meteorology Home page at the following URL:

http://sevilleta.unm.edu/meteor/cim-met-home.html

An on-going project is to perform more complete evaluation of the effects of El Niño Southern Oscillation (ENSO) on New Mexico and how that relates to the Sevilleta in particular using GIS spatial analysis techniques available in Areview 3.0. This involves using an array of High Confidence (HCN) weather stations in and around New Mexico with long-term precipitation and temperature records.

Data management continues to require significant effort in obtaining and archiving of lightning strike location data. There is currently an effort to compare the effectiveness of this data to predict precipitation inputs as compared to that from Nexcad Doppler radar data.

B. Vegetation: Productivity, Populations, and Ecotone Studies. (Bruce Milne, Kimberly Taugher, James Gosz, Debra Coffin)

Overview. During the past year we have completed a large vegetation mapping effort in cooperation with the New Mexico Natural Heritage Program. We also installed 10 new permanent plant transects in our existing
mammal web study sites in an effort to describe the extant vegetation communities, observe changes in composition and diversity over time and provide floral data to accompany our rodent datasets. We are also now studying the changes in floral richness and diversity as well as potential disturbance mechanisms concomitant with the reintroduction of a small population of Gunnison’s prairie dog at the Sevilleta National Wildlife Refuge. Data for the vast majority of plant studies at the LTER have been entered, quality checked, analyzed and archived. Analysis of all vegetation transects for 1996 can be found on our web page at: http://www.sevilleta.unm.edu/plant-home.html
Data for our water balance modeling project are analyzed, and are currently being used to build experimental models. Archival for these data are scheduled for the upcoming month.

*Water balance model.* (Bruce Milne and Scott Martens)

Based on the renewal proposal, the Sevilleta continued to implement a spatially explicit water balance model for the site. We contracted with Dr. Scott Martens to adapt his model, SPLASH, to the Sevilleta. SPLASH couples atmosphere, vegetation, and surface-subsurface hydrology in a distributed, or spatially-explicit, context as a grid of cells. Temporal resolution varies from one second to one day depending on the process simulated. Time steps are adjusted adaptively depending on the fastest water flux to enable efficient computation. This also allows simulation of high-frequency, but important, precipitation or runoff events.

SPLASH includes a microclimate simulator that extrapolates meteorological data (temperature, humidity, precipitation) in space using elevational lapse functions developed previously for the Sevilleta. Solar radiation input, as modified by topography, is also simulated for each cell. Transpiration is estimated using a Penman-Monteith approach. Compartments of water included in the model are canopy storage, snowpack, surface water, unsaturated soil water, and saturated soil water. The fluxes of water modeled are precipitation (rain and snow), canopy throughfall, snowmelt (using an energy balance approach), lateral surface flows (using Manning’s equation), infiltration (using Green-Ampt infiltration approach), exfiltration, lateral subsurface flow (using Darcy’s law), deep seepage, transpiration, and evaporation from soil and canopy surfaces (using an energy balance approach). Recently completed maps of LAI, plant height, and plant cover will be used in conjunction with two years of monthly plant cover measurements to create monthly resolution plant cover maps for the Sevilleta.

The model was originally designed and used as part of the Sierra Nevada Ecosystem Project at UC Davis where it was applied to forested watershed on the west slope of the Sierra Nevada in California. SPLASH is used for the Canopy Crane site in southern Washington. Eventually, Sevilleta simulations will include carbon and nitrogen cycling modules, e.g., production, decomposition, mineralization, etc., as required for application at the Canopy Crane site. Validation is limited to testing output from components of the model at specific points where pertinent data have been collected, e.g., automated time domain reflectrometry (TDR) measurements of soil moisture, remotely sensed surface temperature measurements made in June 1997 by J. C. Richie from ARS. (http://algodones.unm.edu/waterbal/waterbal.html)

*Development of the Sevilleta Vegetation Map.* (Bruce Milne, Esteban Muldavin, Greg Shore)

A preliminary vegetation map with nominal 2 ha resolution has been created for the Sevilleta. The map includes 30 vegetation classes derived from an unsupervised classification of 12 Thematic Mapper images collected in three seasons over a four year period. Plant composition, height, and cover were measured at three or more ground points for each class. Leaf area index for the five plant guilds used in the JOR studies were derived for each cover class. The maps provide a valuable resource for the water balance model and serve as general habitat maps for many other studies. Soon, Esteban Muldavin of the New Mexico Heritage Program, will complete a plant classification at the association level from which the 30 classes will be combined, thereby enabling direct comparison with other mapping efforts in the state, i.e., The Gray Ranch,
Plant population studies of important grass species. (Debra Coffin).

Because of the importance of black grama and creosotebush in Chihuahuan desert ecosystems, and of blue grama in Great Plains grasslands, our plant population studies are focusing on these three species. In 1996, we initiated a seed production study of blue and black grama at 5 sites differing in dominant species (blue grama, blue grama/black grama, black grama, black grama/creosotebush, creosotebush). We plan to collect seeds of these species again in 1997 and 1998 to coincide with the predicted El Niño event. We also collected soil samples for seed bank analyses at these same sites in November (1995) after a severe drought, and again in November and April (1996) after average rainfall conditions. More blue grama seeds were stored in the soil than black grama for all dates, and blue grama was one of the few grasses with seeds in the soil following the drought. In 1996, we conducted a watering experiment to determine if differences in the temporal and spatial distribution of resource use by blue grama, black grama, and creosotebush could account for codominance of these species at the Sevilleta (Coffin 1997a). Blue grama acquired water at cooler temperatures than black grama, and creosotebush acquired water over a broader range of depths than the grasses. Analyses using the ECOTONE model with this information suggest that these differences in resource use are important to patterns in species dominance. The model also predicted that black grama will increase in dominance under increased temperatures expected with elevated CO2 in the future. Effects of grazing on the availability of soil water under canopies of blue grama compared to black grama are being evaluated with the SOILWAT model (Hochstrasser and Coffin 1997). We are currently conducting an experiment of leaf water potential to further investigate differences in species responses. We are also using the SOILWAT model to evaluate the important environmental constraints on seedling establishment of blue and black grama. We will continue our field and modeling analyses in order to better understand the processes controlling species dominance at these sites.

Climate variability and pinyon pine demography. (Julio Betancourt, USGS-Desert Laboratory; Tom Swetnam, Laboratory of Tree-Ring Research, University of Arizona; and Jerry Gottfried, USDA-Forest Service, Tempe, AZ.)

Dendrochronological methods were used to determine the ages (births and deaths) of 850 seedlings, and more than 2000 living and dead trees in the Sierra de los Pinos back to late 1500s. The inclusion of dead trees in our analysis permits reconstruction of dynamic age structures after 1850. Ancillary data collected at each of our five plots (four 1/2 ha and one 11 ha plot) include diameter at root crown, tree height, and canopy dimensions for all pinyons and junipers in the plots. We also sampled soils under living and dead pinyons of known age to evaluate the stability of soil pH, phosphorous, carbon, and nitrogen content 50-100 years after the trees died.

Recruitment episodes are strongly episodic, with major events represented at two or more of the plots in 1630-1670, 1710-1730, 1770-1790, and 1900-1920. Based on the seedling and sapling data, there also appears to be a pulse in recruitment since 1976. The period from 1942-1956 accounts for most of the mortality evident in the vast number of dead trees across the Sierra de los Pinos. This event eliminated most trees established before 1850, shifted the age distribution to younger trees, and decreased the proportion of pinyons to junipers at all of the plots. Below the litter layer, we found no differences in soil carbon and nitrogen between living trees and trees that have been dead for 50 to 100 years. We aggregated births and deaths across all of the plots and compared demographic trends with regional climate reconstructions from tree rings. This comparison suggests the following model for the long-term behavior of these woodlands. First, broadscale mortality during catastrophic droughts, such as 1575-1595, 1667-1680, 1730-1750.
1890-1904, and 1942-1957 release existing seedlings and saplings from competition for light, water and nutrients and open up niches for recruitment. A preferred niche might be the footprint of a dead tree (a pool of soil and carbon and nitrogen), which persists for 100 years or more. Recruitment pulses tend to occur in the first sustained wet period following the drought and the associated mortality. An example of this process may be the pulse in recruitment since 1976, on the heels of the mid-century drought and sustained by a string of wet winters linked to anomalous warming of the tropical Pacific. Most recently, we have expanded the seedling part of our study to other areas in the middle Rio Grande Basin to discriminate between climate and grazing effects (e.g., fencing of the Sevilleta in 1976). Finally, our study underscores the importance of reconstructing, observing, and assessing ecological processes and patterns at the appropriate scales, i.e., mesoscales and centuries. Ecological synchronicity at these scales is the hallmark of climatic effects on ecosystems and is a key to separating cultural from natural causes of environmental change.

Precipitation Seasonality Recorded in Pinyon Pine Cellulose D/H Ratios. (Elise Pendall, Laboratory of Tree-Ring Research, The University of Arizona, Tucson, AZ.)

The D/H ratio in sap is a tracer of water use by pinyon pine, and D/H in cellulose of tree rings and leaves records precipitation seasonality at sites along a gradient of decreasing monsoon rain. Water use by pinyons shifts from >50 cm to <50 cm depth over the course of the growing season at the Sevilleta LTER, in response to monsoon rain inputs. This contrasts with water use by pinyons at sites in Nevada and northern Arizona receiving less monsoon rain, where deep water (>50 cm) is accessed throughout the growing season. The background source water D/H ratio is related to ENSO-related changes in winter rainfall, and is recorded in tree-ring cellulose at the Sevilleta and in northern Arizona. D/H ratios in sap are enriched during evaporation from needles, imparting a summer humidity signal to photosynthates that is ultimately incorporated into needle cellulose at all sites along the gradient of decreasing summer rainfall. D/H ratios in pinyon needles preserved in packrat middens at the Sevilleta suggest little change over the past ~40,000 years in monsoon precipitation. Alternatively, tropical moisture sources and abundant late spring precipitation would explain the relatively enriched D/H ratios observed during the Last Glacial Maximum. Data management is in process. All isotopic data (hydrogen and oxygen stable isotopes) from Sevilleta rainfall samples and a few groundwater samples will be contributed to the Sevilleta database.

C. Nutrient Cycling and Soil Ecology. (Carl White and John Craig)

Primary inputs to ecosystems are determined from chemical analyses of bulk precipitation and the wet/dry collectors (see meteorological section). Annually, replicate litter bags of last year’s production of black grama, juniper, Indian rice grass, and creosote are placed at 4 core sites to measure decomposition: Deep Well; Cerro Montosa; Rio Salado; and Red Tank. Collections are made seasonally through the first year and after two years. A fifth species, blue grama, is placed at the Deep Well site also, which represents the most extensive mixture of blue and black grama. The Deep Well site is also a site represented by the LIDET inter-site decomposition study. At these 4 core sites, soil erosion bridges (5 at each site) were installed and are measured to monitor changes in soil microtopography (erosion/deposition). Associated soil analyses include texture, water holding capacity, organic matter, nitrogen mineralization potential, total N and P, and soil conductivity. A synthesis of soil C and N dynamics at a creosote-grassland ecotone was accepted for publication in Ecology.

Data from the C and N dynamics study are available on the web at http://sevilleta.unm.edu/soil/nc_sub_soil.shtml. A copy of the manuscript with figures and tables is available as well. Also at this address is information on the soil erosion bridge study.

Precipitation chemistry summary and raw data can be viewed at http://sevilleta.unm.edu/water/ppt_chem/precip_chem.shtml.
Decomposition data are currently being QA/QCed and will be available on the web in the near future. Background information on plant litter decomposition, as well as the LIDET study can be viewed at http://sevilleta.unm.edu/soil/nc_sub_decomp.shtml.

D. Trophic Interactions/Animal Population Studies.

Vertebrates. (Parmenter, Yates, Brown, Friggens, Lightfoot). 1997 is the ninth consecutive year for the spring and fall rodent trapping for the Sevilleta LTER Small Mammal Population Study core dataset. Forty percent of the trapping effort generates material for continuing investigation of taxonomy and population trends of host parasites. This research measures mammal densities at six localities representing the major biomes on the SNWR. A four person crew has completed six weeks of field work this year. We can already see a dramatic population increase this year over the two past drought years, especially within the family Heteromyidae. The Bird Population Trend study consists of seasonal point counts in three habitat types on the Sevilleta. The bird densities are also up this year, largely a result of bountiful seed crops produced last fall. Rodent data can be viewed at: http://sevilleta.unm.edu/dbMammal/doc/master-mammal.lst Bird data can be viewed at: http://sevilleta.unm.edu/dba/animal/bird_transect.dbf

Arthropods. (Brantley, Parmenter, Lightfoot). The 1996 drought strongly reduced numbers of arthropods collected from the Sevilleta pitfall traps, with abundances not returning to more typical levels until May 1997. Camel cricket numbers increased first, followed by grasshoppers, tenebrionid beetles and spiders. Pitfall sites at Bosque del Apache and in the grasslands of the Magdalena Mountains were closed, but seven study sites remain. The reference collection of several thousand specimens was deposited with the Museum of Southwestern Biology at the University of New Mexico. Database improvements included the addition of new fields to facilitate data grouping, and a change from species number codes to codes based on species name. This development reflects the growing number of Sevilleta arthropod species that have been identified, rather than listed as "operational taxonomic units." Species distribution data from the Sevilleta have contributed to statewide efforts to inventory arthropod diversity by documenting range extensions and undescribed species. Data are not archived as yet, pending identification confirmations.

E. Disturbance Studies

Wildfires. (Robert Parmenter, James Gosz)

Post-fire measurements of vegetation re-growth is continuing for experimental and natural fire sites on the Sevilleta. Analyses are underway, though data have not been archived. One manuscript on grama grass responses to fires has been published (Gosz and Gosz 1996), and one manuscript on harvester ant responses to fires (Zimmer and Parmenter) has been submitted to Environmental Entomology; eight more manuscripts on plants, rodents (2), pronghorn, beetles, grasshoppers, spiders, and homopterans are in preparation.

Prairie dog reintroduction project. (James Gosz, Robert Parmenter, REU-Ana Davidson)

A population reintroduction of Gunnison's prairie dogs was begun in March 1997 in the grasslands near the South Gate region of Sevilleta. The influence of the prairie dogs on vegetation and other rodent species is being measured by REU student Ana Davidson. Data are entered and are being analyzed, but are not archived as yet.

Small scale disturbance studies. (D. Coffin)

We are evaluating the effects of small, patchy disturbances, such as nest sites of harvester ants and mounds.
from kangaroo rats, on vegetation dynamics through field studies and simulation modeling. Removal plots (3 m x 4 m) of the dominant species that were initiated in 1995 at five sites along a grassland-shrubland transition zone were resampled in 1996. We found that plant recovery was dependent upon the dominant species removed (Coffin 1997b). Recovery on plots previously dominated by blue grama was largely due to the invasion of species from the surrounding landscape whereas recovery on plots previously dominated by black grama was primarily growth of plants of other species remaining on the plots. Recovery on creosotebush plots was limited to microsites located under shrubs that were removed. These plots will continue to be monitored annually for plant recovery and will be maintained to exclude the previous dominant species from the plots in order to evaluate shifts in dominance through time. As part of this project we are modifying the STEPPE individual plant based model developed for shortgrass steppe communities at the SGS-LTER for grass-shrub ecotones at the Sevilleta. Results from the ECOTONE model indicate that long-term dynamics on these removal plots depend upon the source of propagules, either from the plot, patch or landscape. A recent award to Coffin (DEB97-07100) will allow us to continue to refine the ECOTONE model for spatial processes (seed dispersal, soil redistribution) occurring across landscapes at the Sevilleta. We will link the model with Arc/Info to access the spatial datalayers already available for the site. We are also analyzing the long-term vegetation transect data to determine the relative importance of patchy disturbances and climate variation to species diversity and composition. Transect data from Rio Salado, Branco Well, Five Points, and Deep Well from 1989-1996 were separated into undisturbed and disturbed patches, and are being analyzed for temporal and spatial patterns in vegetation.

F. GIS/Remote Sensing. (Greg Shore)

Major tasks undertaken in 1996-97 include: (1) Upgrade/transition primary computer system to Sun Solaris 2.5, and migrate GIS/RS/GPS databases and software to this new system. (2) Complete VegMap Project field work; enter, QA/QC, and archive all field data for Sevilleta LTER and NM Nat Heritage Program for 1994 through 1996; transmit field databases to Dr. Muldavin to complete map labeling, class aggregation, error analysis, and map production Fall 1997. (3) Derive various map products from preliminary VegMap for general use, and for specific use in MODLERS and Water Balance Modeling Projects. Products included average plant cover, height, LAI, and Running's Land Cover Classification, both by image class, and by Jornado LTER (SWB Model) plant guilds within image class. (4) Finish GPS base station installation, real-time DGPS telemetry system, and lightning protection system for same. DGPS telemetry system includes 35W base station transmitter at Sevilleta Field Station, and 17W solar-powered repeater station located on top of Los Pinos mountains on east side of Sevilleta NWR. WWW and anonymous FTP access to GPS base station files to be enabled Fall 1997. (5) Design GIS/RS data management, archiving, and WWW access schema. Conduct ArcView training for PI's, staff, and students. (6) Design VegMap-related research project as part of NASA funded Operational Atmospheric Correction of Satellite Imagery grant, and attended workshop last summer to present proposal. (7) Work with ESA to design and conduct an "Intro to GPS" workshop as part of the annual ESA conference in 1997.

G. Public Outreach. (Robert Parmenter, Terry Yates)

The Sevilleta LTER Program has been featured on public television several times in the past year, and is participating in a future production for PBS. In 1996, we participated in the PBS/Audubon Special, Wild Wings Heading South, which featured Sevilleta data on climate change from tree ring analyses and pack rat middens. In addition, the Sevilleta was on the CBS Evening News in June, 1997, in regard to possible Hantavirus problems associated with the predicted 1998 El Niño. The Sevilleta has also been featured repeatedly in local newspapers and on local TV news shows in regard to the El Niño. In September, 1997, we will participate in the making of a PBS teaching video on mathematics and field ecology (C. Marsh's NSF Project). Finally, the Sevilleta LTER group is functioning as the "local organizing committee" for the
The Sevilleta Site REU Program was renewed for 3 years in 1995. The UMEB Program continues to operate in collaboration with the Sevilleta LTER. As in prior years, the goals of these programs are to (1) instruct undergraduates in the principles of scientific research, (2) expose the students to a wide variety of ecological research techniques and career opportunities, (3) facilitate individual student research projects, and (4) encourage students to continue their scientific education in upper-division courses and graduate school. To accomplish these goals, the programs include (1) orientation meetings and a seminar series devoted to the variety of scientific opportunities in ecological research at the Sevilleta, (2) faculty-student one-on-one instruction of hypothesis development and research protocols in ongoing Sevilleta LTER projects, (3) field and laboratory experiences in sampling and data collection, (4) implementation of individual student research projects, carried out under the guidance of student-selected faculty members, (5) a Sevilleta REU Symposium for project presentations by the students, (6) attendance at scientific meetings, and (7) preparation and submission of project manuscripts to scientific journals. These activities integrate all theoretical and technical aspects of the LTER and promote a holistic approach to large-scale ecological studies. All of the 1997 REU/UMEB students have volunteered to assist with the 1997 Ecological Society of America meeting in Albuquerque.
2. Cross-site Activities.

Chihuahuan Desert small mammal exclosure study with Jornada LTER and Mapimi, Mexico.
(David Lightfoot and Jim Brown)

We continue to make routine measurements on the small mammal exclosure study plots at the Sevilleta. Vegetation quadrat measurements, including plant canopy cover, plant species composition, and soil surface disturbance were measured on all quadrats in the autumn of 1996, and early summer of 1997. Grasshopper species composition and abundance, ant nests, and termite foraging activity were measured on all plots at the same time. All data have been entered into computer database files. We have recently implemented the use of a data entry program specifically designed for this project. Image processing analysis of aerial photographs of all study plots is in progress. We will continue with these efforts through 1998. Measurements were also taken at the Jornada LTER, and the Mapimi Biosphere Reserve. We continue to have excellent collaboration and interaction with researchers from the Jornada and Mapimi. We are now supporting four students on the cross-site small mammal exclosure study. One Ph.D. level student, one masters level student, and two undergraduate REU students. All four students are currently conducting their field research at Sevilleta, Jornada, and Mapimi.

Ground-dwelling Arthropods: Bandelier/Sevilleta/Jornada/Mapimi. (David Lightfoot)

We have implemented the same sampling design and protocols for monitoring ground-dwelling arthropods at the Jornada LTER site (NSF funding to the Jornada LTER program) in southern New Mexico, and at Bandelier National Monument (USGS-BRD funding) in northern New Mexico. This extends the Sevilleta ground-dwelling arthropod studies to a regional level, encompassing an environmental gradient from the southern Rocky Mountains to the northern Chihuahuan Desert. All three study areas include a variety of major habitat types, and elevation gradients. We are coordinating sampling times, target arthropod groups, and data formatting at all three sites. We will continue these efforts through 1998.

The Ecology of Small-Scale Disturbances Along a Continental Gradient.
(Debra Coffin, Tamera Minnick)

Many of the small scale disturbance and plant population studies have comparable studies ongoing at the SGS LTER. Furthermore, we are evaluating the probability of seedling establishment for blue and black grama for 16 sites along a climatic gradient from the SGS to Columbus, New Mexico, including the SGS, Sevilleta, and JER LTER sites (Minnick and Coffin 1995). We found the simulated probability of establishment decreased for blue grama and increased for black grama along this north-south transect. Effects of soil texture on these probabilities were recently evaluated (Minnick and Coffin 1997). We are currently conducting a growth chamber study using blue grama seed from the Sevilleta and SGS, and black grama seed from the Sevilleta to determine experimentally the relationship between soil texture, water availability, and seedling establishment for each species. We are continuing a common garden study initiated in 1995 to reveal mechanisms for the exclusion of black grama in northern Colorado, and to compare variation in two populations of blue grama (Minnick and Coffin 1996). Black grama seedlings from the Sevilleta, and blue grama seedlings from the Sevilleta and the SGS are being grown with and without warming chambers at the SGS. Winter mortality in 1995 was low for all treatments, suggesting that low winter temperatures are not the factor constraining the northern limits to the distribution of black grama. Because only seed from black grama plants growing initially at the SGS were viable, and these plants flowered earlier than plants from the Sevilleta, we hypothesize that phenological differences in response to daylength are important in determining the geographic distribution of black grama. We are continuing a study started in 1994 to evaluate the response to disturbance by blue and black grama at the Sevilleta, SGS,
and JER (Minnick and Coffin). We removed half of individual plants of each species at each site where they exist, and have measured annual rate of response by the remainder of the plants. We also removed entire plants to evaluate successional dynamics on these gaps. Very slow response or recovery has been observed; these results are similar to those obtained in previous small-scale disturbance studies at the SGS.

Hungarian cross-site research. (Debra Coffin)

The initiation of collaborative research between scientists at the Sevilleta, Jornada, Short Grass Steppe LTER sites and Hungary is proposed to evaluate the importance of drought and soil texture to arid and semiarid grasslands in both countries. As part of our US-Hungary project (Coffin and Gosz; INT95-13261), we are conducting cross-site comparisons of vegetation pattern and dynamics at three LTER sites (Sevilleta, SGS, JER) and three sites in Hungary along a climatic gradient. In 1997, we are conducting similar spatial sampling of vegetation at all six sites that will allow us to determine the spatial assemblages of species as well as spatial pattern in vegetation from small (1cm) to larger (32m) scales (Kroel-Dulay et al. 1997). Simulation modeling analyses will be used to evaluate current environmental constraints on plant community composition and to predict effects of climate change on vegetation dynamics. James Gosz, Deb Coffin and Sandra Brantley spent two weeks in Hungary in 1996 and Hungarian scientists will work at the Sevilleta and Jornada in 1997.

Nitrogen limitation of mycorrhizae in grassland ecosystems. (Nancy Collins Johnson and Edith B. Allen)

Sevilleta is collaborating on an inter-site mycorrhizae study which examines the effect of N enrichment on grassland mycorrhizae (DEB-9527317). The study examines long-term fertilization plots at Kellogg, Cedar Creek, Konza, Shortgrass Steppe and Sevilleta. In December, 1995, the P.I.'s established nitrogen addition plots near Black Butte at Sevilleta. The plots were fertilized again (with NH₄NO₃) in July and December 1996, and they will be fertilized again in August and December, 1997. Grasses and soils were sampled in April, July and September, 1996. There are measurable changes in root colonization and spore communities (of mycorrhizal fungi) at all of the sites except Sevilleta. The other enrichment experiments have been maintained for 10 or more years so it isn't surprising that Sevilleta hasn't responded yet. The P.I.'s will continue to monitor the responses through next year (and beyond), and will do some functional response experiments using Sevilleta soil inoculum early next year.
3. Network-level Activities.

A. NASA/MODIS MODLERS Project. Bruce Milne has a subaward from Oregon State University to participate in the NASA/MODIS MODLERS Project. This project brings together 14 Long-Term Ecological Research (LTER) Network sites and NASA's MODIS Land (MODLAND) Science Team for the purpose of locally validating Earth Observation System-era global data sets. (http://atlantic.evsc.virginia.edu/~jhp7e/modlers/).

B. LIDET Experiment. Sevilleta continues to participate in the LTER Network, and has included the Sevilleta data in the project analyses.

C. LTER Network Soils Workshop. A follow-up working-session of the LTER Soils Workshop was held at Sevilleta in the spring of 1997.

D. LTER Network Climatology Workshop. Sevilleta will host the upcoming workshop on Meteorological Methods to be held in early October, 1997.

E. NASA Sun Photometer Calibration Study. Sevilleta continues to maintain and service a Sun Photometer for NASA which is important for atmospheric corrections of satellite images.

F. USDA/ARS Project. Sevilleta is actively involved in supplying meteorological and evapotranspiration data to a 1997 USDA-ARS Global Change project that was integrating remotely sensed data with ground measurements of energy budgets and water fluxes.
4. Additional Grant Support.

(Total = 22 grants. $8,026,703)


REU supplement to small mammal exclosure cross-site grant, DEB 95-27583. NSF, $5,000. PIs: David Lightfoot and James Brown.


Replacement and consolidation of research training facilities of the Department of Biology, University of New Mexico. Terry L. Yates, Robert R. Parmenter, and Howard Snell. National Science Foundation. 15 Mar 1997 - 31 March 1998, $960,000 + $2,300,000 matching funds from UNM. NOTE: This project will fund the renovation of a UNM campus building which will house the new offices, laboratories and museum collections of the Sevilleta LTER Program and the LTER Network Office.

Ecosystem and Soil Studies of Native American Runoff Agriculture. NSF, $476,713. P.I.: Jonathan A Sandor. Iowa State University (ISU); Co-P.I.s: Mark Ankeny, Daniel Stephens, Carleton S. White, Stephen E. Williams, and Deborah A. Muenchrath.
Water Quality Study in the Santa Fe Watershed. USDA Forest Service. $20,000. PI: Carleton S. White.


USGS Paleoclimatic Research at the Sevilleta LTER. DOI, U.S. Geological Survey, Global Change Program: The paleoclimatic work at the Sevilleta LTER has been done through cooperative agreements where at least half of the resources have been contributed by USGS.


A. Journal Articles


B. Book Chapters


APPENDIX D

ANNUAL REPORT:
MOLECULAR
BIOLOGY
FACILITY
The Molecular Biology Facility (MBF) continues to be one of the most heavily used facilities in the Department of Biology. For the past two years, the single most frequently used piece of equipment has been the ABI 377 automated DNA sequencer. This sequencer serves the Neurospora Genome Project (NGP), which is the primary research project actually based in the facility, and approximately ten independent research laboratories in the department. Additional use of the facility includes heavy use of three Macintosh computers and other equipment items (centrifuges, spectrophotometer, pipettors, etc.). Much of this use is general (i.e. by individuals other than those affiliated with the NGP; see list below).

The department and university have been generous in supporting the facility since its inception five years ago. Major support, however, has come from two successive NSF grants (from the now defunct RIMI program) and the department’s Howard Hughes grant. These grants have provided substantial de facto subsidies of diverse research programs in the department in the form of equipment purchases, supply purchases and payment of service contracts. The Howard Hughes grant is in its final months and is no longer providing substantial support for the facility. The RIMI grant that supports the NGP is in its final nine months. As a result, the facility is approaching a pivotal year that could result in a substantial decline in services and equipment maintenance. The directors and principle users have argued for some time that the facility should be given status within the university on a par with the Museum of Southwestern Biology. To maintain the critical functions it provides to fifteen or more Biology faculty members and their students, the MBF should have, at a minimum, a full-time technician and an annual budget of $20,000-$50,000.

Activities and users of the past year

Number of sequencing reactions processed on the ABI 377

NGP: 3000
General Users: 4000

Partial list of users of equipment and space


NGP students and post docs: Seogchan Kang, Anne Marie Armijo, Laura Bean, Eldon Blueyes, Carol Boivin, Edward Braun, Thomas Cushing, Patricia Dolan, Marianita Gorman, Kimberly Judson, Pascale Leonard, Jennifer Ortega, John Perea, Shanda Todisco, Robert Trujillo, Joseph Valentine, Audrey Wells, Sheldwin Yazzie, Mara Giles, Kate Miska, Veronica Marin, Karla Miller, Harriet Platero, Satish Rao, Daniel Azen

Non-NGP students, technicians and post doctorals (some names appear on NGP list as well because of split duties): Ken Barber, John Hnida, Ben Hanelt, Coen Adema, George Rosenberg, Amanda Guth, Michelle Pricer, Hilary Grabe, David Qintana, Amy Ditto, Reet Pai, Aleta Best, Jerry Drago, Cheryl Parmenter, Kelly Howe, Erin Heinemeyer, Vickie Peck, Pascale Leonard, Edward Braun, Matthew Crawford, Marian Skupski, Ken Sylvester, William Dvorachek, Alena Gallegos, Philip Chevalier, Ana Perez, Rebecca Kimball, Karla Melendez, Patrick Zwartjes, Daniel Molina, Diana Northup, Wendy Fuge,
The NGP grant


Publications (partial list)


Miller, R. D., Grabe, H, and Rosenberg, G. H. The VH Repertoire of a Marsupial: *Monodelphis domestica*. Journal of Immunology, in press


Margaret Werner-Washburne, E. L. Braun, M.E. Crawford and V.M. Peck. 1996. Stationary phase in *Saccharomyces cerevisiae*. Molecular Microbiology 19:1159-1166


APPENDIX E

FACULTY

SCHOLARLY & PROFESSIONAL

ACHIEVEMENTS,

CY 1996
I. TEACHING.

A. Graduate Education.

1. Masters degrees awarded.

ALTENBACH
Spring: Elizabeth Milford, “Ant Communities in Naturally Flooded and Unflooded Riparian Forest of the Middle Rio Grande.”

BROWN
Spring: Santiago Garcia, M.S., “Patterns of Habitat Use and Endemism in Resident Bird Communities of North-central Michoacan, Mexico.”

DAHM
Fall: Steve Hucott, Non-thesis Master’s Degree

KODRIC-BROWN
Kelly Gordon, M.S. I, Spring 1996

LOWREY
Summer: Stephen Reed, “Genetic Variation and Population Structure in Four Rare Species of Erigeron (Asteraceae) from the American Southwest.”

MARSHALL
Fall: Toby Bennet, “Variation in Allocation to Male and Female Components of Reproduction in Lesquerella fendler.”

MILNE
Fall: Peter Hrabar, “Community Assembly in a Model Ecosystem.”

SNELL
Spring: Marco Altamirano, “Potential Influences of Biotic and Abiotic Factors on Patterns of Activity in Galapagos Snakes: Locomotory Performance or Prey Abundance?”
Summer: Lee J. Pierce, “Habitat Use By Chorus Frogs in Los Alamos County.”
2. Doctors degrees awarded.

DAHM
Spring: Tad Crocker, "Climatic and Geomorphic Controls on Semi-Arid Fluvial Ecosystems" (Co-chair with Manuel Molles)

DUSZYNSKI
Spring: Patricia G. Wilber, "Temporal patterns of the parasite ecology in Townsend's ground squirrel, Spermophilus townsendii, in Idaho" (with distinction).

MILNE
Spring: Colleen Hatfield, "The Influence of Stream Network Geometry in Time and Space on the Distribution of Riparian Plants."

MOLLES
Spring: Tad Crocker, "Climatic and Geomorphic Controls on Semi-Arid Fluvial Ecosystems."

NELSON
Fall: Sandra T. Merino, "Molecular Analysis of Sexual Development Genes in Two Neurospora Species."

VOGEL

WERNER-WASHBURN
Fall: Edward Braun, "Protein Synthesis in Stationary Phase Yeast: Global Patterns and Characterization of Snz1p, a Novel Stationary-phase Protein."

3. Bona fide graduate courses and number of students enrolled. Indicate new courses (for you) with an asterisk.

BARTON
Spring: Biol. 460, Microbial Physiology, 38 students

BROWN
Fall: Biol. 511, Community Ecology, 24 students
Spring: Biol. 515F, Research in Field Biology, 12 students

DAHM
Fall: Biol. 451, Microbial Ecology, 24 students (8 graduate students)

E-2
Spring: Biol. 514, Ecosystem Studies, 8 students (all graduate students)

EVANS
Fall: * Biol. 502, Scientific Communication, 4 students

GOSZ
Spring: Biol. 514, Ecosystem Studies, 8 students

KERKOF
Spring: Biology 549, Molecular Cell Biology II, 6 students

KODRIC-BROWN
Fall: Biol. 521, Advanced Behavioral Ecology, 9 students
Spring: Biol. 515F, Field Ecology (with Prof. J.H. Brown), 7 students

LEWIS
Fall: * Biol. 500, New Graduate Student Orientation, 34 students
* Biol. 402/502, C++ for Biologists, 7 graduate students

LOKER
Spring: Biol. 402/502, Parasites and Hosts, 1 hr credit, 3 students
Fall: Biol. 402/502, Parasites and Hosts, 1 hr credit, 7 students

LOWREY
Spring: Biol. 523, Principles of Systematics, 14 students

MARSHALL
Spring: * Biol. 502, Plant Herbivore Interactions, 6 students
Fall: Biol. 502, Topics in Plant Ecology, 2 students

MILNE
Spring: Biol. 576, Landscape Ecology and Macroscopic Dynamics, 10 students
Fall: Biol. 502, Seminar in Complexity, 25 students

MOLLES
Fall: Biol. 507L, Bosque Biology, 4 students.

NELSON
Spring: * Biol. 402/502, Advanced Molecular Mycology, 3 students
* Biol. 402/502, Computational Biology, 20 students
Fall: * Biol. 402/502, Fungal Genomics, 8 students
Biol. 402/502, Fungal Physiology, 7 students

E-3
STRICKER
Spring: Biol. 547, Techniques in Light Microscopy, 10 students

THORNHILL
Spring: Biol. 402/502, Developmental Stability and Evolution, 8 students

VOGEL
Spring: * Biol. 402/502, Biology of the Extracellular Matrix, 3 CR, 10 students

WERNER-WASHBURN
Fall: Biol. 444, Molecular Biology, 14 students, 3 graduates
     Biol. 502, Seminar Topics: Fungal Molecular Biology

YATES
Spring: Biol. 523, Principles of Systematic Biology, 25 students
      Biol. 489L, Mammalogy, 20 students

4. Your service on graduate student committees, not as chair, in semester oral exam was given.

DAHM
Spring: Lee Pierce

EVANS
Spring: Diane J. Rowland, oral exam
      Fall: A. Joshua Leffler, oral exam

LOKER
Spring: Patty Wilber, Ph.D.

LOWREY
Spring: Ph.D. Committee: John Hnida, Diane Rowland
      Fall: Ph.D. committee: Rob Taylor, Dawn Kaufman
            M.S. Committee: Toby Bennet

LEWIS
Fall: Robert Taylor, oral exam (filled in for George Stevens)

MARSHALL
Anna Sher, comprehensive exams, January 1996
Diane Rowland, comprehensive exams, March 1996
Chris Frazier, comprehensive exams, August 1996
Heather Pratt, thesis defense, November 1996
Toby Bennett, thesis defense, September 1996
Mark Jordan, comprehensive exams, September 1996
Josh Leffler, comprehensive exams, December 1996

MILNE
Spring: Michael Grubensky, Geology Ph.D. defense

MOLLES
Spring: Anna Sher's Comprehensive, Final Defense
Fall: Sandy Brantley, Final Defense

NELSON
Spring: Charlotte Mobarak, Doctoral Comprehensive Exam
Fall: Edward Braun, Ph.D. thesis defense

STRICKER
Pat Dolan, Tom Ehlers, Kelli Sapp, Department of Biology

THORNHILL
Fall: M. Kiflawi, Oral exam

VOGEL
Fall: Mehran Mojarrad, Ph.D. candidate, UNM Department of Mechanical Engineering, September 1996

WERNER-WASHBURNE
Fall: Sandra Merino, Ph.D., "Molecular Analysis of Sexual Development Genes in Two Neurospora Species."

YATES
Sergio Flores-Ramirez

5. Professional accomplishments and awards of your graduate students, exclusive of those on which you were a co-author or participant (e.g., foreign travel, papers presented, papers published, awards and grants received, etc.).

BROWN
BRIAN ENQUIST: Fulbright fellowship for study in Costa Rica.

WILLIAM GANNON:


Community Service: President, Near North Valley/Old Indian School Neighborhood Association, elected 1995–96; 3,000 member neighborhood association in Northwest Albuquerque, NM.


DAWN KAUFMAN:
Awards and Grants: Albert R. And Alma Shadle Fellowship in Mammalogy, American Society of Mammalogists.

Graduate Student Association, University of New Mexico, SRAC Travel Award UNM Vice President's Graduate Research Fund Grant


KEVIN RICH:
Award: Outstanding Teaching Assistant in UNM Biology Department, Spring 1996.


DOV SAX:

Grant: research grant from the Southwestern Parks and Monument Association for research of exotic species in the Santa Monica Mountains of California in the amount of $4,100.

DAHM
MICHELLE BAKER: invited presenter at the Fall 1996 American Geophysical Meeting in San Francisco CA.

DUSZYNSKI
S. KIMBERLY HECKSCHER:
Travel: India, Thailand, Singapore, Hong Kong, China, January–April; Mexico, October.
JOHN HNIDA:
Posters presented:


BRETT PICKERING:
Travel: Baja, January; Belize, March; Mexico, October; Suriname and Guyana, December 1996–January 1997.


DAMIEN SCOTT:
Achievements/Awards:
B.S.; Magna Cum Laude, Biology Department; Cum Laude, UNM, May 1996.
Outstanding Undergraduate Award ($100), May
Second Place, Undergraduate Oral Presentation, Annual Research Day, Biology Department, UNM, March 29, 1996.

Travel: Belize, Guatemala and Mexico, June–July 1996.

Presentations:


E-8
PATTY WILBER:
Achievements/Awards: Ph.D. awarded with distinction, UNM, May 1996.

Employment: Post-Doctoral Fellow, Department of Biology, UNM, June–October 1996.
 Adjunct Assistant Professor, Department of Biology, UNM, Albuquerque NM
 Personal contract, US Forest Service (43-82FT-6-0569)
 Instructor of Biology (part-time), Albuquerque Technical Vocational Institute, Albuquerque NM.
 Head Registrar, (part-time) Duke City Soccer League, Albuquerque NM.

Papers accepted for publication:


Travel: La Pax, Mexico; Tuscon AZ.

WADE WILSON:
Presentations/posters:


EVANS

DIANE J. ROWLAND:
Contributed talk, Annual Research Day, Biology Department, UNM, March 29, 1996
Award for Best Oral Presentation, Annual Research Day, Biology Department, UNM, March 29, 1996
H. Wayne Springfield Scholarship, Spring 1996
Sigma Xi Fellowship, Summer 1996
Invited speaker, 1996 Annual Interagency Riparian Meeting, Fall 1996
Research Fellowship, M&M Ranch, Fall 1996

A. JOSHUA LEFFLER:
Contributed talk, Annual Research Day, Biology Department, UNM, March 29, 1996
VPGRF grant, Spring 1996
GRAC grant, Fall 1996
Contributed talk, annual meeting of Guild of Rocky Mountain Population Biologists, Fall 1996

GOSZ
WYLIE HARRIS: received a Watson Fellowship to tour Chile and Mexico to identify research sites.

KODRIC-BROWN
DAN ALBRECHT: publication, *Animal Behaviour*

DAVID GRAY: two publications (*American Naturalist* & *Animal Behaviour*)

LIGON
JULIE HAGELIN, REBECCA KIMBALL and PATRICK ZWARTJES: presented at annual meeting of the New Mexico Ornithological Society


LOKER
KELLI SAPP: Ph.D. student, recipient of Best Student Paper award and recipient of Dresden award, annual meeting of the American Society of Parasitologists, June 1996.

BEN HANELT: M.S. student, recipient of Becker Award for Best Student Paper, Southwestern Association of Parasitologists, April 1996; recipient, Best Student Paper Award, Society for Integrative and Comparative Biology meeting, December 1996

LOWREY
CHRISTOPHER FRAZIER: Ph.D. field research in Singapore and Malaysia, January-March 1996.

MARSHALL
ANNA SHER: presented a paper at the Annual Meeting of the Guild of Rocky Mountain Population Biologists.

ROBERT CABIN: offered and accepted a three-year post-doctoral position in Hawaii.


MILNE
ANDREW KERKHOFF: Award in support of “Habitat Preferences of the Florida panther”; $1,000, Dr. David S. Maehr, Wilkison & Associates.
PETER HRABER:


Funding Awards:
Student Award to participate in RECOMB97, January 1997.
UNM/SFI RTG Fellowship, Spring 1997.
SFI Graduate Fellowship, 1996.


Funding Awards:
Student Award to participate in RECOMB97, January 1997.
UNM/SFI RTG Fellowship, Spring 1997.
SFI Graduate Fellowship, 1996.

MOLLES


SNELL

MARCO ALTAMIRANO: USAID Fellowship, Spring 1996.

MARK JORDAN: Fulbright Fellowship for Research in Ecuador, Fall 1996; Organization of American States Fellowship for Research in Ecuador, Fall 1996; Travel to Galapagos for Field Research, Spring 1996, again in Fall 1996.

STEVE EARSON: Travel to Galapagos for Research, Fall 1996; Research Grant from US Fish & Wildlife Service for Fieldwork in Mexico, Fall 1996.

WERNER-WASHBURN

PAM PADILLA: Ph.D. student in my laboratory, was invited to testify before the Senate Democratic Policy Committee's on Science and Technology in Washington with President Peck.

B. Undergraduate Education. *Bona fide* undergraduate courses you taught each semester and the number of students enrolled. Indicate new course (for you) with an asterisk.

ALLEN

Spring: Biol. 435L, Animal Physiology, 30 students
* Biology 402, Special Topics in Comparative Vertebrate Morphology (not a seminar, but a full 3-hr. lecture course), 10 students

Fall: Biology 121, Principles of Biology, 700 students

BACA

Spring: Biol. 239L, Microbiology for Health Sciences, 77 students
Summer: Biol. 239L, Microbiology for Health Sciences, 43 students
Fall: Biol. 239L, Microbiology for Health Sciences, 70 students

BARTON

Spring: Biol. 402, Hazardous Waste Management, 4 students
Fall: Biol. 350, General Microbiology, 91 students
Biol. 402, Hazardous Waste Management, 9 students

BOURNE

Spring: Biol. 237-001, Human Anatomy & Physiology I, 204 students
Biol. 238-001, Human Anatomy & Physiology II, 236 students
Biol. 416-001, Histology, 54 students
Fall: Biol. 237-001, Human Anatomy & Physiology I, 108 students
Biol. 237-002, Human Anatomy & Physiology I, 138 students
Biol. 238-001, Human Anatomy & Physiology II, 83 students

BROWN

Spring: Biol. 494, Biogeography, 21 students

DAHM

Fall: Biol. 451, Microbial Ecology, 24 students (16 undergraduates)

DUSZYNSKI

Spring: Biol. 402, Tropical Ecology, 2 students
Biol. 461, Tropical Biology, 20 students
Fall: Biol. 404L, Marine Invertebrate Lab, 17 students
Biol. 402, Marine Ecology, 4 students

EVANS

Spring: Biol. 221, Introductory Genetics, 70 students
Summer: Biol. 402, Methods in Ecological Research, 10 students
Fall: Biol. 402, Scientific Communication, 5 students

GOSZ

Fall: * Biol. 402, Field Ecosystem Ecology, 6 students
Spring: Biol. 403, Ecosystem Ecology, 35 students
JOHNSON, W.
Spring: Bioi. 123-001, Biology for Health-Related Sciences & Non-Majors, 118 students
       Bioi. 221-001, Introductory Genetics, 110 students
       Bioi. 222-001, Introductory Genetics Problems, 30 students
       Bioi. 222-002, Introductory Genetics Problems, 17 students
Fall:  Bioi. 221-001, Introductory Genetics, 94 students
       Bioi. 222-001 Introductory Genetics Problems, 12 students
       Bioi. 223-001, Introductory Genetics Laboratory, 12 students
       Bioi. 223-002, Introductory Genetics Laboratory, 13 students
       Bioi. 428-001, Human Heredity, 30 students

KERKOF
Spring: Bioi. 449, Molecular Cell Biology, 3-hour course, 31 students
       Bioi. 439, Molecular Cell Biol. Lab., 6-hour lab course, 16 students
Summer: Bioi. 439, Molecular Cell Biol. Lab., 6-hour lab course, 7 students.
Fall:  Bioi. 429, Molecular Cell Biology, 4-hour course, 144 students.

KODRIC-BROWN
Spring: Bioi. 455, Ethology/Animal Behavior, 53 students
       Bioi. 457L, Ethology/Animal Behavior lab, 16 students

LEWIS
Fall:  * Bioi. 121, Principles of Biology, approx. 730 undergraduates

LIGON
Spring: Bioi. 486L, Ornithology, 15 students

LOKER
Spring: Bioi. 382, Parasitology, 21 students
       Bioi. 402/502, Parasites and Hosts, 1 hr credit, 4 students
Fall:  Bioi. 371, Invertebrate Zoology, 25 students
       Bioi. 402/502, Parasites and Hosts, 1 hr credit, 5 students

MARSHALL
No undergraduate teaching. I taught a graduate course in Spring 1996 and my teaching time
was bought out by the Provost in Fall 1996.

MILLER
Spring: Bioi. 219, Principles of Cell Biology, 125 students
       Bioi. 402, Immunogenetics, 6 students
Fall:  Bioi. 219, Principles of Cell Biology, 150 students
       Bioi. 402, Immunogenetics, 6 students
MILNE
Fall:        Biol. 310, Principles of Ecology, 30 students

MOLLES
Spring:     Biol. 122, Principles of Biology, 400 students
Fall:       Biol. 407L, Bosque Biology, 20 students

NELSON
Spring:     * Biol. 402/502, Advanced Molecular Mycology, 3 students
            * Biol. 402/502, Computational Biology, 20 students
Fall:       * Biol. 402/502, Fungal Genomics, 8 students
            Biol. 402/502, Fungal Physiology, 7 students
            Biol. 221, Introductory Genetics, 110 students

SNELL
Spring:     Biol. 379, Conservation Biology, 50 students.
            *Biol. 386, General Vertebrate Zoology, 60 students.
Fall:       

STRICKER
Spring:     Biol. 412, Developmental Biology, 65 students

THORNHILL
Spring:     Biol. 365, The Evolution of Human Sexuality, 128 students
Fall:       Biol. 300, Evolution, 90 students.

VOGEL
Spring:     * Biol. 402/502, Biology of the Extracellular Matrix, 3 CR, 10 students
Fall:       Biol. 456, Immunology, 94 students

WERNER-WASHBURN
Fall:       Biol. 444, Molecular Biology, 14 students, 11 undergraduates
            Biol. 402, Seminar Topics: Fungal Molecular Biology

YATES
Fall:       Biology 489, Mammalogy, 20 students

C. Teaching Awards.

MOLLES
The Teacher of the Year Award for the Academic Year, 1995–96.

D. Curriculum Development/Production of Teaching Materials.
DAHM

I completely revamped and updated my class materials and handouts for Biol. 451 (Microbial Ecology) upon my return from the NSF. A set of 27 lectures and 150 pages of lecture notes are now available for use in this class.

GOSZ

Development of teaching material for Biology 402, Field Ecosystem Ecology, involving setting up meta data standards for student projects.

KERKOF


LEWIS

Developed first World Wide Web site for Biology 121 (http://biology.unm.edu/~bio121/mainpage.html)

Developed a new graduate course (Biol. 402/502, C++ for Biologists) in object-oriented computer programming tailored to biologists needs.

MILNE

Extensive web pages for Ecology and Landscape Ecology
http://algodones.unm.edu:80/~bmilne/bio310/syl96.html
http://algodones.unm.edu:8000/bio576.html
(temporarily unavailable due to system changes)

Released ClaraT Fractal Educational Software, a Windows-based program available at http://algodones.unm.edu/~bmilne/frac/clarat/clarat.html

SNELL

New lecture note, handouts, and laboratory materials (in conjunction with Mark Jordan) for Biol. 286, General Vertebrate Zoology.

STRICKER


WERNER-WASHBURNE

E. Museum Curator, Advisor, Assistant Chair, EM Director, etc.

BACA
Graduate Advisor

BARTON
Supervisor, Media Preparation for Microbiology
Supervisor, Bacterial Culture System for Teaching

DUSZYNSKI
Secretary-Treasurer, Biological Society of New Mexico
Pre-veterinary advisor, UNM

JOHNSON, W.
Departmental Undergraduate Advisor for Transfer Students

LIGON
Curator, Bird Division, Museum of Southwestern Biology

LOKER
Vice Chair, Biology Department, 1996

LOWREY
Curator of Herbarium, Museum of Southwestern Biology
Acting Co-Director, Museum of Southwestern Biology, Summer 1996

MOLLES
Curator of Ichthyology, Museum of Southwestern Biology
Acting Curator of Insects, Museum of Southwestern Biology

SNELL
Director of Museum of Southwestern Biology
Curator of Division of Reptiles, Museum of Southwestern Biology

VOGEL
Director, Howard Hughes Undergraduate Research Program

YATES
Chair, Department of Biology
Curator, Division of Mammals, The Museum of Southwestern Biology
Curator, Division of Biological Materials, The Museum of Southwestern Biology
F. Other Teaching Activities.

BARTON

Spring: Biol. 699, 1 student
Fall: Biol. 499, 3 students
Biol. 699, 2 students

DAHM

The hydrogeocology group meets for two hours each week to discuss papers or research data during both the fall and spring semesters. I assist Dr. Maury Valett in coordinating this activity.

EVANS

Continued fifth-year development of NSF-funded Research Experiences for Undergraduates (REU) program, which provides funded research opportunities for undergraduate students from UNM and elsewhere.

KERKOF

Names of 551, 599 and 699 students I supervised each semester:

Spring: Biol. 699, Patricia Dolan, 6 Cr. Hr.
Summer: Biol. 551, Kathryn Stack, 3 Cr. Hr.
Fall: Biol. 699, Patricia Dolan, 9 Cr. Hr.

Names of 400 and 499 students I supervised each semester:

Spring: Biol. 499, Kathryn Stack, 3 Cr. Hr.
Fall: Biol. 499, Charles Emmons (3 Cr. Hr.), Pamela Kelley (2 Cr. Hr.), Deidre Thomas (3 Cr. Hr.; research in Medical School).

At the 1996 Fifth Annual Research Day in the Department of Biology, one of my students, Kathryn Stack, presented a poster presentation entitled: “Analysis of a Tumor-Suppressor Protein in a Mouse Mammary Adenocarcinoma.”

At the 1996 Fifth Annual Research Day in the Department of Biology, another one of my students, Karla Melendez, presented a poster presentation entitled: “The Role of Cyclin-D1 in the Mouse Mammary Adenocarcinoma MA16C.”

During the 1996 Summer Research Symposium in the Department of Biology, my Hughes student, Tamara Rimash, presented a paper titled: “A Preliminary Study of the Expression of Transforming Growth Factor (TGF-Beta 1) in a Mammary Adenocarcinoma.”

In the Fall of 1996, a fourth-year Medical School student, Deborah Zamora, presented the results of the required research that she conducted in my laboratory in a poster titled: “A Preliminary Study of the Effects of Estrogenic and Thyroid Hormones on DNA Synthesis in
Mammary Adenocarcinoma Cells in Culture.” A paper of this work was also presented to the UNM Medical School for approval.

LEWIS
Spring: Four guest lectures for Biol. 523, Principles of Systematic Biology

MARSHALL
Summer: Mentored two REU students (Dustin Cole and Diane Stevenson)

MILNE
Mentored two Research Experiences for Undergraduate (REU) students during the summer (Ben Keim and Laura Martens).

I sponsored the entry of Gary Schiffmiller’s essay, which received a Best Student Essay award for his paper, “The Decline in Abundance, Diversity and Distribution of Native American Fishes of Western North America.” Gary wrote the paper in my ecology class.

MOLLES
Spring: Biol. 400, Debbie Terry
       Biol. 499, Michael Marshall
       Biol. 599, Heather Pratt
       Biol. 699, Tad Crocker, M. J. Mund-Meyerson, Deborah Potter
Summer: Biol. 551, Deborah Potter
Fall:    Biol. 551, Heather Pratt
       Biol. 599, Heather Pratt, Fred Heinzelmann
       Biol. 699, Mary-Jean Mund-Meyerson, Deborah Potter

NELSON
Spring:  Biol. 599, Master’s Thesis, 1 student
       Biol. 699, Dissertation, 1 student
Summer: Biol. 699, Dissertation, 1 student
Fall:    Biol. 400, Senior Honors Thesis, 2 students
       Biol. 599, Master’s Thesis, 1 student
       Biol. 699, Dissertation, 1 student

SNELL
Several undergraduate and graduate student research hours supervised.
Two students (undergraduate) with National Science Foundation Field research trips to the Galápagos Islands

VOGEL
Mentoring laboratory research of undergraduate students:
   Jim Langlois (Hughes)
   Leah Swetman (Hughes)
   Audrey Wells (Hughes)
II. PUBLICATIONS.

A. Books Authored.

LIGON


MOLLES


B. Books Edited.

None.

C. Chapters in Books or Major Synthetic Reviews.

BROWN


DAHM


LEWIS


LOWREY

MILNE

THORNHILL

YATES


D. Articles in Refereed Journals.

BACA


BARTON


**BROWN**


**DAHM**


**DUSZYNISKI**


MILLER


MILNE


MOLLES


NELSON


SNELL


THORNHILL


VOGEL


WERNER-WASHBURNE


YATES


E. Book Reviews.

THORNHILL

*Journal of Mammalogy* (1)

F. Articles in Non-scholarly Journals.

BROWN


KODRIC-BROWN


SNELL

Snell, H.M. and H.L. Snell. 1996. Goats on Pinta—again? *Noticias de Galápagos* 56:3. Note: while *Noticias de Galápagos* contributed papers are reviewed, this was in a non-reviewed notes section.

E-24
THORNHILL

G. Quasi-public Reports for Internal/external Circulation.

ALTENBACH


A Report on the Bat Use, Occupancy and Roost Potential of the Katherine Mine, Lake Mead Recreational Area, AZ. Submitted to National Park Service, Las Vegas NV. September, 1996.


DAHM
I authored or co-authored the NSF program announcements for the Terrestrial Ecology and Global Change (TECO) program (joint with DOE, NASA and USDA) and the Environmental Geochemistry and Biogeochemistry competition (joint with seven divisions within the NSF).

DUSZYNSKI
Wrote and prepared camera-ready copy of The Call For Papers booklet announcing the 1997 Meeting of the American Society of Parasitologists (ASP). Mailed by Allen Press to 1,500 members and libraries of ASP, 39 p.

Prepared and edited The Program and Abstracts booklet for the 1996 Joint Meeting of the ASP and the Society of Protozoologists (SOP) and the Fourth International Workshop on Opportunistic Protists (IWOP), June 11-15, 1996, Holiday Inn City Center, Tucson AZ. Mailed to some 2,000 members of ASP, SOP and IWOP 181 p.
GOSZ


LOWREY
T.K. Lowrey. 1996. Floristic inventory of along Highway 258, Taos County, New Mexico. Included in report by Marron and Assoc. to NM Department of Transportation, 10 p.

MILNE

MOLLES

VOGEL

H. Abstracts (Refereed or Invited).

BACA


BARTON


DAHM


GOSZ


LOKER


Barber, K.E., G. Mkoji, and E.S. Loker 1996. Comparison of the internal transcribed spacer of the ribosomal DNA (rDNA) of Schistosoma haematobium and S. bovis from Kenya. Presented at the annual meeting of the Southwestern Association of Parasitologists, Lake Texoma OK, April 18-20, 1996.


MARSHALL

MILNE
Milne, B.T. "The canonical structure and dynamics of landscapes." The National Center for Ecological Analysis and Synthesis, University of California–Santa Barbara, CA.
MOLLES


VOGEL

Vogel, K.G. Proteoglycans and tendon mechanical history. Interface of Biomechanics and Cell Biology in Orthopaedics (invited).


WERNER-WASHBURN


I. Abstracts (Contributed).

BARTON


DAHM


DUSZYNSKI


KODRIC-BROWN

"Effects of Age on Female Choice in the Guppy," Animal Behavior Society meeting, Northern Arizona University, Flagstaff AZ, February 3-8, 1996.

LEWIS


MILNE


STRICKER


VOGEL


J. Other.

ALTEBACH

The Bats of Ohio. Poster prepared by the Cincinnati Museum of Natural History. J.S. Altenbach photographs of bats.


DUSZYNISKI

Travelled to Nashville TN to site-visit the convention facilities for the 1997 Annual Meeting of the ASP to be held there in June 1997.

Research Affiliate, The Harold W. Manter Laboratory of Parasitology, University of Nebraska State Museum, Lincoln NE.
III. RESEARCH PROJECTS OR OTHER CREATIVE WORK IN PROGRESS OR COMPLETED DURING PERIOD.

A. Grants and Contracts, Extramural and Intramural.

1. Submitted to all agencies in 1996.

BARTON


BROWN

"Factors influencing ecological processes, biodiversity, and ranching economies in the Malpai Borderlands Ecosystem and across the arid Southwest"; J.H. Brown, PI; The Nature Conservancy; $182,704 over three years.

"Remote monitoring of decadal changes in the arid Southwest: Toward sustainable land use"; W.H. Schlesinger, PI, J.H. Brown, B. Murray, J.Peach, Co-PIs; NASA; $600,000 over three years.

"Long-term monitoring and manipulation of a desert ecosystem"; J.H. Brown, PI; NSF; $664,894 over five years.

DAHM

"Influence of the Flood Pulse on Organic Matter Dynamics and Nitrogen Retention in a Regulated River/floodplain Ecosystem"; H.M. Valett, M.C. Molles Jr., C.S. Crawford and C.N. Dahm, PIs; National Science Foundation; $604,989, June 1, 1997–May 31, 2000, pending proposal.


DUSZYNSKI

"Bridges to Baccalaureate Degree" B.V. Hofkin, S.B. Wright, Co-PIs; D.W. Duszynski, UNM Coordinator (subcontract); NIH, DHHS, PHS, Bridges to Biomedical Careers Project (No. R25 GM53405-01A1); $197,168, December 1996–December 1998. Funded.

"Historical biodiversity of the parasite faunas of Galápagos reptiles"; D.W. Duszynski, L. Couch, Co-PIs; Charles Darwin Research Station, Isla Santa Cruz, Galápagos; $3,550, Pending.
"Imported and emerging biological agents in the Caribbean and the United States: Subproject: The Coccidia of the Caribbean and Latin America”; D.W. Duszynski, PI; Hispanic Collaborative for Research & Education in Science & Technology (HiCREST); $43,930, Pending.

"Scholarships for undergraduates to support UNM’s ‘Hemispheric Initiative’”; D.W. Duszynski, PI; Scholarship Office, Division of Student Affairs, UNM; $3,600, program put on hold for one year.

EVANS

"Can non-random mating result in evolutionary change? A selection experiment using wild radish as a model system, phase II, completion of replicates 2-4"; A.S. Evans, D.L. Marshall, Co-PIs; National Science Foundation; $399,090, January 1, 1997–December 31, 2000.

"Evolution in response to increasing CO₂ and nitrogen: Artificial selection experiments using Brassica rapa as a model system”; William A. Winner (Oregon State University), PI; Environmental Protection Agency; $125,000, September 1, 1996–August 1, 1999.

"Recognition awards for the integration of research and education”; A.S. Evans, D.L. Marshall, Co-PIs; National Science Foundation; pre-proposal.

"Physiology across the range of a riparian tree: Spatial and temporal variation”; A.S. Evans, A. Joshua Leffler (graduate student), Co-PIs; National Science Foundation; $9,392, May 1, 1997–April 30, 1998.

"Can non-random mating result in evolutionary change? A selection experiment using wild radish as a model system, phase II”; D.L. Marshall, A.S. Evans, Co-PIs; National Science Foundation; $261,858, July 1, 1997–June 31, 1999.

GOSZ


LEWIS

"Development of a Genetic Algorithm for Phylogenetic Inference”; B.O. Lewis, PI; National Science Foundation; $477,618, September 1, 1997–August 31, 2002, $95,524 per year

E-33
“Molecular phylogeny of the liverworts (Bryophyta) and the extent of the complex thalloid slowdown”; L.A. Lewis, P.O. Lewis, Co-PIs; National Science Foundation; $396,381, September 1, 1997–August 31, 2000, $132,137 per year.

LOKER
“Molecular Studies of Kenyan Schistosomiasis”; Dr. Gerald Mkoji, Kenya Medical Research Institute, PI, E.S. Loker, UNM, Faculty Sponsor; Fogarty International Research Fellowship; proposed dates September 1997–August 1998, dates flexible, no specified amount, pending.

LOWREY
“Supplement to NSF Grant Genetics of Adaptive Radiation in Tetramolopium”; T.K. Lowrey, PI; NSF; $17,400.


MARSHALL

“Can non-random mating result in evolutionary change? A selection experiment using wild radish as a model system, phase II, completion of replicates 2-4”; D.L. Marshall, A.S. Evans, Co-PIs; National Science Foundation; $399,090, January 1, 1997–December 31, 2000.

MILNE
“Simultaneous Regulation of Ecotone Responses by Biophysical and Biotic Processes”; B.T. Milne, PI; NSF; $846,618, not funded.

“Multi-scaled Ecological Assessment Methods: Prototype Development Within the Interior Columbia Basin”; P. Bourgeron, PI; Environmental Protection Agency; 1997–99, $40,000/yr subaward to B.T. Milne, funded.

MOLLES

STRICKER


"Molecular Analyses of an Oscillin-Like Sperm Factor from a Nemertean Worm"; S.A. Stricker, PI; Smithsonian Institution; $2,000, October 1–30, 1996.

YATES


"Acquisition of Advanced Computer Instrumentation for Integrated, Multi-disciplinary Biological Research and Research Training in the Department of Biology, UNM"; T.L. Yates, PI; NSF; $1.2 million, September 1, 1996–August 31, 1998, $600,000.

"Renovation, Integration, and Data Verification of the Mammal Collections of the Museum of Southwestern Biology and those of the National Biological Service, Albuquerque, New Mexico"; T.L. Yates, PI; NSF; $653,879, March 1, 1996 for 60 months, $130,775.

"Replacement and Consolidation of Research and Research Training Facilities of the Department of Biology, University of New Mexico"; T.L. Yates, PI; NSF; $960,000, March 15, 1997–May 31, 1998.


2. Awarded with 1996 initial start date.

ALTENBACH

"Evaluation of Bat Habitat in Abandoned Mines in New Mexico"; J.S. Altenbach, PI; NM Department of Mining and Minerals; $6500.00, July 1, 1996–June 30, 1997.

"Evaluation and the Mitigation of Bat Habitat in the Bullwhacker Mine, Eureka, NV"; J.S. Altenbach, PI; Brown Berry Biological Consulting; $1,500, September 1, 1995.


"Evaluation of Shaft Features for Bat Occupancy and Use at the KOFA National Wildlife Refuge, AZ"; J.S. Altenbach, PI; U.S. Geological Service; $2,500, September 1, 1996.


E-35
BARTON


DUSZYNJSKI

"Bridges to Baccalaureate Degree" B.V. Hoefkin, S.B. Wright, Co-Pis; D.W. Duszynski, UNM Coordinator (subcontract); NIH, DHHS, PHS, Bridges to Biomedical Careers Project (No. 1 R25 GM53405-01A1); $197,168, December 1996–December 1998.


GOSZ


"Supplement to the Sevilleta LTER Award: Travel Funds for Interactions with S. Africa"; J.R. Gosz, PI; NSF; $5,400.

"Supplement to the Sevilleta LTER Award: Travel Funds for Polish Scientists to Attend the ILTER Meeting in Panama"; J.R. Gosz, PI; NSF; $5,500.

LOKER

"Molecular Phylogeny for the Family Schistosomatidae"; Dr. Scott Snyder, UNM, PI, E.S. Loker, UNM, Faculty sponsor; NSF–Sloan Foundation; September 1, 1996–August 30, 1998, no set amount.

LOWREY

"Supplement to NSF Grant Genetics of Adaptive Radiation in Tetramolopium"; T.K. Lowrey, PI; NSF; $17,400; October–December 1996.


MILLER

"CAREER Award: Immunological Development in a Marsupial"; R.D. Miller, PI; NSF; $300,000, October 1, 1996–September 30, 2000, yearly expenditures $75,000.

"Travel award for field studies in the Galápagos Islands"; R.D. Miller, PI; Latin American Institute; $975.00, May 4, 1996–June 11, 1996.
MILNE

“Near-real Time Doppler Radar Imaging of Precipitation in the Sevilleta LTER”; B.T. Milne, PI; NSF, Supplement to LTER; $48,000, 1996.


MOLLES


WERNER-WASHBURNE

Understanding the Silence: Cells in Stasis (production of a video for PBS); M. Werner-Washburne, PI; National Science Foundation, special supplement for integrating research and education; September 1, 1996–August 31, 1998, $50,000 plus supplements.


YATES


3. In force from previous years.

ALLENBACH


"Evaluation of Bat Habitat in Abandoned Mines in New Mexico"; J.S. Altenbach, PI; NM Department of Mining and Minerals; $6,500, July 1, 1995–June 30, 1996.

BACA

"Phosphatase as a Virulence Factor in Q Fever"; O.G. Baca, PI; U.S. Public Health Service/National Institutes of Health, Grant No. RO1 AI 32492; $434,762 direct costs; approx. $144,000/year; 1993–96.

"Morbidity/Mortality in the Tome–Valencia–Peralta Area, Late 1700s through the 1940s"; UNM’s Center for Regional Studies: $5,932.

BARTON


"Mechanisms of Metal Transformation by Bacteria"; L.L. Barton is one of 15 faculty on the grant; NIH; $2,000,000; $17,500 to L.L. Barton, February 1, 1996 to Jan 31, 2001.

BROWN


DAHM

My name does not appear on any of the ongoing proposals of our group as this was required for my employment as an IPA at the National Science Foundation. Dr. H. Maurice Valett was named as my substitute PI. These projects include an NSF project ($610K from February 1995–January 1998) and a USFS project ($70K, September 1994–August 1997). In addition, our NSF project received a $50K supplement from the informal science education initiative of the NSF and a $16K supplement for REU and RAMHSS support in 1996. Finally, Dr. Valett received two additional awards in 1996 from the NSF. One is a $290K joint award with Dr. Laura Crossey in EPS from July 1996–June 1999 and the second is a $54K subcontract for July 1996–June 1999 for an intersite stream 15N experiment. Although not a PI on these awards, I will participate and assist in this research over the next three years.

EVANS


"REU with the Sevilleta LTER Program: Ecological Studies in a Biome Transition Zone"; R.R. Parmenter, A.S. Evans, Co-PIs; National Science Foundation; $153,000, May 1, 1995-April 30, 1998.


KODRIC-BROWN

"Video-imaging Technique for an Experimental Analysis of Mate Choice in Guppies"; A. Kodric-Brown, PI; NSF; $120,000, 1994-96.

"Investigation of Premating Isolating Mechanisms in Three Species of Mexican Pupfishes from Lake Chichancanab, Yucatan, Mexico," in collaboration with Ulrike Strecker, who was funded by DAAD, German Research Council.

LOKER

"Laboratory Education and Research in Biology"; K.G. Vogel, PI, several Co-PIs; Howard Hughes Medical Institute grant; $900,000, 1992-97.

"The Impact of Crayfish on Schistosomiasis Transmission and Non-target Organisms in Man-made Habitats in Central Kenya"; E.S. Loker, PI; U.S. Agency for International Development; $150,000, September 1993-97, $50,000.

"Biology of Trematode-Snail Associations"; E.S. Loker, PI; National Institutes of Health Grant R01 AI24340; $821,404 (direct costs), December 1994–November 1999, $128,055 (direct for 1996).
“Molecular Studies of Schistosome–Snail Interactions”; E.S. Loker, PI; USAID grant administered by Medical Service Corporation International’s Schistosomiasis Research Program; $45,000, March 1996–February 1997, $45,000.

LOWREY


MARSHALL


MILLER

“Isolating the scid mouse DNA repair gene”; R.D. Miller, PI; NIH/NIAID, 5 RO1 AI 34945; $539,972, December 1, 1995–August 30, 1997.

MILNE


MOLLES


NELSON

“Molecular Analysis of Sexual Development in Neurospora”; M.A. Nelson, PI; National Institutes of Health; $519,578 (direct plus indirect costs), May 1, 1992–April 30, 1997.

SNELL

"The Roles of Sexual and Natural Selection in the Evolution of Sexual Size-Dimorphism"; H.L. Snell and D.B. Miles, co-PIs; National Science Foundation; September 1993–September 1996, $212,000, approximately $67,000/yr.

"Status of Sceloporus graciosus arenicolous in the Mescalero Sands of Southeastern New Mexico"; H.L. Snell, W Gorum, L. Fitzgerald, D. Sias and A. Landwer, co-PIs; New Mexico Department of Game and Fish; May 1991–June 1998, $150,000.

STRICKER

"Confocal Microscopy Facility"; S.A. Stricker, PI; NSF; $178,000, October 1, 1992–September 30, 1996.

VOGEL


"Undergraduate Research Program"; K.G. Vogel, Director; Howard Hughes Medical Institute; $1 million total award, funding period May 1992–June 1998.

WERNER-WASHBURNE

The Neurospora Genome Sequencing Project; M. Werner-Washburne, Co-PI; National Science Foundation, HRD; August 1, 1995–July 31, 1998, $328,000 plus approximately $300,000 in matching funds


The role of gene regulation in starvation-induced arrest in the yeast Saccharomyces cerevisiae; M. Werner-Washburne, PI; NSF Presidential Young Investigator Award; July 1, 1990–June 30, 1997, $400,000.

YATES


B. Other.

ALTENBACH
Ongoing research on bats and abandoned mines.

KODRIC-BROWN
“The Interaction Between Display Rate and Swimming Performance of Male Guppies in Four Streams in Trinidad,” with Paul Nicoletta.

IV. ACTIVITIES IN LEARNED AND PROFESSIONAL SOCIETIES.

A. Invited or Plenary Talks at Professional Meetings, Workshops, Etc.

ALTENBACH
Organized and moderated a discussion of the “Bats and Abandoned Mines Issues in the Southwest” at the Regional Bat Research Symposium, Durango CO, January 1996.

“Bats, An Evening with Scott Altenbach.” Invited lecture presented to the participants and visitors at the bats/abandoned mines workshop, Bakersfield CA, April 1996.

“Bats, An Evening with Scott Altenbach.” Invited lecture presented to the participants and visitors at the bats/abandoned mines workshop, Redding CA, April 1996.

“Bats, An Evening with Scott Altenbach.” Invited lecture presented to the participants and visitors at the bats/abandoned mines workshop, Portland OR, June 1996.

BARTON


BROWN
Syracuse University, Oct. 4-7, 1996
University of Umea, Sweden, Oct. 21-15, 1996
NCEAS Symposium on the Role of Synthesis in Ecology, Nov. 18-22, 1996

DAHM
I was an invited participant in the Riparian Ecology Workshop in Kastanienbaum, Switzerland, February 4-12, 1996. I was the presenter and team leader for the nutrient dynamics group at this international meeting. I presented an introductory paper on the status of our knowledge on this topic, and I presented a second paper at the end of the workshop highlighting the group’s deliberations and the outline of a paper to be written. A draft paper from this meeting is presently in review.

EVANS
Annual meeting, Guild of Rocky Mountain Population Biologists, “Dormancy According to Lesquerella,” Colorado College Field Station CO, Fall 1996.

GOSZ
“International Long Term Ecological Research: Priorities and Opportunities in Brazil,” CNPq, Brazilia, Brazil, March 4, 1996.

“International Long Term Ecological Research: Opportunities for Research in Brazil,” Kruger National Park, Brazil, March 6, 1996.

“International Long Term Ecological Research: Priorities and Opportunities in Brazil,” Department of Education, Brazilia, Brazil, March 8, 1996.

“Long Term Ecological Research: Opportunities at National and International Levels,” Archbold Biological Station FL, April 4, 1996.

“Environmental Research at LTER Sites: Analyses of Rodent Dynamics,” Harvard School of Medicine, Boston MA, April 10, 1996.

“Ecological Analyses in Long Term Research Programs,” Harvard University, Boston MA, April 10, 1996.


“Collaborative Research between the Sevilleta LTER and Hungarian LTER sites,” Institute of Botany, Budapest, Hungary, June 21, 1996.
"Interactions between LTER and LMER Programs: To Join or Not to Join," University of Wisconsin, Madison WI, July 19, 1996.


"International LTER Development in Central and South America," Panama City, Panama, November 11, 1996.

KODRIC-BROWN

LEWIS
Invited talk, Mardi Gras Symposium in Systematics and Evolutionary Biology, “A Maximum Likelihood Model for Discrete Morphological Data: Implications for Combining Data and the Study of Morphological Character Evolution”; Louisiana State University, Baton Rouge LA, February 17, 1996

MARSHALL

MILNE

Milne, B.T. “Spatial Aggregation Methods in Landscape Ecology,” MODELERS workshop, Oregon State University, Spring.
NELSON

Invited poster presentation, Cellular, Molecular and Structural Biology in Health and Environmental Science Meeting, sponsored by the Santa Fe Institute, “Genes Controlling Sexual Development in *Neurospora crassa*,” Santa Fe Institute, Santa Fe NM, January 4, 1996.

Invited speaker, Department of Biology, University of Puerto Rico, “Molecular Analysis of Fungal Sexual Development,” Cayey PR, March 5, 1996.


SNELL


THORNHILL


VOGEL


Invited talk, meeting on the Interface of Biomechanics and Cell Biology in Orthopaedics, “Proteoglycans and Biomechanics of Tendon,” Johns Hopkins Medical Institutions, Baltimore MD, June 1996.

Invited talk, meeting on The Biology of the Synovial Joint, “Proteoglycans in Wrap-around Tendon,” University of Wales, Cardiff, Wales, July 1996.

B. Contributed Talks at Professional Meetings, Workshops, Etc.

ALTENBACH


BACA


BARTON


DUSZYNSKI


Annual meeting, Society for the Study of Evolution, “Effect of a seed bank on the evolution of post-germination traits,” Washington University, St. Louis MO, Summer 1996.

Annual meeting, Guild of Rocky Mountain Population Biologists, “Fecundity and germination behavior within a population of Lesquerella fendleri,” with Laura A. Hyatt (post-doctoral associate), Colorado College Field Station CO, Fall 1996.

Annual meeting, Guild of Rocky Mountain Population Biologists, “Variation in seed size: Effects on germination and vigor in Lesquerella fendleri,” with Jason D. Lett (undergraduate student), Colorado College Field Station CO, Fall 1996.

Annual meeting, Guild of Rocky Mountain Population Biologists, “Variation within individual seed crops in Lesquerella fendleri,” with Richard Smith (undergraduate student), Colorado College Field Station CO, Fall 1996.

KODRIC-BROWN

Animal Behavior Society meeting; “Effects of Age on Female Choice in the Guppy”; Northern Arizona University, Flagstaff AZ, February 3-8, 1996.

LEWIS

Contributed talk, American Institute of Biological Sciences annual meeting, “Can We Do Better than Parsimony When Using Morphological Data to Infer Phylogeny?”, University of Washington, Seattle WA, August 6, 1996.
LIGON


MILNE


MOLLES


SNELL


STRICKER


THORNHILL


VOGEL


Poster Presentation, Pan Pacific Connective Tissue Societies meeting, HI, December 1996.

C. Attendance at Professional Meetings, Workshops, Etc.

ALTEMBACH

Regional Bat Research Symposium, Durango CO, January 1996.

BACA


Historical Society of New Mexico Annual Conference, Las Vegas NM, April 18-20.
BARTON

96th General Meeting of the American Society for Microbiology, New Orleans LA, May 19-21, 1996.


Congress on Anaerobic Bacteria and Anaerobic Infections, Chicago IL, July 19-21, 1996.


BOURNE
Attended the Human Anatomy & Physiology Society Annual Meeting.

BROWN
ESA Governing Board, May 15-17, Nov. 8-10, 1996
ASM meeting, June 14-19, 1996
ABS meeting, Aug. 1-18, 1996
Attended Winter Meeting of British Ecological Society as representative of the Ecological Society of America, Dec. 16-20, 1996

DAHM

DUSZYNISKI
Southwestern Association of Parasitologists, 29th Annual Meeting, Lake Texoma OK, April, 1996.


Joint Meeting of the ASP, SOP and IWOP, Tucson AZ, June, 1996.

EVANS
Annual meeting, Guild of Rocky Mountain Population Biologists, Colorado College Field Station CO, Fall 1996.

KODRIC-BROWN
LEWIS
Society for the Study of Evolution, Washington University, St. Louis MO, June 19-23, 1996

LIGON
Annual meeting of the American Ornithologists’ Union, Boise ID, August 1996.

LOKER

LOWREY
American Institute of Biological Sciences meeting, University of Washington, Seattle WA, August 1996.
Organizing workshop, United States Organization for Bioinformatics, San Diego Supercomputer Center, sponsored by NSF, April 1996.

MARSHALL
Plant Reproduction, Lorne, Australia, February, 1996
GRMPB meeting, September 1996
NCEAS meeting, November 1996
RMAIRE meeting, October 1996

MILNE
Annual Meeting, International Association for Landscape Ecology Coordinating Committee Meeting, LTER Network, Cedar Creek MN.
First Annual Meeting of the National Center for Ecological Analysis and Synthesis (Invited attendee), March.
Symposium on Synthesis, National Center for Ecological Analysis and Synthesis, November.

MOLLES
Annual meeting of the North American Benthological Society, Kalispell MT, June 1996.

NELSON
Cellular, Molecular and Structural Biology in Health and Environmental Science Meeting, Santa Fe Institute, Santa Fe NM, January 4, 1996.
Gordon Research Conference on Cellular and Molecular Mycology, Plymouth NH, June 16-21, 1996.

Developmental Control of Gene Expression and Protein Modulation, Stanford University, Stanford CA, August 17, 1996.

SNELL
Attended two meetings of the Charles Darwin Foundation: one in Washington, DC in April and one in Quito, Ecuador in November.

STRICKER

VOGEL

WERNER-WASHBURNE
Yeast Molecular Genetics meeting, Madison WI Microbiology meeting, Essex, England SACNAS meeting, Los Angeles CA

D. Service as Editor of Scholarly Journal.

BARTON

BROWN
Associate Editor for North America, Journal of Biogeography

MILNE
Guest editor, Ecological Applications

SNELL
Editor, Noticias de Galápagos.

THORNHILL
Zoology: Analysis of Complex Systems
YATES
Editor for Reviews, *Journal of Mammalogy*
Managing Editor, Museum of Southwestern Biology Series

E. Service on Editorial Board of Scholarly Journal.

BARTON
Member, Editorial Board for the journal *BioMetals*.

BROWN
Editorial board, *Evolutionary Ecology*

GOSZ
*Biogeochemistry*

LOKER
Associate Editor for "Invertebrate Host-Parasite Associations," *Journal of Parasitology*
Editorial Board, *Journal of Medical and Applied Malacology*.

LOWREY
Member, Editorial Board of *Madrono*

MILNE
Member, Science Editorial Board, *Conservation Ecology*, 1996--

MOLLES
Associate Editor, *Journal of the North American Benthological Society*

SNELL
Member, Editorial Board, *Iguana Times*.

STRICKER
*Acta Zoologica*

VOGEL
*Archives of Biochemistry and Biophysics*, Editorial Committee, Section on Glycoconjugates and Oligosaccharides; Proteoglycan Extracellular Matrices.
*European Journal of Cell Biology*, Editorial Board
*Journal of Orthopaedic Research*, Chairman, Editorial Advisory Board

YATES
Trustee, American Society of Mammalogists, elected
Trustee, Southwestern Association of Naturalists, elected

E-52
Member, Board of Directors, American Society of Mammalogists, elected

F. Service as Officer of Professional Organization (indicate whether Elected or Appointed).

BACA
President of the American Society for Rickettsiology & Rickettsial Diseases, 1994–96 (elected).

BARTON
Secretary, International Biometals Society (appointed)

Member of Steering Committee for International Society for Iron Nutrition and Interactions in Plants

BROWN
President, Ecological Society of America (elected)

DAHM
Chair, Executive Committee, North American Benthological Society, 1996-97.

DUSZYNKI

Archivist, Annual Coccidiosis Conference (appointed).

Archivist, Southwestern Association of Parasitologists (appointed).

Research Affiliate, The Harold W. Manter Laboratory of Parasitology, University of Nebraska State Museum, Lincoln NE (elected).

GOSZ
Chairman of the LTER Network (elected)

Chairman of the International LTER Network (elected)

LOKER

LOWREY
Council Member, American Society of Plant Taxonomists (elected in national election)

American Society of Plant Taxonomists representative
MILNE
Advisory Committee for the Vice President for Science, Ecological Society of America, 1996–98 (appointed)

NELSON
New Mexico Computational Biology Committee, member, 1994–present (appointed).

SNELL
Vice President for North America of the Charles Darwin Foundation for the Galápagos Islands (elected).

STRICKER
Chair, Local Arrangement Committee for Society of Integrative and Comparative Biology National Meeting, Albuquerque NM, December 27–30, 1996 (appointed).

VOGEL
Orthopaedic Research Society, Ad hoc member of Board of Directors (appointed), because serving as Chairman of Editorial Advisory Board. Board meeting in Chicago IL, October 1996.

WERNER–WASHBURNE
Board of Directors, Society for the Advancement of Chicanos and Native Americans in the Sciences, 1995–98 (elected).

Organizing Committee, Yeast Genetics Meeting/Genetics Society of America, 1994–96 (elected).


G. Other.

VOGEL

Organizing Committee, Pan Pacific Connective Tissue Societies meeting, Hawaii, December 1996.

Session Chairman, Oral presentations, at the following:
V. OTHER PROFESSIONAL ACTIVITIES.

A. Colloquium Presentations, UNM and Elsewhere.

DUSZYNSKI


THORNHILL

Department of Zoology, University of Toronto, February 1996
Department of Psychology, University of Texas, March 1996

VOGEL


WERNER-WASHBURNE

Moderator/organizer of "Careers in Science" workshop, Yeast Genetics Meeting, Madison WI.
Organizer, SACNAS meeting. Moderator of "Writing a Letter of Intent" session

YATES

University of Colorado
University of St. Louis (one of three featured speakers for World Ecology Day)
Florida International University

B. Seminar Presentations, UNM and Elsewhere.

BACA

Dept. of Medical Microbiology, Health Science Center, Texas A&M, "Virulence Factors of the Q Fever Agent," College Station TX, February 22.

BROWN

Brown Bag Seminar, UNM

DAHM


GOSZ
"Long Term Ecological Research in the LTER Network," REU students at the Sevilleta Field Station, Socorro NM.

KODRICE-BROWN
Four seminars at the Department of Animal Ecology, University of Umea, Sweden.

MARSHALL
Macquarie University, Sydney, Australia, February 1996

MILNE
UNM Biology Department, "The Canonical Structure and Dynamics of Landscapes," Fall 1996.

MOLLES


Oregon State University, "Multicultural Perspectives on Natural Resources in the American Southwest," Corvallis OR, February 16, 1996

Oregon State University, "The Influences of Flooding on the Rio Grande Riparian Forest: Theoretical Perspectives and Experimental Results," Corvallis OR, February 19, 1996


NELSON
"Molecular Analysis of Fungal Sexual Development," Department of Biology, University of Puerto Rico, Cayey PR, March 5, 1996.


SNELL


“Biological Diversity of the Galápagos Islands: Past, Present, and Future Patterns,” The University of New Mexico, April 1996.

STRICKER

VOGEL
Invited Seminar, Lovelace Institute, Albuquerque NM, September 16, 1996

Invited Seminar, Department of Eye Research, University of Alabama Medical Center, Birmingham AL, November 8, 1996.

WERNER-WASHBURNE


“Ancient genes in stationary-phase yeast,” Chemistry Department, MBRS lecture, California State–Los Angeles, April 5, 1996.

“Signal transduction and expression of ancient genes in yeast,” Department of Molecular Biology, University of California–Davis, April 25, 1996.

YATES
“Viral Refugia and Global Climate Change: The Great Holarctic Interchange.” Presented at:
University of Miami
University of Missouri
University of Kentucky
C. Testimony in a Scholarly Capacity at Hearings of Commissions, Legislative Committees, Etc.

DAHM

I testified to the National Research Council (NRC) of the National Academy of Sciences on July 22, 1996 concerning the NSF programs and competitions in the environmental sciences. This was part of an ongoing evaluation of the developing environmental sciences research agenda for the Department of Energy being conducted by the NRC.

D. Presentation to General Audience in a Scholarly Capacity.

ALTENBACH


"Wings in the Night." Address presented at Festival of the Cranes, November 17, 1996.

"The Bats of New Mexico." Invited presentation on bats and bat conservation presented to the Audubon Society, Santa Fe NM, September 11, 1996.

"The Bats of New Mexico." Invited presentation on bats and bat conservation presented to the Sierra Club, Truth or Consequences NM, October 13, 1996.

BACA

New Mexico Historical Society's Speakers Bureau, "The Impact of Infectious Disease in New Mexico’s Rio Abajo from the Late 18th Through the Mid-20th Century."

DAHM

I spoke to the fifth graders of Mosby Woods Elementary School about hydrothermal vents and diving on the submersible ALVIN on March 20, 1996.

DUSZYNSKI


LIGON


LOWREY

Lecture, Chamiza Elementary School, Albuquerque Public Schools, April 1996
Lecture, Teachers In-Service Program, Chamiza Elementary School, Albuquerque Public School, August 1996
MOLLES

NELSON
Presentation to the National Association for the Advancement of Women in the Sciences, The University of New Mexico, Albuquerque NM, March 25, 1996

VOGEL

E. Service in a Scholarly Capacity as Member of Local, State or National Panel, Committee, or Commission, for Purpose of Reviews of Public Policy Issues, Scientific Evaluations, Awards of Grants or Fellowships or Prizes, Etc.

ALTBACH
Advisor to the New Mexico Chapter of the Nature Conservency on the Jornada del Muerto bat caves.

Advisor to the University of Wisconsin, Milwaukee, on the Neda Mine Bat Hibernaculum, Dodge Co WI.

BACA
Panelist of the National Science Foundation's Instrumentation and Instrument Development Advisory Panel, Division of Biological Instrumentation and Resources, 1993–96.

Member of New Mexico State's Recombinant DNA Committee

BARTON
Member on the following research panel: USA-National Research Initiative Competitive Grants Program: Improved Utilization of Wood and Wood Fiber Panel, June 12-14, 1996.

Reviewed 25 grant applications for National Research Initiative Competitive Grants Program

BROWN
Member, Scientific Advisory Board, Malpai Borderlands Group, Douglas, AZ.

DAHM
Co-director, the Environmental Geochemistry and Biogeochemistry panels, National Science Foundation, April 10-12, 1996.

Co-director, the Ecosystem Studies Program panel, National Science Foundation, April 11-12, 1996.
Director, panels for Terrestrial Ecology and Global Change (TECO), National Science Foundation (joint NSF/DOE/NASA/USDA program), June 17-19, 1996.


Member of the site review team for the Research Training Grant (RTG) application in Biogeochemistry from Cornell University, May 28-30, 1996.

Policy retreat of the Division of Environmental Biology of the National Science Foundation June 26-28, 1996.

DUSZYNSKI
Member, TVI Advisory Committee for Arts & Sciences (appointed).

New Mexico Representative, Student Exchange Programs, Advisory Board for the Western Interstate Commission for Higher Education (WICHE), 1993-98 (appointed).

Grant Reviewer, John Sealy Memorial Endowment Fund for Biomedical Research, University of Texas Hospitals and Clinics, Galveston TX.

GOSZ
NSF proposal reviewer (8)

KODRIC-BROWN
Reviewed five grant proposals for Animal Behavior NSF panel and Population Biology panel.

MARSHALL
Member, NSF LTER review panel, Spring, 1996

MILNE
Reviewed research plan for the Rocky Mountain Forest and Range Experiment Station, Ft. Collins CO.

SNELL
Latin American Institute Grant Review Board.

VOGEL
Regular Member, Pathobiochemistry Study Section, National Institutes of Health, June, October 1996.

WERNER-WASHBURNE
Howard Hughes Predoctoral Fellowship Panel, Washington DC
F. List Journals and the Number of Papers You Refereed for Each in 1996.

ALTENBACH

*Journal of Mammalogy* (2)
*Southwest Naturalist* (1)

BACA

*Gene* (1)
*Infection & Immunity* (2)
*Microbiology* (1)
*New Mexico Historical Review* (1)
*Trends in Microbiology* (1)

BARTON

*Journal of Bacteriology* (2)
*Anaerobe* (35)
*Applied and Environmental Microbiology* (3)
*Journal of Plant Nutrition* (2)
*BioMetals* (4)

BROWN

*Oikos* (3)
*American Naturalist* (1)
*Vegetation* (1)
*Ecology* (1)

DAHM

*Limnology and Oceanography* (1)
*Freshwater Biology* (1)
*Journal of the North American Benthological Society* (1)

DUSZYNSKI

*Journal of Parasitology* (4)
*Clinical Microbiology Reviews* (1)
*Acta Protozoologica* (1)

EVANS

*American Journal of Botany* (1)
*American Naturalist* (1)
*Oecologia* (1)
*National Science Foundation grant proposals* (3)
US Department of Agriculture (1)
Israel Science Foundation (2)

GOSZ
Biogeochemistry (3)
Ecology (1)
Landscape Ecology (1)

KODRIC-BROWN
American Naturalist (3)
Animal Behavior (12)
Behavioral Ecology (8)
Behavioral Ecology & Sociobiology (4)
Canadian Journal of Zoology (3)
Copeia (2)
Ecology (2)
Ecology (2)
Ethology (1)
Evolution (3)
Journal of Fish Biology (2)
Nature (1)

LIGON
American Naturalist (2)
Condor (2)
Journal of Avian Biology (1)
Journal of Raptor Research (1)
Proceedings of the Royal Society: Biological Sciences (1)

LOKER
Journal of Parasitology (11)
Parasitology (2)
Journal of Medical and Applied Malacology (1)
Developmental and Comparative Immunology (3)
Journal of Invertebrate Pathology (1)
Experimental Parasitology (1)

LOWREY
American Journal of Botany (2)
Systematic Botany (1)
Molecular Ecology (1)
Madrono (1)

MARSHALL
American Naturalist (1)
A. Miller

American Journal of Botany (2)
Evolution (2)
Ecology (1)
Completed editorial duties for Ecology (4)

M. J. Miller

Journal of Immunology (3)

M. E. MILNE

Evolutionary Ecology (1)
International Journal of Supercomputing and High Performance Computing (1)
Journal of North American Bentholological Society (1)
Journal of Wildlife Management (1)
Vegetation (1)

N. E. MOLLES

Hydrological Processes (1)
Regulated Rivers (1)
JNABS (6)

M. T. NELSON

Fungal Genetics and Biology (1)

J. STRICKER

Invertebrate Reproduction and Development (2)
Invertebrate Biology (1)
Developmental Biology (1)

T. VOGEL

Archives of Biochemistry and Biophysics (10)
European Journal of Cell Biology (5)
Journal of Orthopaedic Research (3)
Journal of Bone and Joint Surgery (1)
Journal of Biological Chemistry (1)
Clinical Orthopaedics and Related Research (1)
Matrix (1)

Proposal Reviews:
  Medical Research Council of Canada (2)
  Veteran Administration (1)
  Arthritis and Rheumatism Council, United Kingdom (1)
  Wellcome Trust, United Kingdom (1)

W. WERNER-WASHBURN

EMBO Journal (3)
VI. NON-TEACHING UNIVERSITY, COLLEGE AND DEPARTMENT SERVICE.

A. Symposia, Workshops, Conferences, Etc., Sponsored, Hosted, Organized.

BACA
Organized the national meeting of the American Society for Rickettsiology at Asilomar, Pacific Grove CA, March 10-13.

BARTON
Organizing Committee for International Biometals Symposium to be held in Canada in August 1997.

KODRIC-BROWN
Hosted Ecological and Evolutionary Ethology of Fishes (EEEF) meeting, May 25-30, 1996, in Albuquerque.

Organized a symposium on “Video and Animation Techniques to Study Fish Behavior” at the EEEF meeting, May 25-30, 1996.

MARSHALL

MILNE
Hosted Sevilleta LTER symposium, January 1996.

STRICKER

YATES
Hosted U.S./Mexico Workshops

B. Distinguished Departmental Visitors You Hosted.

BARTON
Marcus Yaffee from Switzerland

BROWN
Eric Charnov, Professor of Biology, University of Utah

Joel Kingsolver, Professor of Zoology, University of Washington

E-64
William H. Schlesinger, James B. Duke Professor of Botany & Professor of Geology, Duke University

**DUSZYNSKI**


Dr. Sue Tornquist, Associate Dean, College of Veterinary Medicine, Oregon State University, "Veterinary Medical Education at OSU," October 1996.

Dr. Phillip Steyn, Associate Dean, College of Veterinary Medicine, Colorado State University, "Open Forum," October 1996.

Dr. Lynn Wheaton, Associate Dean, College of Veterinary Medicine, Washington State University, "Veterinary Medicine: The Program at WSU," September 1996.

**GOSZ**

Roman Zlotin, Institute of Geography, Moscow, Russia

**LOWREY**

Dr. Lucinda McDade, University of Arizona

Dr. John Lundberg, University of Arizona

**NELSON**

Dr. Alice Schroeder, Washington State University, Feb. 9, 1996

**VOGEL**

In conjunction with UNM Research Lecture: Dr. Linda Sandell, University of Washington, April 1996

Seminar Speaker: Dr. Barbara Vertel, Chicago Medical School, April 1996

**WERNER-WASHBURREN**

Dr. Mark Winey, BCMB, University of Colorado-Boulder

**C. Committee Service.**

1. Departmental committees served on in 1996 (indicate chair with asterisk).

**ALTENBACH**

* Undergraduate Policy Committee
* Graduation Committee
* Physiologist Search Committee
BACA
Search Committee for Distinguished Professor

BARTON
Member, Graduate Policy Committee
Member, Space Committee

BROWN
Graduate Student Selection Committee
Promotions Committee

DAHM
Library Liaison Committee for Biology

DUSZYNISKI
* Biological Society of New Mexico
Biology Development Committee

EVANS
Greenhouse Committee (ongoing)
Graduate Curriculum Committee, Spring 1996

GOSZ
Graduate Student Selection Committee

KODRIC-BROWN
Graduate Policy Committee
Research Day Committee

LEWIS
Computational Biologist Search Committee

LIGON
* Animal Physiologist Search Committee

LOKER
Graduate Selection Committee
Undergraduate Policy Committee
Research Day Committee
Howard Hughes Advisory Committee
Graduate Student Advising
Coordinator, Departmental Seminar Program, Spring

E-66
LOWREY
Chair, Graduate Student Selection Committee
Greenhouse Committee
Howard Hughes Undergraduate Research Committee

MARSHALL
* Greenhouse Committee
Undergraduate Policy Committee
* Honors advisor

MILLER
Undergraduate Policy Committee
Comparative Physiology Faculty Search Committee

MILNE
Computational Biologist Search Committee (1996- )
Graduate research funding committee (E.S. Loker, chair)

MOLLES
* Terrestrial Arthropod Ecologist Search Committee

NELSON
Hughes Undergraduate Research Program Advisory Committee
Research Improvements in Minority Institutions (RIMI) Committee
Library Liaison
Computational Biologist Search Committee
Graduate Student Selection Committee

SNELL
* Graduate Policy

STRICKER
* Honors Committee

THORNHILL
Seminar Committee

VOGEL
Undergraduate Policy Committee

2. College/University committees served on in 1996 (indicate chair with asterisk).

BACA
A&S Tenure and Promotion Committee, Jr. committee (1995–96)
Legislative Coordinating Committee
UNM Institutional Biosafety Committee on Recombinant DNA
UNM Long Range Planning Committee

BARTON
Member, Bachelor of University Studies Committee
Member, Admissions and Registration Committee
Member, Minority Biomedical Research Students (MBRS) Committee

BOURNE
Faculty Senate Curricula Committee
Health Professions Advisor

DAHM
Biology representative for the Graduate Studies Committee

DUSZYNSKI
Athletic Council
*Academic Integrity Subcommittee, NCAA Accreditation of the UNM Athletic Department
UNM Foundation, Evans Distribution Committee

GOSZ
Research Allocation Committee

KODRIC-BROWN
Faculty Senate
Faculty Senate Library Committee

JOHNSON, W.
Member, Faculty Senate
Member, A&S Undergraduate Committee

LOWREY
UNM Library Committee

MARSHALL
Search Committee for the Natural Heritage Program
Administrative Intern to the Provost

MILNE
SEC, certificate in high performance computing
NELSON
Teacher of the Year Award, Member of the Selection Committee

SNELL
Faculty Ethics Committee.

THORNHILL
Professor Promotion Committee

VOGEL
UNM Member, Departmental Review Team for Department of Anthropology, UNM, October 1996

WERNER-WASHBURN
Native American Studies Director Search
A&S Dean's Search

YATES
Committee on Governance

D. Other.

DAHM
I accompanied Dr. Mary Clutter, Assistant Director for Biological Sciences of the National Science Foundation, to the Medal of Science dinner at the Mayflower Motel in Washington DC on July 25, 1996.

I was asked to represent the Division of Environmental Biology at the NSF on the occasion of the US Medal of Science being awarded to Dr. Ruth Patrick of the Philadelphia Academy of Sciences. The Division of Environmental Biology has supported some of Dr. Patrick's research.

DUSHZNSKI

Took Marine Invertebrate Biology class (Bio. 404L) on a field trip to the Centro de Estudio de Desierto y Oceanos (CEDO, Inc.), Puerto Penasco, Sonora, Mexico.

Took Introduction to Tropical Biology class (Bio. 461L) on a 10-day field trip to Belize, Central America, during UNM's Spring Break.

Helped the Athletic Department recruit student athletes in men's football, women's soccer and women's softball.

Active participation in Biology Department's May Graduation Program.
LOKER
Poster Judge, Biology Department Research Day, April
Mentor for MBRS students David Quintana and Danny Molina
Mentor for Regents' Scholar, Danny Molina
Mentor for Senior Honor's student, Peter Doucette

MARSHALL
One-on-One mentor
Regents' Scholar mentor

NELSON
Mentor for a Regents' Scholar (Leslie Reeves)

VOGEL
Spring & Summer: Associate Dean, College of Arts and Sciences

VII. ADVANCED STUDY AND NEW SCHOLASTIC HONORS, FELLOWSHIPS, ETC.

DAHM
I was awarded the Director's Award for Program Management Excellence by the National Science Foundation on June 5, 1996. This award was given to nine of the approximately 400 NSF program directors.

LOKER
Regents' Lecturer, 1995–97

LOWREY
Visiting Fellow, University of New South Wales, Sydney, Australia, September–December 1996.

MILNE
Regents' Lecturer in Arts and Sciences, UNM, 1995–98.

VOGEL
Kappa Delta Elizabeth Winston Lanier Award for Outstanding Orthopaedic Research (Basic Research), American Academy of Orthopaedic Surgeons, 1996.

UNM Research Lecturer, 1996

YATES
Recipient of the "Robert C. Packard Outstanding Educator Award," Southwestern Association of Naturalists.
VIII. SABBATICALS, LEAVES OF ABSENCE, SUMMER TEACHING ELSEWHERE, TRAVEL, ETC., DURING THE PERIOD.

DAHM
I was a program director at the National Science Foundation from August 1994–August 1996. I returned to UNM for the Fall semester of 1996.

LEWIS
Participated in: Summer Institute for Statistical Genetics (Bruce S. Weir, organizer), North Carolina State University, Raleigh NC, June 1996.

LIGON
Fall: Sabbatical leave

LOKER

Collaboration with Scientific Colleagues, University of Cairo, Egypt and Kenya Medical Research Institute, Nairobi, Kenya, January 1996.

LOWREY
Fall: Sabbatical Leave, Australia

SNELL
Travel to the Galápagos Islands for summer research and conservation activity.

STRICKER
Sabbatical Leave August 1997–July 1997; research conducted during 1996:


“Role of follicle cell-oocyte attachments during meiotic maturation in a brachiopod,” Friday Harbor Laboratories, Friday Harbor WA, December 1996.

“ Intracellular injections of a soluble sperm factor trigger calcium oscillations and meiotic maturation in unfertilized oocytes of a nemertean worm,” The University of New Mexico, August, September and November 1996.

WERNER-WASHBURN
Spring: Sabbatical leave

YATES
Travel to Japan, Mexico and Bolivia
IX. PUBLIC SERVICE.

BACA
Board member of the Valencia County Historical Society
Member of the New Mexico Historical Society’s Speakers Bureau

EVANS
Workshop leader, “Expanding Your Horizons” Conference (to encourage middle and high school girls in science), Spring 1996

KODRIC-BROWN
Member of Desert Fishes Council

MARSHALL
Helped coordinate the “Expanding Your Horizons Conference” for the New Mexico Network for Women in Science and Engineering.

MILNE
Consulted with two Jefferson Middle School students (Dominique Hinds and Jennie McDonald) in the design of an experiment that won first prize in the school science fair, February 17, 1996.

MOLLES
Trustee for The Nature Conservancy of New Mexico

NELSON
Court Appointed Special Advocate (addressing child abuse and neglect)

SNELL
Work with the New Mexico Department of Game and Fish on the Conservation of New Mexican Reptiles and Amphibians.
Conservation work for the Galápagos Islands.
Information about reptiles and amphibians to the citizens of New Mexico, 100 calls in 1996.

THORNHILL
Popularization of evolutionary biology, in general, and my research, in particular: Aided TV productions for multiple companies: Beyond 2000, Dateline NBC, National Geographic, Discover Canada, Discover Magazine, etc.

WERNER-WASHBURNEN
Did 45-second promotional video for UNM being shown on KNME
Judged science fairs at Menaul School and UNM
Regents’ scholar mentor for 3 students
MIRT (Fogarty) and MBRS advisory committees
Office of Cultural and Ethnic Programs, advisory committee MEMS program coordinating committee
Classroom teacher, 3rd grade, cell biology at Bandelier School Coordinate Navajo Community College Math Demonstration Day, August
APPENDIX F

RESEARCH

PROPOSALS

SUBMITTED,

FY 1996–97
### BIOLOGY DEPARTMENT
**1996-97 FISCAL YEAR PROPOSALS**

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Agency/Proposal No.</th>
<th>Period of Performance</th>
<th>Proposed Funding</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altenbach, J.S.</td>
<td>NMEM&amp;NR (5033)</td>
<td>07/01/96-06/30/97</td>
<td>6,250</td>
<td>July 1996 Evaluation of Bat Population &amp; Bat Habitat Research.</td>
</tr>
<tr>
<td>Barton &amp; Thomson</td>
<td>WERC (4793)</td>
<td>07/01/96-06/30/97</td>
<td>36,000</td>
<td>WERC: Chemical/Biological Treatment Strategies for Mixed Waste.</td>
</tr>
<tr>
<td>Johnson, K.</td>
<td>NC</td>
<td>07/01/97-07/31/97</td>
<td>17,413</td>
<td>Burrowing Owls Reproduction Study.</td>
</tr>
<tr>
<td>Lightfoot, D.C.</td>
<td>NSF</td>
<td>08/01/96-07/30/98</td>
<td>30,000</td>
<td>The Effects of Indigenous Small Mammals on the Species Composition &amp; Structure of Chihuahuan Desert Communities: A Travel Supplement Request.</td>
</tr>
<tr>
<td>Loker, E.S.</td>
<td>SRP (940)</td>
<td>03/01/96-02/28/97</td>
<td>90,056</td>
<td>Molecular Studies of Schistosome-Snail Interactions.</td>
</tr>
<tr>
<td>Mehlhop &amp; Johnson</td>
<td>DOD</td>
<td>10/01/96-03/31/98</td>
<td>250,084</td>
<td>Integrated Resource Management Plan for Holloman AFB.</td>
</tr>
<tr>
<td>Mehlhop &amp; Johnson</td>
<td>USBR (4966)</td>
<td>05/23/96-02/01/97</td>
<td>10,535</td>
<td>Avian Nesting Success.</td>
</tr>
<tr>
<td>Miller, R.D.</td>
<td>NSF (4517)</td>
<td>10/01/96-09/30/00</td>
<td>300,000</td>
<td>Immunological Development in a Marsupial.</td>
</tr>
<tr>
<td>Milne, B.T.</td>
<td>NSF (3256)</td>
<td>10/15/96-10/14/97</td>
<td>560,000</td>
<td>Sevilleta LTER II: Biome-level Constraints on Population, Community and Ecosystem Responses to Climate Fluctuation.</td>
</tr>
<tr>
<td>Natvig &amp; Jacobson</td>
<td>NSF</td>
<td>02/01/97-01/31/01</td>
<td>632,448</td>
<td>Reproductive Genetics of Neurospora tetrasperma.</td>
</tr>
<tr>
<td>Snyder, S.D.</td>
<td>NSF (5559)</td>
<td>09/01/96-08/31/98</td>
<td>80,000</td>
<td>Evolution of Host-Parasite Associations among the Schistosomatidae: NSF/Sloan Foundation Fellowship.</td>
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<tr>
<td>Werner-Washbume, M.</td>
<td>NSF (4580)</td>
<td>09/01/96-08/31/99</td>
<td>80,003</td>
<td>Developmental Regulation of Signal Transduction: Bcylp in Stationary Phase Yeast.</td>
</tr>
<tr>
<td>Werner-Washbume, M.</td>
<td>NSF (4580)</td>
<td>10/01/96-09/31/97</td>
<td>22,305</td>
<td>Supplement to: Developmental Regulation of Signal Transduction: Bcylp in Stationary Phase Yeast.</td>
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**Total:** $2,115,094
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<tr>
<th>Principal Investigator</th>
<th>Agency/Proposal No.</th>
<th>Period of Performance</th>
<th>Proposed Funding</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>Frenkel, J.K.</td>
<td>NIH</td>
<td>10/01/97-09/30/98</td>
<td>33,900</td>
<td>Second Interamerican Symposium on Toxoplasmosis (conference grant).</td>
</tr>
<tr>
<td>Muldavin, E.</td>
<td>NPS (5586)</td>
<td>10/01/96-12/31/98</td>
<td>185,000</td>
<td>Vegetation Mapping &amp; Assessment of the Sierra del Carmen.</td>
</tr>
<tr>
<td>Yates, T.L.</td>
<td>CDC (5591)</td>
<td>10/01/96-09/30/01</td>
<td>1,324,662</td>
<td>Longitudinal Studies of Rodent Reservoirs of Hantaviruses in the Southwestern U.S.</td>
</tr>
<tr>
<td>Muldavin, E.</td>
<td>NPS</td>
<td>10/01/96-12/31/98</td>
<td>185,000</td>
<td>Vegetation Mapping &amp; Assessment of the Sierra del Carmen.</td>
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<tr>
<td>Total:</td>
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<td>$1,728,562</td>
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<tr>
<td>Crawford &amp; Molles</td>
<td>USFWS</td>
<td>10/01/96-09/30/97</td>
<td>54,998</td>
<td>Recovery from Fire of Experimentally &amp; Naturally Flooded Riparian Forest Sites at Bosque del Apache National Wildlife Refuge.</td>
</tr>
<tr>
<td>Hjelle, Yates et al.</td>
<td>NIH</td>
<td>07/01/97-06/30/01</td>
<td>1,030,602</td>
<td>Ecology of Hantavirus Infections: Immune Interventions.</td>
</tr>
<tr>
<td>Loker, E.S.</td>
<td>NSF (572-2306)</td>
<td>12/01/96-11/30/97</td>
<td>188,699</td>
<td>Biology of Trematode-Snail Associations.</td>
</tr>
<tr>
<td>Yates, T.L.</td>
<td>IHS (952/3799)</td>
<td>05/15/96-05/14/97</td>
<td>99,610</td>
<td>Longitudinal Studies of Hantavirus in Rodent Populations of the American Southwest.</td>
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<tr>
<td>Total:</td>
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<td>$1,373,909</td>
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<tr>
<td>Evans &amp; Lefler</td>
<td>NSF (7127)</td>
<td>05/01/97-04/30/98</td>
<td>9,392</td>
<td>Dissertation Improvement Grant: Physiology Across the Range of a Riparian Tree: Spatial &amp; Temporal Variation.</td>
</tr>
<tr>
<td>French &amp; Gosz</td>
<td>NSF (7175)</td>
<td>12/01/96-11/30/98</td>
<td>187,132</td>
<td>Intergovernmental Personnel Act (IPA) Assignment.</td>
</tr>
<tr>
<td>Gosz, J.R.</td>
<td>NSF (4246)</td>
<td>11/01/96-12/31/96</td>
<td>5,504</td>
<td>Travel Support for Foreign Scientists.</td>
</tr>
<tr>
<td>Gosz &amp; Buxbaum</td>
<td>NSF (7128)</td>
<td>05/01/97-04/30/99</td>
<td>6,691</td>
<td>Dissertation Research: Landscape Heterogeneity, Soil Moisture Availability, &amp; Vegetation Dynamics in a Desert-Grassland Transition Zone.</td>
</tr>
<tr>
<td>Johnson, K.</td>
<td>TNC</td>
<td>10/01/96-12/30/97</td>
<td>8,819</td>
<td>Distribution &amp; Habitat Use of the Lesser Prairie Chicken.</td>
</tr>
<tr>
<td>Lewis, P.O.</td>
<td>NSF</td>
<td>09/01/97-08/31/02</td>
<td>447,618</td>
<td>Development of a Genetic Algorithm for Phylogenetic Inference.</td>
</tr>
<tr>
<td>Loker, E.S.</td>
<td>USAID</td>
<td>09/08/93-08/30/97</td>
<td>150,000</td>
<td>The Impact of Crayfish Transmission in Man-Made Habitats in Central Kenya.</td>
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<tr>
<td>Schlesinger &amp; Brown</td>
<td>Duke Univ. (7124)</td>
<td>01/01/97-01/01/00</td>
<td>30,000</td>
<td>Remote Monitoring &amp; Decadal Change in the Arid Southwest: Toward Sustainable Land Use.</td>
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<tr>
<td>Valett, H.M.</td>
<td>USDA (4247)</td>
<td>09/01/96-09/30/97</td>
<td>15,000</td>
<td>Nutrient Retention Along the Rio Grande Continuum: Supplement II.</td>
</tr>
<tr>
<td>Principal Investigator</td>
<td>Agency/Proposal No.</td>
<td>Period of Performance</td>
<td>Proposed Funding</td>
<td>Title</td>
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<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Yates &amp; Parmenter</td>
<td>NSF (4744)</td>
<td>01/01/97-12/31/98</td>
<td>960,000</td>
<td>Replacement &amp; Consolidation of Research &amp; Research-training of the Dept. of Biology, UNM.</td>
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<tr>
<td>Total:</td>
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<td>$1,820,156</td>
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<tr>
<td>Gosz, J.R.</td>
<td>NSF (4623)</td>
<td>01/01/97-01/01/02</td>
<td>5,590,000</td>
<td>A Proposal for the Network Office of the LTER Network.</td>
</tr>
<tr>
<td>Koster, F.</td>
<td>PHS</td>
<td>08/15/96-07/31/97</td>
<td>113,995</td>
<td>Subcontract to University of Massachusetts Medical Center, Hantavirus Infections: Ecology, Immunity &amp; Treatment.</td>
</tr>
<tr>
<td>Total:</td>
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<td></td>
<td>$5,703,995</td>
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<tr>
<td>Altenbach, J.S.</td>
<td>Sandia NL</td>
<td>01/10/97-02/28/97</td>
<td>992</td>
<td>Evaluation of Abandoned Mine Features for Bat Use &amp; Habitat Potential at Sandia National Laboratories.</td>
</tr>
<tr>
<td>Brown, J.H.</td>
<td>NSF</td>
<td>01/01/98-12/31/02</td>
<td>664,894</td>
<td>Long-term Monitoring &amp; Manipulation of a Desert Ecosystem.</td>
</tr>
<tr>
<td>Carroll, S.P.</td>
<td>NSF</td>
<td>09/01/98-08/31/01</td>
<td>407,006</td>
<td>Wing Form &amp; Life History Variation in an Insect.</td>
</tr>
<tr>
<td>Duszynski, D.W.</td>
<td>NIH</td>
<td>09/30/96-08/31/98</td>
<td>25,632</td>
<td>Bridges to Biomedical Careers Project (BBC).</td>
</tr>
<tr>
<td>Gosz, J.R.</td>
<td>NSF (881A)</td>
<td>03/01/97-06/01/97</td>
<td>11,200</td>
<td>Supplement: Participant Support for Second Annual SE Asian LTER Program, Japan.</td>
</tr>
<tr>
<td>Gosz, J.R.</td>
<td>NSF (881B)</td>
<td>05/01/97-10/01/97</td>
<td>5,500</td>
<td>Supplement: Participant Support for Travel to Poland.</td>
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<tr>
<td>Johnson, K.</td>
<td>NMDG&amp;F</td>
<td>02/01/97-06/30/97</td>
<td>7,500</td>
<td>Lesser Prairie Chicken Surveys.</td>
</tr>
<tr>
<td>Lewis &amp; Lewis</td>
<td>NSF</td>
<td>09/01/97-08/31/00</td>
<td>396,381</td>
<td>Molecular Phylogeny of the Liverworts (Bryophyta) &amp; the Extent of the Complex Thalloid Slowdown.</td>
</tr>
<tr>
<td>Marshall &amp; Evans</td>
<td>NSF (7325)</td>
<td>07/01/97-06/31/00</td>
<td>261,858</td>
<td>Can Non-random Mating Result in Evolutionary Change: A Selection Experiment Using Wild Radish as a Model System, Phase II.</td>
</tr>
<tr>
<td>Valett, M.H.</td>
<td>NSF</td>
<td>06/01/97-05/31/00</td>
<td>70,292</td>
<td>Collaborative Research: Temporal &amp; Spatial Heterogeneity in Control of Benthic Algal Communities in Snowmelt-Disturbed Streams.</td>
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<tr>
<td>Valett, Molles</td>
<td>NSF</td>
<td>06/01/97-05/31/00</td>
<td>245,989</td>
<td>Influence of the Flood Pulse on Organic Matter Dynamics &amp; Nitrogen Cycling in a Regulated River/Flood Plain Ecosystem.</td>
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<tr>
<td>Crawford &amp; Dahm</td>
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<td>$2,097,244</td>
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<tr>
<td>Principal Investigator</td>
<td>Agency/Proposal No.</td>
<td>Period of Performance</td>
<td>Proposed Funding</td>
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<td>Barton &amp; Thompson</td>
<td>DOE</td>
<td>08/01/97-07/31/00</td>
<td>1,471,089</td>
<td>Investigation of Microbial Barriers for Reduction &amp; Immobilization of Metals.</td>
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<td>Brown, J.H.</td>
<td>NSF (1557)</td>
<td>05/15/97-08/05/97</td>
<td>5,000</td>
<td>Long-term Monitoring &amp; Manipulation of the Desert Granivore System.</td>
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<td>Hofmann, G.E.</td>
<td>NSF</td>
<td>09/01/97-08/30/01</td>
<td>31,544</td>
<td>Nearshore-Benthic Linkages: Association between Rocky Intertidal Communities and Phytoplankton and Larval Abundance.</td>
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<td>Lightfoot &amp; Brown</td>
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<td>The Effects of Indigenous Small Mammals on the Species Composition &amp; Structure of Chihuahuan Desert Communities.</td>
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<td>Valett &amp; Campana</td>
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<td>Stream/Groundwater Ecotones: 1997 REU, RAMHSS Supplement.</td>
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<td>Yates, T.L.</td>
<td>NMSLO (1105)</td>
<td>12/16/96-06/30/98</td>
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<td>Biological Diversity of N.M. State Trust Land.</td>
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**January 1997**

| Brown & Parody           | USGS               | 05/01/97-08/01/98     | 7,962            | Habitat Requirements of Bell's Vireo: A Landscape Analysis of Southwest Populations.        |
| Dahm et al.              | EPA/NASA (7516)    | 09/01/97-08/31/00     | 715,914          | Riparian Ecosystem Restoration: Effects of Flooding & Vegetation Type on Annual Evapotranspiration in a Semi-arid Landscape. |
| Gosz, J.R.               | NSF                | 01/01/97-12/31/00     | 208,389          | Vulnerability of Chihuahuan Desert Grasslands & Dominant Plant Species to Global Change.    |
| Hofmann, G.E.            | ORAU               | 02/01/97-02/01/98     | 5,000            | Global Climate Change, Thermotolerance, and Species' Distribution.                          |
| Johnson, K.              | DOD                | 03/01/97-12/31/98     | 92,461           | Foraging Ecology of Wetland Birds at Holloman A.F.B.                                        |
| Miller, R.D.             | NSF                | 05/30/97-08/30/97     | 15,647           | Research Opportunity Award (ROA) Supplement.                                               |
| Werner-Washburne         | NSF                | 05/01/97-04/31/98     | 386,328          | Characterization of a novel, stationary-phase gene in the yeast, Saccharomyces cerevisiae.   |
| **Total:**               |                    |                      | **$1,431,701**   |                                                                                           |

**February 1997**

| Barton, L.L.             | WERC-DOE           | 08/15/97-08/14/98     | 60,000           | Chemical/Biological Treatment Strategies for Mixed Waste: Phase II.                        |

**March 1997**
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<td>Evans, A.S.</td>
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<td>Cosz, J.R.</td>
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<td>Ladyman, J.A.R.</td>
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<td>27,864</td>
<td>Pilot Study to Evaluate the Use of Microhabitat Plant Species Characteristics to Predict the Presence of Jemez Mt. Salamanders (Plethodon neomexicanus).</td>
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<td>BLM</td>
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<td>Status &amp; Reproductive Biology of Lepidoplastium burgessii (Burgess broomshrub or gypsum scalebroom).</td>
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<td>Ladyman &amp; Muldavin</td>
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<td>05/01/97-09/15/98</td>
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<td>Cryptogamic Crust Community Structure &amp; Dynamics in Piñon-Juniper Woodlands of the Southwest: A Comparison Between Research Natural Areas &amp; Adjacent Managed Areas.</td>
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<td>196,278</td>
<td>Biology of Trematode–Snail Associations.</td>
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<td>Lowrey, T.K.</td>
<td>NMDEMNR</td>
<td>03/07/97-05/31/97</td>
<td>3,000</td>
<td>White Sands Missile Range Polygala &amp; Penstemon Survey.</td>
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<td>Perez, A.V.</td>
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<td>Interactions, Composition of ECM, Cytoskeleton in Tendon.</td>
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<td>San Juan River Larval Fishes Processing.</td>
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<td>The Role of Climate Change, Ecology, Long-term Processes, &amp; Human Land Use Patterns in Emerging Infections.</td>
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**April 1997**

| Mehlhop, P.            | DOD/US Army        | 04/30/97-09/30/98    | 35,000           | Sensitive Biological Elements Database Enhancements. |
| **Total:**             |                    |                     | **$141,204**     |       |

**May 1997**

| Ladyman, J.            | Nature Conservancy (7790) | 05/01/97-06/01/98 | 43,701 | Rare & Endangered Species Survey & GIS. |
| **Total:**             |                         |                    | **$43,701** |       |

Page 5
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<td>Bat Survey of N.M.: Special Emphasis on BLM–Socorro District.</td>
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<td>Status &amp; Reproductive Biology of Lepidospartum burgessii.</td>
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<td>Polechla, P.J.</td>
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<td>Ecology of the River Otter and Other Wetland Furbearers of the Upper Rio Grande.</td>
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<td>Reduction of Inorganic Contaminants by Combined Zero Valent Iron &amp; Microbial Activity.</td>
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<td>White, C.S.</td>
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<td>Ecology of Fire in Semi-arid Grasslands: Responses Two Years after Fire.</td>
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APPENDIX G

PROFESSIONAL & TECHNICAL SUPPORT STAFF, FY 1996–97
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<th>EMPLOYER</th>
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DEPARTMENT OF BIOLOGY
ANCILLARY FACULTY
FY 1996-97

JOINT APPOINTMENTS (with other departments or areas):  

Robert Kelley, Prof., Anatomy  
Tokio Kogoma, Prof., Cell Biology  
Frederick Koster, Prof., Dept. of Medicine  
Miriam Roman, Asst. Prof., Valencia Campus  

Sherry Rogers, Assoc. Prof. of Anatomy  
Henry Shapiro, Assoc. Prof. of Computer Science  
John Trotter, Prof., Anatomy  
Robert Waterman, Prof., Anatomy

ADJUNCTS (not on UNM payroll):  

Richard Aguilar, Forest Service, Adj. Asst. Prof.  
Susan M. Barns, Res. Asst. Prof.  
Carlos Blanco-Montero, Colonia Niños Héroes, Adj. Asst. Prof.  
David Bleakley, Assoc.  
Michael Bogan, Res. Prof.  
Penelope J. Boston, Res. Assoc. Prof.  
Carlos Blanquet Montero, Colonia Niños Héroes, Adj. Asst. Prof.  
David Bleakley, Assoc.  
Michael Bogan, Res. Prof.  
Penelope J. Boston, Res. Assoc. Prof.  
David Breshears, Res. Asst. Prof.  
Ralph T. Bryan, Adj. Res. Prof.  
Richard A. Byles, USFS, Adj. Asst. Prof.  
James Cheek, Res. Asst. Prof.  
James Childs, Adj. Assoc. Prof.  
Roger Conant, UNM, Adj. Prof.  
John O. Corliss, UNM, Adj. Prof.  
David Cowley, North Carolina State, Adj. Asst. Prof.  
Clifford S. Crawford, Res. Prof.  
Harry Crissman, Los Alamos National Labs, Adj. Prof.  
David C. Deardorff, Adj. Prof.  
Robert Dickerman, Res. Assoc. Prof.  
Christopher A. Fields, Res. Prof.  
Deborah Finch, Res. Assoc. Prof.  
Richard Forbes, Res. Prof.  
Jacob Frenkel, Adj. Prof.  
Charles Gwo, Res. Asst. Prof. of Biology  
David Hafer, NMMNH, Res. Assoc. Prof. & Visiting Scholar  
Robert Harrison, Res. Asst. Prof.  
Bill Hevron, Associate in Biology  
Bruce Hofkin, Adj. Asst. Prof.  
David Hsi, NMSU, Adj. Prof.  
John P. Hubbard, NMG&F, Adj. Assoc. Prof.  
Sorin Istrail, Adj. Assoc. Prof.  
Randy Jennings, Adj. Asst. Prof.  
Kathryn M. Jacobson, Res. Asst. Prof.  
Mahmood Kassam, Ryerson University (Canada), Res. Prof.  
Timothy Keitt, Visiting Asst. Prof.  
Rebecca Kimball, Adj. Lecturer III  
Steven Kucera, Post-Doctoral Fellow  
William J. Kuipers, Adj. Asst. Prof.  
Samuel Kunkle, Adj. Prof.  
Juanita Ladyman, Adj. Assoc. Prof.  
Ronald D. Ley, Lovelace Foundation, Adj. Prof.  
Karen Lightfoot, Associate  
John E. Lobdell, Univ. of Alaska, Adj. Assoc. Prof.  
Jenella Loye, Res. Asst. Prof.  
Lawrence M. Mallory, Res. Assoc. Prof.  
Mary McNamara, TVA, Adj. Res. Prof.  
Patricia Mehlihop, Nature Conservancy, Adj. Asst. Prof.  
Gary Miller, Res. Asst. Prof.  
Paul J. Polechla, Res. Assoc. Prof. of Biology  
Deborah U. Potter, Res. Asst. Prof.  
David Propst, Adj. Assoc. Prof.  
Robert Rausch, Assoc. Prof.  
Eric M. Rominger, Res. Asst. Prof.  
J. Rowland, Adj. Assoc. Prof.  
Kenneth Schoenly, Adj. Asst. Prof.  
Daniel Shaw, Associate of Biology  
Michael E. Seidel, Res. Prof.  
Gary L. Simpson, Res. Prof.  
Robert Sivinski, Associate  
Mohan Sopori, Lovelace Foundation, Adj. Prof.  
Peter B. Stacey, Res. Prof.  
Eleonora Trotter, UNM, Res. Asst. Prof.  
John Ubelaker, Southern University–Dallas, Adj. Prof.  
Roby Wallace, Nature Conservancy, Associate  
Paul J. Watson, UNM, Res. Asst. Prof.  
John Wiens, Adj. Distinguished Prof.  
Stephen Wood, Lovelace Foundation, Adj. Prof.  
Marcus I. Yaffe, Res. Assoc. Prof.
RESEARCH OR VISITING STATUS (usually on UNM payroll):

Coenraad Adema, Res. Asst. Prof.
Lee Couch, Res. Assoc.
Charles Curtin, Res. Asst. Prof. (P-T)
Murray Dalley, Adj. Prof.
Michael Folsom, Res. Asst. Prof. (P-T)
Jennifer Frey, Res. Asst. Prof.
K. (Wendy) Fuge, Res. Asst. Prof.
Deborah Goldberg, Univ. of Michigan, Res. Assoc. Prof.
Sujata Guha, UNM Centennial Library, Res. Assoc. Prof.
Lynn Hertel, Res. Assoc.
Richard Holloway, Res. Assoc. Prof.
Nancy Johnson, Adj. Asst. Prof.
David Lightfoot, Res. Assoc. Prof. (P-T)
Randall Mitchell, Res. Asst. Prof. (P-T)
Diana Northup, UNM Centennial Library, Res. Assoc.
Robert Parmenter, Res. Assoc. Prof.
Vicki Peck, Visiting Asst. Prof.
Ursula Shepherd, Adj. Asst. Prof.
Marian Skupski, Res. Asst. Prof.
Felisa Smith, Adj. Asst. Prof.
George C. Stevens, Adj. Assoc. Prof.
Scott Snyder, Post-Doctoral Fellow
H. Maurice Valett, Res. Asst. Prof.
Carleton White, Res. Asst. Prof.
Patricia Wilber, Adj. Asst. Prof. of Biology

HERBARIUM AFFILIATES:

Margaret Caffey-Moquin, M.S.
Elizabeth Crowder, B.S.
Anne Cully, M.S.
Ellen A. DeBruin, M.S.
Reggie Fletcher, M.S.
Nancy Collins Johnson, M.S.
Paul Knight, M.S.
Yavonn Wilson-Ramsey, B.A.

EMERITI:

Clifford S. Crawford
William Degenhardt
Howard Dittmer
James S. Findley
William W. Johnson
William Martin
Loren D. Potter
Marvin L. Riedesel
APPENDIX I

ALL COURSE OFFERINGS,
FY 1996–97
### COURSE OFFERINGS & SEMESTER CREDIT HOURS, FY 1996-97

#### SUMMER 1996

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**TOTAL, SPRING 1997**  
203 4,316 9,861

**TOTALS, FY 1996-97**  
526 9,384 21,627
APPENDIX J

PROGRAM OF
THE SIXTH ANNUAL
RESEARCH DAY
Friday, April 18, 1997

Department of Biology • The University of New Mexico

A Presentation of Graduate and Undergraduate Student Research
Celebrating Discovery and Education in the Biological Sciences

Abstracts of Poster and Paper Presentations

http://biology001.unm.edu/~pwatson/r_day.htm
ACKNOWLEDGMENTS

We wish to thank the Howard Hughes Undergraduate Research Program for financial support for this event. Research Day is sponsored by the Department of Biology at The University of New Mexico, Albuquerque, NM.

Many thanks to all who helped with the preparation of this booklet, including Beth Dennis for the design of the logo, and to all the students, staff, and faculty who helped throughout the day.
SCHEDULE OF EVENTS

THURSDAY, 17 APRIL 1997

2:00 p.m. - 5:00 p.m.  Posters displayed, judges preview.

FRIDAY, 18 APRIL 1997

9:00 a.m. - 5:00 p.m.  Posters displayed in the main hallway of the Biology Building.

9:00 a.m. - 11:20 a.m.  Oral Presentations: Session 1, Room 100. Moderator: Elisheva H. Crowell

10:30 a.m. - 11:30 a.m.  Judging of Posters 1-12.

11:30 a.m. - 1:00 p.m.  Observations of Optimal Foraging Behavior at the Watering Hole. Everyone welcome to observe and to forage!! The Central Courtyard.

1:00 p.m. - 2:00 p.m.  Judging of Posters 13-24.

1:10 p.m. - 3:30 p.m.  Oral Presentations: Session 2, Room 100. Moderator: Brian J. Enquist

2:00 p.m. - 3:00 p.m.  Judging of Posters 25-33.

4:00 p.m. - 5:00 p.m.  Keynote Address, Dr. J. Stamps, UC Davis. "Testing assumptions about habitat selection and territorial behavior." Geology, Room 122.

5:00 p.m. - 5:30 p.m.  Awards Ceremony
Moderator: Dr. Terry L. Yates, Chair

5:30 p.m. - 6:00 p.m.  Reception in the Conservatory

7:30 p.m. - 
RESEARCH DAY ORGANIZATION

COMMITTEE:

Dr. Paul J. Watson
Carol B. Brandt
Claire M. Carpenter
Amy M. Ditto
Anne E. Rice
Dr. Randy Thornhill
Dr. Jennifer K. Frey
Dr. Luis A. Ruedas
Dr. Jerry W. Dragoo
Dr. Terry L. Yates

JUDGES FOR ORAL PRESENTATIONS:

Michelle A. Baker
Elisheva H. Crowell
Brian J. Enquist
S. K. Morgan Ernest
Pascale M. Leon
Dr. Mary Anne Nelson
Dr. Vickie M. Peck
Damien T. Scott

JUDGES FOR POSTER PRESENTATIONS:

Daniel J. Abrecht
Dr. Coen M. Adema
Sarah Berkman
Claire M. Carpenter
Scott Carrol
Matthew E. Crawford
Miranda S. Dendy
Amy M. Ditto
Dr. Jennifer K. Frey
Dr. William L. Gannon
Joslyn M. Garcia

S. Kimberly Heckscher
Dr. Gordon V. Johnson
A. Joshua Leffler
Pascale M. Leon
Dr. Louise A. Lewis
Dr. E. Sam Loker
Carla A. Morita
Scott D. Norris
Diane L. Rowland
Dr. Luis A. Ruedas
KEYNOTE ADDRESS

DR. JUDY A. STAMPS

Testing Assumptions about Habitat Selection and Territorial Behavior.

Dr. Stamps is a member of the Section of Evolution and Ecology at The University of California, Davis. She studies the proximate bases and ecological consequences of social behavior, especially territorial behavior and habitat selection. Her research relates to mechanisms affecting growth and maturation patterns, the evolution of body size, body size and age at maturity, and sexual size dimorphism in lizards.

This year, the keynote address will take place in the Northrup Hall lecture room (Geology 122) so that we have more seating than in past years. The keynote address runs from 4:00 to 5:00 pm, and will be followed immediately by the Awards Ceremony. After that, join us at a reception in the Biology Atrium (Conservatory). Then, beginning at 7:30 pm, come to Astrid and Jim Brown's home (directions to the Brown's will be available at the keynote address) to meet with Dr. Stamps, informally, and enjoy a sumptuous POTLUCK extravaganza.
Oral Presentations

9:00 DOES WATER AVAILABILITY INFLUENCE WATER USE EFFICIENCY IN RIPARIAN TREE.
A. Joshua Leffler and Ann S. Evans

9:20 COMPARISON OF THE RELATIVE SUSCEPTIBILITY TO DIGENEAN INFECTION OF A FIELD-DERIVED AND TWO LABORATORY STRAINS OF BIOMPHALARIA GLABRATA.
J. Miralles-Salazar and E. S. Locker

9:40 PHYLOGENY OF PLECOTINE BATS (CHIROPTERA: VESPERTILLIONIDAE) BASED ON CYTOCHROME B DNA ANALYSIS.
Matthew J. Garcia, Jorge Salazar, Jerry W. Dragoo, and Terry L. Yates

10:00 VARIABLE RESPONSE OF MYCORRHIZAL FUNGI TO P FERTILIZATION.
Christopher B. Blackwood and Nancy C. Johnson

10:20 EFFECTS OF ISLAND ATTRIBUTES ON GENETIC VARIABILITY IN SOUTHWESTERN MONTANE MAMMALS.
Amy M. Ditto and Jennifer K. Frey

10:40 THE NEUROSPORA GENOME PROJECT: A WEALTH OF INFORMATION FROM A SMALL GENOME.
Marianita Gorman, Sheldwin Yazzie, Seogchan Kang, Mary Anne Nelson, and Donald O. Natvig

11:00 CHARACTERIZATION OF THE CAR1 GENE OF NEUROSPORA CRESSA; A PUTATIVE PEROXISOME ASSEMBLY FACTOR GENE.
Kelly A. Howe and Mary Anne Nelson

LUNCH BREAK

1:10 THERMOREGULATORY BEHAVIOR AND HABITAT SELECTION OF UTA STANSBURIANA AND CALLISARUS DRACONOIDES; SONORA, MEXICO.
Claire M. Carpenter, Charles G. Curtin, and Tim C. Frey

1:30 DIVERSIFIED SEED GERMINATION BEHAVIOR AND SIBLING COMPETITION IN LESQUERELLA FENDLERI.
Jason D. Lett and Ann S. Evans
1:50  WELL WATER SPECIATION IN CORRELATION WITH BIOLOGICAL ACTIVITY REACTION TESTS AND WATER QUALITY ANALYSES IN MUNICIPAL WATER WELLS IN ALBUQUERQUE, NEW MEXICO.
Shannon M. House

2:10  A MOLECULAR PHYLOGENY OF SOUTH AMERICAN RODENTS IN THE TRIBE PHYLLOTINI (MURIDAE: SIGMONTINAE).
J. R. Franks, Jorge Salazar, Jerry W. Dragoo, and Terry L. Yates

2:30  VARIATION IN BOLIVIAN POPULATIONS OF VESPER MICE (CALOMYS).
David S. Tinnin, Jorge Salazar, Jerry W. Dragoo, and Terry L. Yates

2:50  VASOPRESSIN-INDUCED INCREASE IN INTRACELLULAR CALCIUM AND NITRIC OXIDE PRODUCTION IN CULTURED PULMONARY ARTERY ENDOTHELIAL CELLS.
G. M. Herrera, J. J. Candelaria, T. C. Resta, and B. R. Walker

3:10  TERMINAL DEOXYNUCLEOTIDYL TRANSFERASE GENE OF A MARSUPIAL.
Amanda Guth and Robert D. Miller

POSTER PRESENTATIONS

1.  THE CORRELATION BETWEEN PROTEOGLYCAN EXPRESSION AND ACTIN FILAMENT ORGANIZATION IN CELLS ISOLATED FROM TENDON AND CARTILAGE.
Thomas Ehlers and Kathryn Vogel

2.  USING A PHOSPHOTYROSINE KINASE ASSAY TO MEASURE A CELLULAR RESPONSE TO MECHANICAL FORCES IN BOVINE TENDON CULTURE.
Audrey Wells and Kathryn Vogel

3.  STRATEGIES FOR SITE DIRECTED MUTAGENESIS OF HUMAN LIVER ENZYME PHOSPHOFRUCTOKINASE.
Aleta Best and John Trujillo

4.  KINETIC CHARACTERIZATION OF RECOMBINANT MUTANT HUMAN LIVER PHOSPHOFRUCTOKINASE.
Randy Willink and John Trujillo
5. RECOMBINANT RAT LIVER PHOSPHOENOLPYRUVATE CARBOXYKINASE (PEPCK) IN E. COLI: PURIFICATION AND VERIFICATION OF EXPRESSION.
   Vince N. Montes, Marvin K. Pena-Parson, and John Trujillo

6. DIRECT PROBABILITY MAPPING BY STOCHastically INDUCED PERCOLATION.
   Ethan H. Decker, Peter T. Hraber, Drew Kerkhoff, and Bruce T. Milne

7. THE ROLE OF MIO C AND GID TRANSCRIPTION IN INITIATION OF E. COLI CHROMOSOME REPLICATION AT ORI C.
   David B. Bates, Erik Boye, Tsuneaki Asai and Tokio Kogoma

8. CHARACTERIZATION OF THE SNZ1 GENE IN NEUROspora CrasSA.
   Allison Errett, Donald O. Natvig, and Mary Anne Nelson

9. CHARACTERIZATION OF THE NEUROspora CrasSA SNO GENE.
   Erin Heinemeyer and Mary Anne Nelson

10. THE NEUROspora GENOME PROJECT AT THE UNIVERSITY OF NEW MEXICO.
    Anne Marie Armijo, Laura Bean, Eldon Blueyes, Marianita Gorman, Jennifer Ortega, John Perea, Robert Trujillo, Joseph Valentine, Sheldwin Yazzie, Patricia L. Dolan, Pascale M. Leonard, Seogchan Kang, Mary Anne Nelson, and Donald O. Natvig

11. PREFERENTIALLY EXPRESSED GENES FROM THE SEXUAL STAGE OF NEUROspora CRAsSA.
    Patricia L. Dolan, Donald O. Natvig, and Mary Anne Nelson

12. DIFFERENTIAL SITES OF POLYADENYLATION IN NEUROspora CRASSA.
    Robert Trujillo, Seogchan Kang, Donald O. Natvig, and Mary Anne Nelson

13. CHARACTERIZATION OF NOVEL GENES OF NEUROspora CRAssA.
    Tom Cushing and Mary Anne Nelson

14. THE FUTURE DIRECTION OF THE NEUROspora GENOME PROJECT.
    Laura E. Bean, Mary Anne Nelson, and Donald O. Natvig

15. REGENERATION RESPONSE OF THREE CACTI TO PICLORAM AND KINETIN IN MURASHIGE AND SKOOG'S MEDIUM.
    A. R. Heilman and Gordon V. Johnson
16. THE ECOLOGICAL ROLE OF CRYPTOGAMIC CRUSTS ACROSS A CREOSOTE BUSH-GRASSLAND ECOTONE IN CENTRAL NEW MEXICO: DOES SOIL CLAY MAKE A DIFFERENCE? Elisheva Crowell and Gordon V. Johnson

17. THE EFFECTS OF IRON DEFICIENCY ON NITROGEN FIXATION IN SOYBEANS. Cecilia Pike and Gordon V. Johnson

18. PERSONALITY AS AN ADAPTIVE PSYCHOLOGICAL MECHANISM IN HUMANS. Matt Deller

19. JUNCTIONAL DIVERSITY AT THE IMMUNOGLOBULIN HEAVY CHAIN LOCUS IN THE SHORT TAILED OPOSSUM, MONODELPHIS DOMESTICA. Michelle Y. Pricer, George H. Rosenberg, and Robert D. Miller

20. INJURY-INDUCED PLASTICITY IN AN AUTONOMIC PATHWAYS. R. Galindo, F. Harji, J. Gonzales, and W. G. Dail

21. ALTERATIONS IN SYNAPTOPHYSIN IMMUNOREACTIVITY IN RAT PITUITARY INNERVATION AFTER 6 HYDROXYDOPAMINE TREATMENT. D. Thomas, L. C. Saland, and J. Gaddy

22. DISCOVERY OF A PUTATIVE ANTI-BACTERIAL PEPTIDE ENCODING GENE IN THE GASTROPOD BIOMPHALARIA GLABRATA. Peter A. Doucette, Pascale M. Leonard, Coen M. Adema, and Eric S. Loker

23. PATTERNS OF LIFE FORM CHARACTERISTICS OF THE FLOWERING PLANTS OF HAWAII. Jane Mygatt

24. USING GREEN FLOURESCENT PROTEIN FROM THE JELLY FISH AEQUOREA TO DETERMINE THE SUBCELLULAR LOCALIZATION OF SNZ PROTEINS. S. Atencio, P. Padilla, and M. Werner-Washburne

25. SOCIAL MEMORY IN PRAIRIE VOLES (MICROTUS OCHOGASTER): SELECTIVE ABILITY TO RECALL SCENT INFORMATION. Michelle K. Schmick, Ray L. Woodward, Jr., and Michael H. Ferkin
26. COMPETITION BETWEEN FLOODPLAIN TREE SPECIES: A NATIVE COTTONWOOD (*POPULUS FREMONTII*) WITH EXOTIC SALT CEDAR (*TAMARIX CHINENSIS*).
Anna A. Sher, and D. L. Marshall

27. HYPOXIA-INDUCED DECREASES IN BODY TEMPERATURE IN THE LIZARD: ROLE OF PUTATIVE REPTILIAN \(\alpha\)-OPIOID RECEPTORS.
R. Silva and G. M. Malvin

28. THERMOREGULATORY BEHAVIOR OF THE TENEBRIONID BEETLE.
Hannah Johnson and Eric Toolson

29. DETERMINING FEMALE MATE CHOICE WHEN GIVEN A CHOICE OF LONG FIN VS. SHORT FIN MALES, AND FRAYED FIN VS. INTACT FIN MALES IN SIAMESE FIGHTING FISH (*BETTA SPLENDENS*).
Claudette M. Sandoval and Astrid Kodric-Brown

30. RNA SEQUENCE COMPOSITION AND THE DYNAMICS OF SELF-ASSEMBLY.
Peter T. Hraber, Erik A. Schultes, and Thom H. LaBean

31. DESERT GRASSLAND RESPONSES FOLLOWING LIVESTOCK EXCLOSURE ON THE SEVILleta NATIONAL WILDLIFE REFUGE, NEW MEXICO.
Daniel E. Ryerson and Robert R. Parmenter

32. THE LATITUDINAL GRADIENT OF DIVERSITY IS MORE THAN SPECIES RICHNESS.
Dawn M. Kaufman

33. DEFICITS IN PHOSPHATIDYL INOSITOL-SPECIFIC PHOSPHOLIPASE C ARE INVOLVED IN FETAL ALCOHOL EXPOSED NEUROBIOLOGIC DEFECTS.
Ed Weeber
9:00 Does water availability influence water use efficiency in a riparian tree?
A. Joshua Leffler AND Ann S. Evans
In the deserts of the southwestern U. S., water availability fluctuates dramatically from year to year. Due to this variation, no single water use strategy by plants is adaptive in all years. Growth, reproduction and survival would be maximized if plants could respond to variation in water availability by maintaining high water use efficiency (WUE) under xeric conditions, but being less conservative when water is abundant. We investigated the ability of Fremont cottonwood, a native southwestern riparian tree, to alter its WUE in response to water availability in the form of precipitation and river flow. Annual rings record the carbon isotope ratio, a parameter correlated with WUE, of each year. We collected annual ring samples from ten individuals in a central New Mexico cottonwood population for carbon isotope ratio analysis. Carbon isotope composition was analyzed on annual rings corresponding to the years 1981 to 1995. We found WUE to be variable among years. High values of WUE were associated with years of low precipitation or river flow and low WUE was observed when water was abundant. Our study demonstrates the influence of water availability on riparian plant physiology, suggests that both precipitation and river flow are important water sources to riparian plants, and indicates that plants are able to respond to interannual climate variation.

9:20 COMPARISON OF THE RELATIVE SUSCEPTIBILITY TO DIGENEAN INFECTION OF A FIELD-DERIVED AND TWO LABORATORY STRAINS OF Bionphalaria glabrata. J. Miralles-Salazar and E. S. Loker. Department of Biology, University of New Mexico.
The susceptibility to infection with both Echinostoma paraensei (Ep) and Schistosoma mansoni (Sm) was studied in a field-collected strain of Biomphalaria glabrata (Bg) from Salvador Bahia, Brazil (SB strain) and in two inbred, lab-derived strains of Bg, the 13-16-R1 and M line. The SB and 13-16-R1 strains are generally considered to be resistant to Sm whereas the M line strain is susceptible. SB and 13-16-R1 snails were confirmed to be refractory, and M line snails susceptible, to infection with Sm. 13-16-R1 snails were significantly less susceptible (p<0.05) to Ep than the other two strains, however. This result suggests that the factors underlying resistance of SB and 13-16-R1 snails may be different. Also, the susceptibility of M line snails of different sizes to both Sm and Ep was compared and the results suggested that this snail strain responds differently to the two parasites. Larger snails were significantly less likely to become infected with Ep than Sm. In addition, the number and general appearance of circulating hemocytes in snails of the three strains were compared, and the results will be related to the outcome of the susceptibility experiments described above. Supported by NIH grant RO1 AI24340, GRAC and RTP.

9:40 Phylogeny of Plecotine Bats (Chiroptera: Vespertilionidae) Based on Cytochrome b DNA Analysis
Matthew J. Garcia, Jorge Salazar, Dr. Jerry Dragoo, and Dr. Terry Yates
Phylogenetic relationships among the taxa of plecotine bats (Plecotus, Ixionycteris, Barbastella, Euderma, and Corynorhinus) have been under extensive research using morphological and karyotypical data. DNA sequencing analysis of taxa has become an important and key compliment since the advent of polymerase chain reaction (PCR). By using PCR, I sequenced the full mtDNA Cytochrome b (1140 bp) gene of the five genera of the plecotine tribe and four outgroups. I rooted the phylogenetic tree with genera Myotis, Eptesicus, Pipistrellus, and Antrozous as my outgroups. I also sequenced DNA from Histiotus to determine its relationship to the plecotine bats. Histiotus fell outside of the plecotine bats and grouped with Eptesicus as suggested originally by Tate (1942). Various other relationships were verified including the elevation of Corynorhinus to full genus from Plecotus and the contention that Ixionycteris is a distinct genus. My data was compared with various morphological and karyotypical data.
10:00 VARIABLE RESPONSE OF MYCORRHIZAL FUNGI TO P FERTILIZATION
Christopher B. Blackwood and Nancy C. Johnson

It is generally assumed that mycorrhizae are mutualistic, with the plant supplying the fungus carbohydrates and the fungus supplying the plant nutrients, principally P. This experiment was conducted to determine whether particular species of mycorrhizal fungi can cause a net cost to the plant. Big Bluestem seedlings were grown in a greenhouse in a 2x3 factorial experiment, with high or low P applied, and one of three fungal treatments: Glomus intraradices, Gigaspora sp., or a sterile plug. Glomus inoculum resulted in a slight decrease in biomass with tissue P, while the other treatments resulted in increases in biomass with tissue P. This implies that Glomus was able to increase carbohydrate consumption when photosynthesis was increased due to higher P levels. Hence Glomus mycorrhizae are a net cost at high P levels when compared to Gigaspora mycorrhizae.

10:20 EFFECTS OF ISLAND ATTRIBUTES ON GENETIC VARIABILITY IN SOUTHWESTERN MONTANE MAMMALS.
Amy M. Ditto and Jennifer K. Frey.
Museum of Southwestern Biology, Department of Biology, University of New Mexico, Albuquerque, NM 87131.

Genetic variation is predicted to be reduced due to genetic drift as the size of a population decreases. In contrast, immigration into a population is predicted to increase genetic variation. We examined the effects of island attributes, such as size and degree of isolation, on levels of genetic polymorphism and heterozygosity in allopatric populations of several species of montane mammals in the Southwest. The predicted patterns of genetic variation were inconsistently met among species examined.

10:40 THE NEUROSPORA GENOME PROJECT: A WEALTH OF INFORMATION FROM A SMALL GENOME.
Marianita Gorman, Sheldwin Yazzie, Seogchan Kang, Mary Anne Nelson and Donald O. Natvig.

The Neurospora Genome Project (NGP) at the University of New Mexico is a project directed toward undergraduate research training in molecular genetics. Neurospora crassa is a filamentous fungus with a complex life cycle. The project includes the sequencing and characterization of expressed genes (ESTs). Three cDNA libraries made from mRNAs isolated from conidial, mycelial and perithecial tissues were constructed. The identities of the expressed structural genes and their expression patterns are being analyzed. 2500 clones from these libraries have been sequenced using the ABI 377 automated sequencer using single-pass sequencing. Surprisingly, about 60% of the genes correspond to novel (previously uncharacterized) genes. Among the identified genes, about 45% were involved in metabolism, 32.6% in protein synthesis and 7.4% in RNA synthesis.
11:00 CHARACTERIZATION OF THE carl GENE OF NEUROSPORA CRASSA; A PUTATIVE PEROXISOME ASSEMBLY FACTOR GENE
Kelly A. Howe AND Mary Anne Nelson

Peroxisomes are the least characterized organelles of the cell; they received little attention until the discovery of their role in a specific group of human genetic disorders, characterized by a lack of peroxisomes in cells and a subsequent loss of vital peroxisomal functions. It is now known that peroxisomes contain enzymes involved in many metabolic pathways of eukaryotic cells, including 8-oxidation of fatty acids. Peroxisome biogenesis and the role of the organelle in development are still poorly understood, but microorganisms have provided good model systems for the study of peroxisomes. We have cloned a putative peroxisome assembly factor gene, carl, from the filamentous fungus Neurospora crassa. The carl gene encodes a protein with significant homology to a conserved family of proteins related to the human PAF1 (Peroxisome Assembly Factor 1) protein. The PAF1 protein is known to be involved in peroxisome biogenesis and its absence is associated with human peroxisome disorders.

The N. crassa carl gene has been RIP-disrupted and partially characterized. It encodes a protein with two membrane spanning domains and a zinc finger region; all of which are conserved among the PAF1-related proteins. A carl mutant strain has been isolated exhibiting a mild form of gene disruption of the carl gene and aberrant peroxisome function. Here we report the sequence analysis and partial characterization of carl function in N. crassa.

1:10 THERMOREGULATORY BEHAVIOR AND HABITAT SELECTION OF UTA STANSBURIANA AND CALLISaurus DRACONOIDES; SONORA, MEXICO
Claire M. Carpenter, Charles G. Curtin, and Tim C. Frey

Uta stansburiana and Callisaurus draconoides are iguanid lizards that occur sympatrically in the Sonoran desert. Thermoregulatory behavior of these species was studied by monitoring captured lizards in several enclosures near Kino Bay, Sonora, Mexico. C. draconoides maintained higher body temperatures and selected hotter microhabitats than did U. stansburiana. C. draconoides exhibited a unimodal distribution of daily activity with a peak at midday; activity of U. stansburiana was bimodal with peaks in morning and afternoon. U. stansburiana appears to maintain large geographic range by flexibility in activity times. Limitations of this strategy may prevent U. stansburiana from occupying sand dune habitat at our study site, and may delineate the southern limits of U. stansburiana distribution. C. draconoides appears to have a narrower and warmer thermal niche and consequently used a smaller range of microhabitats.

1:30 DIVERSIFIED SEED GERMINATION BEHAVIOR AND SIBLING COMPETITION IN LESQUERELLA FENDLERI.
Jason D. Lett, AND Ann S. Evans

Recent theory suggests that diversified seed germination patterns in plants may help mitigate the risks of sibling competition among offspring. One way to approach the problem is to ask how variation in germination patterns is correlated with the competitive ability among families within a species. Families that have inherited delayed germination patterns should have experienced less selective pressure to evolve competitive ability and therefore seedlings from such families would be poorer competitors than seedlings from families that have immediate germination. We quantified (1) the span of time over which seeds germinated, and (2) the effect and response components of competition for 50 families of Lesquerella fendleri. At the family level, performance in the absence of competition was not correlated with performance in the presence of competition, indicating that competition is a unique selective force in Lesquerella. Families varied in the response component of competition though not in the effect component. Finally, differences among families in the time span of germination correlated with response to competition: families with narrow germination spans competed "better" than families with wide spans. This supports the theory that delayed seed germination may be a competition avoidance mechanism.
WELL WATER SPECIATION IN CORRELATION WITH BIOLOGICAL ACTIVITY REACTION TESTS AND WATER QUALITY ANALYSES IN MUNICIPAL WATER WELLS IN ALBUQUERQUE, NEW MEXICO.

Shannon M. House

Water. Clear, clean and pure, or is it? Iron bacteria is a nuisance organism that can cause biofouling of equipment and distribution lines. Iron bacteria is known to inhabit some of the City of Albuquerque municipal wells. A well water bacteria speciation program is currently underway to index the microbiological flora of the 91 water wells and 44 storage reservoirs in the City water system. There are three goals for this program: 1) bacteriological speciation of well and reservoir water, 2) determination of the Biological Activity Reaction Test (BART) as an applicable field test for presence-absence of iron bacteria, 3) correlation of water quality analytical results at each site with species results. Speciation is being conducted by the New Mexico Health Department, State Laboratory Division, Environmental Microbiology Section following Standard Methods for Examination of Water and Waste Water 9240 A and B. Water quality analyses are performed by the City Public Works Department, Water Quality Laboratory. Analysis of the BARTs is being done by members of the Water Quality Section of the Water Utility Division. The program is ongoing. Findings are inconclusive to date.

A MOLECULAR PHYLOGENY OF SOUTH AMERICAN RODENTS IN THE TRIBE PHYLLOTINI (MURIDAE:SIGMODONTINAE)

J. R. Franks, Jorge Salazar, Dr. Jerry W. Dragoo and Dr. Terry L. Yates

Arenaviruses, like Hantaviruses, are rodent-borne viruses that are harbored by specific rodent hosts. There are several species of Arenaviruses that occur in South America and can be severe or even fatal to humans. In order to understand emerging zoonoses, we need to understand ecological and evolutionary factors associated with viral/host relationships. Here, we focus on the phylogenetic relationships of the South American rodents in the tribe Phyllotini. We have sequenced the cytochrome b gene and produced a phylogeny of approximately 7 genera and 15 species of these hosts. These data will be used in a larger study to understand the Arenavirus infections in wild populations of mice in relation to human activities. To what extent are human activities responsible for the increased rates of human fatalities caused by Arenaviruses?

VARIATION IN BOLIVIAN POPULATIONS OF VESPER MICE (CALOMYS)

David S. Tinnin, Jorge Salazar, Dr. Jerry W. Dragoo and Dr. Terry L. Yates

Calomys callosus currently is recognized as the reservoir species for the virus responsible for Bolivian Hemorrhagic Fever (BHF). Two recent outbreaks of BHF have occurred only in the Beni province of Bolivia. Yet, Calomys callosus occurs throughout eastern Bolivia, and also into Brazil, Argentina, and Paraguay. However, there is very little known about this South American rodent and its relationship to other species of Calomys. We have sequenced the cytochrome b gene and used it to test the monophyly of different populations of Calomys callosus and its relationship to other species in this genus. These data are being used in a larger study to investigate the relationship between virus and host species.
2:50 VASOPRESSIN-INDUCED INCREASE IN INTRACELLULAR CALCIUM AND NITRIC OXIDE PRODUCTION IN CULTURED PULMONARY ARTERY ENDOTHELIAL CELLS.

Arginine vasopressin (AVP) is recognized for its vasoconstrictor actions, however recent evidence suggests that AVP may also regulate vascular tone by eliciting release of endothelium-derived vasodilator substances. For example, AVP-induced pulmonary vasodilation is prevented by agents that inhibit the synthesis of nitric oxide (NO). Furthermore, in rat and dog pulmonary circulations AVP elicits vasodilation that can be inhibited with a V1-vasopressinergic receptor antagonist. Thus, AVP appears to elicit pulmonary vasodilation by binding V1 receptors on endothelial cells (EC), increasing production of NO. However, the mechanism of action of AVP on pulmonary EC is unclear. We hypothesized that AVP-stimulation of cultured dog pulmonary artery EC (PAEC) would result in increased release of NO. Indeed, AVP treatment resulted in a significant increase in NO production, detected by chemiluminescence. The enzyme responsible for NO production in EC, NO synthase, is stimulated by increased intracellular Ca2+ ([Ca2+]i). Thus, we hypothesized that AVP elicits an increase in [Ca2+]i in cultured dog PAEC. Experiments using the Ca2+-sensitive fluorophore fura-2 supported this hypothesis and further showed that the AVP-induced increase in [Ca2+]i was inhibited by V1 antagonist. We conclude that AVP binds to V1 receptors on EC, resulting in increased NO production following elevated [Ca2+]i. Future studies will examine the mechanism whereby AVP binding elicits an increase in [Ca2+]i in PAEC.

3:10 TERMINAL DEOXYNUCLEOTIDYL TRANSFERASE GENE OF A MARSUPIAL
Amanda Guth and Robert D. Miller

Marsupials provide interesting immunological problems since most marsupials appear to be born at a stage of development much less mature than that of eutherians. A newborn Monodelphis domestica, the short tailed opossum, appears to be at a stage of development similar to a 13 day mouse or 8 week human embryo, the point of gestation at which lymphoid development is first detectable. By comparison, at birth the Monodelphis thymus is primarily undifferentiated epithelium, consistent with the lack of mature T cells in the neonate. Recently, we began to characterize the development of lymphocytes and the antibody repertoire of Monodelphis to compare with known eutherians. During fetal development and the first week following birth, the antibody and T cell receptor repertoire of mice and humans lacks junctional diversity because of a low expression of the enzyme TdT. We wished to determine if a similar developmental pattern was found in a species in which the repertoire development was entirely postnatal. Towards this goal, a complete Monodelphis TdT cDNA has been sequenced and characterized. Using the TdT clone, timing of expression of this enzyme and the effect on antibody repertoire development in newborn opossums can be analyzed.
1 The Correlation Between Proteoglycan Expression and Actin Filament Organization in Cells Isolated from Tendon and Cartilage
Thomas Ehlers and Kathryn Vogel

Previous studies have suggested that chondrocytes synthesize the large proteoglycan, aggregan, when they are rounded. However, small proteoglycans, such as decorin, are produced when these cells spread out on a plastic culture dish. This study tests whether tendon cells that are normally extended in tissue and synthesize small proteoglycans will be induced to make large proteoglycans if forced to take on a rounded shape. Bovine chondrocytes, along with fibroblasts from the tensile and compressed regions of bovine deep flexor tendon, were isolated and cultured as monolayers on polystyrene and in alginate beads, which force cells to maintain a round rather than a spread morphology. The cultures were allowed to incorporate $^{35}$SO$_4$ at days 7 and 21 of primary culture. Proteoglycan synthesis was then assessed by sieve chromatography. Additionally, laser confocal microscopy was performed to assess the organization of intracellular actin fibers. Initial results suggest that fibroblasts from the tensional region of tendon synthesize mostly small proteoglycans regardless of whether they are cultured as monolayers or in alginate beads. In contrast, chondrocytes synthesize mostly large proteoglycan when maintained in alginate beads but express a mixture of small and large proteoglycans when in monolayer.

2 USING A PHOSPHOTYROSINE KINASE ASSAY TO MEASURE A CELLULAR RESPONSE TO MECHANICAL FORCES IN BOVINE TENDON CULTURE
Audrey Wells and Kate Vogel

The bovine deep flexor tendon is an excellent connective tissue model for studying cellular response to mechanical forces. Previous work in the Vogel lab showed that tyrosine kinases adjust their activity according to applied mechanical load. We are interested in the role tyrosine kinases play in the signal transduction pathway activated in response to tensional and compressive forces.

Bovine tendon fibroblasts in culture were lysed with a mild detergent solution. Protein-protein complexes containing phosphotyrosine were immunoprecipitated with a specific anti-phosphotyrosine antibody. The presence of kinase enzyme and its substrate(s) was assessed by incorporation of radioactive phosphorus (ATP$^{32}$) in a five minute reaction. The products were separated via gel electrophoresis and phosphorylated components visualized by autoradiography. A major band was consistently observed at MW 200 kDa, along with a minor band at 60 kDa. Similar results were seen in cartilage cell cultures. The signal at 200 kDa is particularly interesting because it is the same size as tensin, a protein kinase that has interactions with integrin and three actin binding domains.

3 Strategies for Site Directed Mutagenesis of Human Liver Enzyme
Phosphofructokinase
Alexa Beel and Dr. John Trujillo

Phosphofructokinase (PFK) is a key regulatory enzyme in glycolysis. It catalyzes the phosphorylation of Fructose 6 Phosphate to Fructose 1,6 Bisphosphate via ATP. The clinical significance of PFK is that the locus on chromosome 21 encoding the liver type PFK enzyme has been linked to the chromosomal region known to be involved in Down Syndrome. Liver PFK levels are enhanced in patients with Down Syndrome due to the trinity of chromosome 21. The purpose of this project is to alter the nucleotide sequence encoding PFK by single nucleotide substitutions in order to map catalytic and regulatory functional domains. The nucleotide substitution changes a single amino acid in the PFK protein. Binding sites of PFK were chosen as the key sites of mutation. PFK binds a number of nucleotides which include Fructose 6 Phosphate, Fructose 1,6 BP, Fructose 2,6 BP, AMP, ATP, and Phospho-enolpyruvate. Due to the large number of binding sites to be mutated, the most efficient method of site directed mutagenesis must be determined. Various methods to achieve mutation of PFK were used. The first method involves mutagenesis of circular double stranded DNA through the use of a mutagenic oligonucleotide. A second method involves inserting mutations into restriction marker sites of the double stranded plasmid. The third strategy for site directed mutagenesis involves cloning the gene for PFK into a vector that will yield circular single stranded DNA. Mutagenesis is expected to be more efficient with the use of single stranded DNA. A fourth method involves mutating both the non coding and coding strand of the circular double stranded plasmid with two complementary mutagenic oligonucleotides. Further goals of the research are to analyze the protein created by a mutation of PFK and to compare its kinetic activity to that of wild-type PFK. This information will give us a better understanding of the tertiary and quaternary structure of the enzyme.
4 KINETIC CHARACTERIZATION OF RECOMBINANT MUTANT HUMAN LIVER PHOSPHOFRUCTOKINASE
Randy Willink and Dr. Trujillo

The regulation of carbon flow through the metabolic pathway of glycolysis is an important function of the liver L type isozyme phosphofructokinase-1 (PFK-1). This enzyme catalyzes the phosphorylation of fructose-6-phosphate to fructose-1,6-bisphosphate via ATP with magnesium ion required for catalysis. PFK-1 is also intimately tied to the regulation of gluconeogenesis at the enzyme fructose-1,6-bisphosphatase. PFK-1 is allosterically regulated by ATP and for the most part, resides in the liver cell in an inhibited state under its influence. Fructose-2,6-P2 and AMP are powerful activators as well as various anions and cations. At present site-directed mutagenesis studies are underway that are designed to map functional regions of the enzyme that involve catalysis, regulation, and structure-fuctional relationships. Initial studies are designed to map the ATP inhibitory site and, from X-ray crystal data, amino acid 470 has been changed from an arginine to a glycine and residue 474 has been changed from a lysine to a glycine. These are presumed to be the putative ATP binding regions that chemically interact with ATP phosphate groups. These mutant enzymes have been kinetically characterized, compared to that of wild type, and the binding constants determined.

5 Recombinant Rat Liver Phosphoenolpyruvate Carboxykinase (PEPCK) in E. coli: Purification and Verification of Expression
Vince N. Montes, Marvin K. Pena-Parson and John Trujillo.
Department of Biology, University of New Mexico.

Phosphoenolpyruvate carboxykinase is an enzyme involved in gluconeogenesis, the metabolic pathway that generates glucose. It is induced when blood glucose levels are low. As blood glucose levels rise, insulin is secreted and gluconeogenesis is halted. In diabetes mellitus, PEPCK is continuously induced due to the absence of insulin or its mechanism of action. Future gene therapy is potentially possible using a designer enzyme of PEPCK that is less active. Thus, a recombinant PEPCK cDNA clone has been constructed on an E. coli plasmid. The clone exists on a plasmid that is regulated by a T7 promoter, allowing experimental control of protein induction. Expression and purification of PEPCK from induced E. coli cells has been accomplished. Verification of this expression has been achieved utilizing three techniques. They include restriction digest of plasmid DNA, Western blot analysis, and spectrophotometric kinetic assay. Current projects include further purification of PEPCK and site-directed mutagenesis of the PEPCK cDNA.

6 DIRECT PROBABILITY MAPPING BY STOCHASTICALLY INDUCED PERCOLATION.
Ethan H. Decker, Peter T. Hraber, Drew Kerkhoff AND Bruce T. Milne

A new method for direct mapping of cover type probabilities was applied to a classified thematic map of Hawaii. Stochastically Induced Percolation (SIP; Milne, in review) uses a noise function to induce a critical probability (à la percolation theory) at any desired target probability on any non-uniform map. Eleven target probabilities (0, 0.1, ... 1) were located with SIP analysis for all four cover classes reported by Zhu and Evans (1994), resulting in a multivariate map of cover probabilities. Maximum Likelihood Estimates in each cell were used to determine which cover type was the most likely to occur in each cell. SIP appears to be an effective tool for mapping cover type probabilities and making spatially explicit inferences about within-pixel information.
THE ROLE OF mioC AND gid TRANSCRIPTION IN INITIATION OF E. coli CHROMOSOME REPLICATION AT oriC. David B. Bates, Erik Boye, Tsuneaki Asai and Tokio Kogoma

CHARACTERIZATION OF THE SNP1 GENE IN NEUROSPORA CRASSA

Allison Errett, Don Natvig and Mary Anne Nelson

The snz1 gene is part of a highly conserved gene family seen in a variety of organisms including prokaryotes, eukaryotes, and archaea. However, the function of the snz genes has not yet been determined. We have isolated the snz1 gene of Neurospora crassa, a filamentous fungus commonly known as bread mold. N. crassa is an ideal organism to study gene function because of a naturally-occurring process known as RIP (Repeat Induced Point Mutations). In the RIP process, duplicated sequences are inactivated during a cross by the introduction of multiple transition mutations. The RIP process is being used to disrupt the N. crassa snz1 gene in order to determine its function. An extra copy of the snz1 gene was introduced into Neurospora by transformation, and the transformed strain was put through a cross. Progeny strains, which are potential snz1 mutants, are being examined for growth defects. Sequencing of the snz1 gene is being used to identify the specific point mutations. Expression analysis is under way to determine when snz1 RNA is being made. In addition, the relationship of snz1 to an adjacent highly conserved gene, sno, is being examined.

CHARACTERIZATION OF THE NEUROSPORA CRASSA SNO GENE

Erin Heinemeyer and Mary Anne Nelson

Two related gene families, snz and sno, have recently been found in Neurospora crassa. They are both highly conserved throughout evolution and have been found in fungi, bacteria, archaea, and plants. The two genes are often co-regulated and transcribed from the same promoter. Such conservation of genes and their coordinate regulation between kingdoms is rarely seen, suggesting that these genes participate in a common important role. However, the function of these genes has not yet been determined.

The sno gene of N. crassa has been identified and sequenced. A natural process called Repeat Induced Point mutation (RIP) in N. crassa is being used to create a sno mutant. After insertion of an extra gene by transformation, N. crassa mutates both copies during the sexual cycle. A strain of N. crassa was transformed with the sno gene and crossed to activate the RIP process. The progeny will be analyzed in an attempt to determine the function of the sno gene product. The expression of the sno gene in wild type and mutant strains grown under various conditions is also being analyzed.
10 The Neurospora Genome Project at the University of New Mexico
Anne Marie Armijo, Laura Bean, Eldon Blueyes, Maranita Gorman, Jennifer Ortega, John Peres, 
Robert Trujillo, Joseph Valentine, Sheila J Yazzie, Patricia L. Dolan, Pascale M. Leonard, Seogchan 
Kang, Mary Anne Nelson, Donald O. Natvig

Neurospora crassa is a filamentous fungus containing a haploid genome. Its life cycle consists of 
a mycelial stage (filamentous growth under favorable growing conditions), asexual development 
(formation of conidia) and sexual development (generation of sexual progeny, ascospores, within a 
fruitlet body or perithecial). Neurospora has long been an important model genetic organism, and its 
value as a model system is increasing, in part because of the need for understanding the biology of 
fungal pathogens.

The Neurospora Genome Project (NGP) at the University of New Mexico is a student-based 
project currently focused on the sequencing and characterization of expressed genes (ESTs). Three 
cDNA libraries (mycelial, conidial, and perithecial) have been constructed to identify the expressed 
structural genes and to analyze the expression patterns in different tissues. Clones from these 
libraries are being sequenced with an ABI 377 automated sequencer. Sequences are submitted to the 
GenBank database for homology searches. Currently, the NGP goal is to sequence and characterize five 
thousand cDNAs within three years. In addition to enhancing knowledge in the field of Neurospora 
genetics, the NGP provides a unique undergraduate training program in molecular biology.

11 Preferentially expressed genes from the sexual stage of Neurospora crassa.
Patricia L. Dolan, Donald O. Natvig, Mary Anne Nelson

Neurospora crassa, a heterothallic filamentous fungus, undergoes a complex pattern of sexual 
development to form the peritheceum (fruiting body) composed of several kinds of specialized tissue. In the Neurospora Genome Project (NGP) at the University of New Mexico, expressed sequence tags 
(ESTs) corresponding to three stages of the life cycle of Neurospora crassa (conidial, mycelial and perithecial) are being analyzed. Results of this pilot project identifying genes preferentially expressed 
during the sexual phase are presented. 557 partial complementary DNA (cDNA) sequences for 425 
perithecial clones were determined using single-pass sequencing. For 29.5% of the sequences, highly or 
moderately significant matches to sequences in the NCBI database were detected. Approximately 59.2% 
of the ESTs correspond to previously unidentified genes. Genes involved in secondary metabolism were 
found only in mycelial and perithecial tissues. Genes encoding products required for transport were 
found primarily in mycelial and perithecial tissues. The majority of the genes from all three tissues 
were involved in metabolism or protein synthesis. In addition, the serial analysis of gene expression 
(SAGE) technique is being used to generate more extensive and precise information about mRNA 
abundance at different stages of the Neurospora life cycle.

12 Differential sites of polyadenylation in Neurospora crassa
Robert Trujillo, Seogchan Kang, Donald O. Natvig, and Mary Anne Nelson

Post-transcriptional processing of pre-mRNA involves excision of introns, 
addition of a 5' cap, and trimming near the 3' and followed by addition of a 3' 
poly-A tail. It is this 3' polyadenylation that is the focus of this research.

In the Neurospora Genome Project (NGP) at UNM, the sequences of many ESTs 
(expressed sequence tags, corresponding to mRNAs) have been determined. We have 
used this database to examine sites of polyadenylation. Repeatedly-isolated 
clones that encode products of known identity were selected for analysis. Precise 
sites of polyadenylation were determined for the entire set of sequences, and ESTs 
derived from single genes were compared among themselves. Eighteen sets 
composed of 154 clones were analyzed. In many cases, evidence for differential 
sites of polyadenylation was obtained. We are currently attempting to identify 
consensus sequences specific to sites of polyadenylation.
13 CHARACTERIZATION OF NOVEL GENES OF NEUROSPORA CRASSA.
Tom Cushing and Mary Anne Nelson.

Through analysis of the Neurospora Genome Project's cDNA sequence database, three cDNA clones were identified which seem to be specific to the sexual reproduction stage of Neurospora crassa, a multinucleated, filamentous fungus commonly referred to as "bread mold." An internet homology search, using the BLAST algorithm, showed that one of the cDNA clones probably encodes a polyketide synthase, a classic secondary metabolite producing enzyme (although Neurospora crassa was not thought to carry out secondary metabolism). No homologs for the other two cDNAs were identified, indicating that they encode novel (as yet undescribed) genes. We are employing a multi-faceted approach to characterize the three genes. A reverse-genetic approach is being used to disrupt the genes to ascertain if they play essential roles in development. Sequence analysis to determine the structures of the entire genes is underway. Finally, Northern analysis is being used to define the pattern of expression of the genes in wild type and mutant strains during vegetative growth and sexual development.

14 THE FUTURE DIRECTION OF THE NEUROSPORA GENOME PROJECT
Laura E. Bean, Mary-Anne Nelson, and Donald O. Natvig

The Neurospora Genome Project is an undergraduate research program that studies the expressed genes of the filamentous fungus, Neurospora crassa. Genes expressed in three tissue types are analyzed by single pass sequencing. The sequences obtained are called Expressed Sequence Tags (ESTs). This project has progressed rapidly, and now new techniques are being explored: 1) The complementary DNA (cDNA) library is being screened by hybridization to eliminate repetitive clones. 2) The use of 96-well plates is being investigated, so as to replace individual culture tubes. 3) The accuracy of the ESTs was determined by comparing specific sequences with previously characterized Neurospora genes in the database.

In the future, the Neurospora Genome Project will collaborate with Dr. J. Arnold at the University of Georgia to map the sequenced ESTs onto the seven chromosomes of N. crassa.

15 Regeneration Response of Three Cacti to Picloram and Kinetin in Murashige and Skoog's Medium.
A.R. Heilman, Dr. G.V. Johnson, Advisor

Tissue culture is a promising approach to the propagation of rare and endangered plant species. Explants from three rare or valued cacti, Sclerocactus mesae-verdae, Aztekium ritteri, and Uebelmannia buiningii, were cultured on Murashige and Skoog's medium with 0.83 uM picloram and 46 uM kinetin. Both A. ritteri and U. buiningii produced shoots while S. mesae-verdae produced large masses of callus. Calluses and shoots were subsequently transferred to fresh medium with kinetin alone. U. buiningii shoots developed a brownish reddish coloration and additional shoots. A. ritteri shoots developed a bulbous bright pink to red mass on the cut end with several new shoots emerging from this mass. The callouses of S. mesae-verdae also developed a dark reddish brown coloration. This occurred without further growth or differentiation. Root induction experiments are in progress.
The Ecological Role of Cryptogamic Crusts Across a Creosotebush-Grassland Ecotone in Central New Mexico

Elisheva Crowell and Dr. Gordon V. Johnson

Cryptogamic crusts are able to fix nitrogen when they contain cyanobacteria. Such nitrogen fixing crusts are present in the grasslands of the Sevilleta LTER. We are interested in comparing differences in crust components, crust cover, the nitrogen fixation potential of the crusts and the effect on soil across a Creosotebush-Grassland ecotone at the Sevilleta LTER. Our results indicate a difference between crust cover in the grasslands and in the creosotebush; cover in the ecotone between them is variable. The nitrogen fixation potential of the crusts in the grasslands is larger than that of the creosotebush habitat, and the fixation potential in the ecotone is variable. The soil analyses indicate differences in soil texture and soil nitrogen, and there are differences in the amount of organics present as measured by the presence of chlorophyll. The information obtained from this investigation provides insight into the ecological role of cryptogamic crusts in desert grasslands, particularly with respect to their role in soil maintenance and stability in a desert grassland that is undergoing the process of desertification.

The Effects of Iron Deficiency on Nitrogen Fixation in Soybeans

Cecilia Pike and Gordon Johnson

Iron has many functions in plant metabolism and is especially critical for nodule development and symbiotic fixation of dinitrogen. The effect of iron deficiency on soybean (Glycine max) growth and nitrogen fixation were explored in this investigation. Plants were grown hydroponically and inoculated with Bradyrhizobium japonicum with various iron concentrations. Chlorophyll content, root biomass, and shoot biomass were decreased by iron deficiency. Nodule number and mass were also significantly reduced by inadequate iron. Iron deficiency also limited the number of nodule initials, suggesting a role for iron in the initiation of the infection process. Nitrogen fixation, as measured by the acetylene reduction procedure, decreased with iron deficiency stress.

PERSONALITY AS AN ADAPTIVE PSYCHOLOGICAL MECHANISM IN HUMANS

Matt Deller

This study’s purpose is to examine the relationship between personality traits and an individual’s level of developmental instability. Using fluctuating asymmetry as a marker of developmental instability, we would predict that personality differences such as introversion and extroversion have evolved as an aspect of cognitive ability to complement various degrees of fluctuating asymmetry. This study will also incorporate a new method in measuring facial asymmetry using shape analysis.
POSTER ABSTRACTS

19 JUNCTIONAL DIVERSITY AT THE IMMUNOGLOBULIN HEAVY CHAIN LOCUS IN THE SHORT TAILED OPOSSUM, Monodelphis domestica.
Michelle Y. Pricer, George H. Rosenberg, and Robert D. Miller

Junctional diversity is generated by the addition and deletion of nucleotides in the V(D)J junctions during lymphocyte development and contributes significantly to heterogeneity in the antibody repertoire. Additional nucleotides are added by the enzyme terminal deoxynucleotidyl transferase (TdT). In placental mammals, TdT expression is low or absent in fetal and neonatal lymphocytes resulting in limited junctional diversity at this time of development. TdT expression in humans and mice appears around the first week after birth with a concomitant increase in junctional diversity.

Marsupials are born at the same developmental stage as an 8-week or 13 day human or mouse embryo respectively. This is the point in placental mamma ontogeny when lymphocyte development is first detectable. In contrast to placental mammals, lymphocyte development is initiated entirely postnatally.

We wished to determine whether marsupial B cell ontogeny followed a similar pattern of development, initially lacking N region additions, as seen in placental mammals. Using the short-tailed opossum, Monodelphis domestica, as a model marsupial, we analyzed the CDR3 regions of expressed heavy chain sequences. Using primers specific for the FWR3 region of the dominant V family used by Monodelphis and the first constant region domains, CDR3 regions were amplified and sequenced from >60 clones. This analysis will contribute to our understanding of the generation of antibody diversity.

20 INJURY-INDUCED PLASTICITY IN AN AUTONOMIC PATHWAYS.
R. Galindo, F. Harji, J. Gonzales and W.G. Dail

Autonomic ganglia offer the opportunity to study the mutability of the nervous system consequent to injury. Injury to the spinal cord induces significant changes in the biochemistry and morphology of neurons such as, the activation of transcription of different substances that aid in the processes of axonal growth and synaptic proliferation. The pelvic ganglion, an association of neurons that govern visceral tissues involved in eliminative and reproductive functions, has been studied as a model for injury induced plasticity. For this reason, we have undertaken a series of approaches whereby the parasympathetic or sympathetic input to pelvic ganglia has been interrupted (decentralized). Partial decentralization enhances sympathetic-induced penile vasodilation. In addition, there is a partial restoration of synaptic input to pelvic neurons following chronic parasympathetic decentralization. Whether the restoration of synapses to pelvic neurons is causally related to the enhance vasodilatory response in the partially decentralized ganglia is being studied.


The rat pituitary intermediate lobe is innervated via the periventricular hypothalamic neurons which forms synapses which release proopiomelanocortin (POMC) peptides. It has previously been shown that there is Synaptophysin (SN) present in the rat pituitary via immunohistochemistry. Here, it is shown that when Sprague Dawley rats are injected via the tail vein with 6-hydroxydopamine 150mg/kg, the nerve terminals are denervated. Halothane anesthetized animals were perfused intracardially at one week and three weeks after injection. Sections were immunostained for SN with monoclonal antibody from Boehringer-Mannheim (dilution 1:50). At one week after injection, the animals treated with 6-OHDA had a reduced intensity of SN presence in both intermediate lobes and neural lobes, in comparison to the saline injected control animals. Three weeks after injection, all animals showed nearly the same amount of intensity in both lobes, although some 6-OHDA animals showed less SN immunoreactivity. These results imply that 6-OHDA-induced degenerative changes lead to loss of synaptic vesicles and reduced SN protein at nerve terminals. Support: NIH GM-52576.
POSTER ABSTRACTS

22 DISCOVERY OF A PUTATIVE ANTI-BACTERIAL PEPTIDE ENCODING GENE IN THE GASTROPOD Biomphalaria glabrata.
Peter A. Doucette, Pascale M. Leonard, Coen M. Adema and Eric S. Loker

The genes functioning in internal defense in invertebrates remain poorly characterized. A relatively new approach for identifying such genes, one that is made possible by the advent of automated sequencing procedures, is to sequence at random clones from cDNA libraries derived from organisms of interest. A specific long-standing interest of our lab is to identify at the molecular level components of the internal defense systems of snails, particularly ones involved in the response to infection with digenetic trematodes. A cDNA library derived from mRNA extracted from Biomphalaria glabrata at 4 days post-infection with the digenetic Echinostoma paraensei was used as a source of clones to be sequenced. One such clone was found to contain considerable homology to cecropins, a family of antimicrobial peptides thus far identified only in insects and mammals. Cecropins are known to be important inducible components of the internal defense systems of insects. They may also be involved in the response of insects to macroparasites, so the putative cecropin found in B. glabrata may represent part of its response to digenem infection. Southern hybridization revealed the presence of at least two cecropin-like sequences in the B. glabrata genome. Further studies are underway to characterize the inducibility of snail cecropin genes. Classical methods for identifying immunologically relevant genes and their products are labor intensive. The approach outlined here greatly simplifies this task. (Supported by NIH grant A12340 and funding from the Howard Hughes Medical Institute)

23 PATTERNS OF LIFE FORM CHARACTERISTICS OF THE FLOWERING PLANTS OF HAWAII

Jane Mygatt

Data from the Manual of the Flowering Plants of Hawaii was used to score the presence or absence of native and exotic flowering plants for 19 islands in the Hawaiian archipelago. I analyzed the data to determine characteristics and vulnerability of native species, and characteristics and patterns of invasion of exotic species. There is a significant positive relationship between number of native and introduced species. Nine of 19 islands have a greater number of introduced than native species, including the four largest islands. The four largest islands also have the greatest numbers of extinct, endangered, rare and vulnerable species. There were positive correlations between the number of introduced versus extinct species, and the number of introduced versus endangered, rare and vulnerable species. Native species are predominantly perennial or arborescent, while exotic species are predominantly herbaceous with many annuals represented. Exotic introductions have doubled the flora and are more widespread than native species. Native species are increasingly vulnerable due to a high degree of single island endemicism, small population size and the lack of a rescue effect. It appears likely that exotic species will out-compete native species, in part, due to the decreased opportunity of a rescue effect for single island endemic species.

USING GREEN FLUORESCENT PROTEIN FROM THE JELLY FISH AEOUOREA TO DETERMINE THE SUBCELLULAR LOCALIZATION OF SNZ PROTEINS

S. Atencio, P. Padilla, and M. Werner-Washburne, Biology Department, University of New Mexico

Our lab is interested in gene expression in response to starvation. We use the model eukaryotic system, Saccharomyces cerevisiae, to study this stress response. We have identified a highly conserved gene family designated the SNZ gene family. It appears that this gene family may play a role in a response to starvation. My project has been to determine the subcellular location of members of the SNZ family. To determine subcellular location of Snz3p, it was fused to the green fluorescent protein from the jelly fish Aequorea which acts as a marker. Two constructs were made. A fusion protein of Snz3p-GFP under the Gal-1 promoter was designed (for synthesis of large amounts of Snz3p-GFP) and a Snz3p-GFP fusion protein regulated by the SNZ3 promoter (to obtain more physiological concentrations of the protein). Results have shown that the expression of the Snz3p-GFF fusion protein was not detrimental to yeast cells and this fusion, whether present at normal or high concentrations, was not localized to the nucleus or to the vacuole. An intracellular lipid dye, nile red, was used to compare localization of Snz3p-GFP with that of lipid vesicles. During this experiment, it was shown that SNZ mutants have a different accumulation and distribution of lipid particles. Further analysis has shown that the mutants contain more sterols than do wild type cells from growth to stationary phase.
25 
Social Memory in Prairie Voles (Microtus ochogaster): Selective Ability to Recall Scent Information
Michelle K. Schmick, Ray L. Woodward, Jr. & Michael H. Ferkin University of Memphis, Department of Biology, Division of Organismic Biology, Memphis, Tennessee 38152

Abstract. The process whereby animals deposit chemical signals to communicate individual identity, delineate territorial boundaries, and announce status is called scent marking. Animals often encounter scent marks deposited by their conspecifics while out searching for a mate, foraging, establishing a territory, among other daily activities. Despite the generality of scent marking, little is known about the ability of an individual to recognize, remember, and recall a familiar scent that the organism has come into previous contact with. This study was designed to test the selective memory capabilities of male and female prairie voles under long-photoperiodic conditions. Specifically, I documented the amount of time that each subject investigated the top-deposited scent in a scent overmark that was deposited by opposite sex conspecifics. A latency of twelve hours increments of time preceded subsequent tests. The data indicate that female prairie voles are unable to discriminate between two overlapping scents after twelve hours. Male prairie voles retain the ability to recognize the familiar scent in an overmark for up to thirty-six hours after initial exposure. These results suggest that the distinctive information encoded in a male-deposited scent mark may not be intended to convey long-term information to female conspecifics. Perhaps male scent marks are deposited to communicate territory boundaries to other males. The information encoded in female-deposited scent marks, on the other hand, might convey more long-term information to male conspecifics such as age and sexual receptivity.

26 
COMPETITION BETWEEN FLOODPLAIN TREE SPECIES: A NATIVE COTTONWOOD (Populus fremontii) WITH EXOTIC SALT CEDAR (Tamarix chinensis). Anna A. Sher, AND D. L. Marshall

Competitive exclusion is often invoked to explain the displacement of native plant species by exotics. However, research often shows natives to be competitively superior. To investigate this apparent paradox, I conducted research to define the competitive relationship between a native (Populus fremontii) and exotic (Tamarix chinensis) tree species. The decline of native Populus in the American southwest has been blamed in part on the invasion of Tamarix. Replacement series were constructed at three densities, and competitive response was measured in terms of total biomass, height, and tissue nitrogen and phosphorous. Populus had a greater competitive effect on inter and intraspecific neighbors at medium and high densities as reflected by lower total biomass and mean heights. Tissue concentrations of nutrients revealed similar patterns. The results of this experiment suggest that competitive superiority of the native may explain field observations of Tamarix mortality among dense Populus stands. Tamarix has gained dominance in the middle Rio Grande floodplain since the cessation of flooding. If the hydrology of the river were restored, this research indicates that Populus establishment could easily occur in the presence of the exotic.

27 
HYPOXIA-INDUCED DECREASES IN BODY TEMPERATURE IN THE LIZARD: ROLE OF PUTATIVE REPTILIAN δ-OPIOID RECEPTORS. R. Silva and G. M. Malvin. The Lovelace Institutes, Albuquerque, NM 87108

Hypoxia decreases body temperature (Tb) in numerous organisms. This thermoregulatory response prolongs hypoxic survival, but little is known of the mechanisms involved. In mice, δ-opioid receptor stimulation appears to mediate the protective thermoregulatory effects during hypoxia (Mayfield & D'Alley: J. Pharmac. Exp. Therapeut, 268:683, 1994: Boleti et al. Anesth. Analges, 82:1237, 1996). In previous studies on different animals and even protozoans, we showed that non-specific opioid receptor antagonists attenuate hypoxia-induced reductions in Tb. We tested the hypothesis that stimulation of putative reptilian δ-opioid receptors help mediate the hypoxia-induced decrease in Tb in the lizard Anolis carolinensis. Tb changes of an ectotherm are an accurate index of thermoregulatory set point. Thermoregulatory set point in mammals is difficult to assess.

Lizard Tb in a thermogradients (10 to 45°C) was measured continuously with a cloacal thermocouple. During normoxia, Tb was 29.5 ± 1.1°C. Hypoxia (4% O2; 6 h) caused Tb to fall 7.4 ± 0.5°C (p < 0.001). A mammalian δ-opioid receptor antagonist, naltrindole (90-250 μg/kg i.p.), had no effect on normoxic Tb nor the Tb response to hypoxia (p > 0.3). During normoxia, the mammalian δ-opioid receptor agonist, [D-Pen2, D-Pen5]-enkephalin (100μg/kg, s.c.), mimicked the thermoregulatory response to hypoxia.

We speculate that beneficial hypoxia-induced reductions in lizard Tb is mediated by an opioid receptor that may be similar, but not identical, to a mammalian δ-opioid receptor.

Supported by NIH grants HL 38942 and HL 07758.
28 Thermoregulatory Behavior of the Tenebrionid Beetle. Hannah Johnson, Dr. Eric Toolson.

Many studies have been published on the thermoregulation of arthropods. They have shown the effectiveness of many species to maintain their body temperatures within a narrow range. This includes members of the Tenebrionidae family. We aimed to provide a better understanding of this thermoregulatory behavior of the Tenebrionid beetle by using a thermal gradient to collect data on preferred body temperature. Thermal preference was then observed after injection of bacterial extract. It is suggested that the ectotherm will produce a behavioral fever in which the beetle chooses a higher temperature in the gradient.

29 DETERMINING FEMALE MATE CHOICE WHEN GIVEN A CHOICE OF LONG FIN VS. SHORT FIN MALES, AND FRAYED FIN VS. INTACT FIN MALES IN SIAMESE FIGHTING FISH (Betta splendens)

Claudette M. Sandoval and Dr. Astrid Kodric-Brown

Four experiments were conducted to determine distinct cues displayed by males when primed females are choosing a mate. A sample size of 20 females is tested sequentially with 20 unique male pairs: 1) long fin vs. long fin, 2) long fin vs. short fin, 3) long fin vs. long fin, 4) frayed fin vs. intact fin. Data was collected for female preferences, and measured in total time spent with each male. Selected male fins were modified and measured for comparisons. Data was analyzed to show a relationship between female preferences and male fin characteristics.

30 RNA SEQUENCE COMPOSITION AND THE DYNAMICS OF SELF-ASSEMBLY.

Peter T. Hraber, Erik A. Schultes, AND Thom H. LaBean.

Given the combinatorial vastness of sequence space, searching for novel catalysts is difficult. We present a way to search for ribozymes based on coarse-graining sequence space by nucleotide composition. This technique allows us to identify catalytic "hot-spots" in sequence space.

The evolution of functional sequence from random sequence pools is analogous to the adaptation of RNA catalysts from mesothermal to hyperthermal conditions. As the molecules become adapted to a specific task they acquire more stable conformations than random sequences.

To apply this concept, we show that natural sequences satisfy the principle of minimum frustration in the folding process. Natural sequences have greater base-pairing and smoother folding energy landscapes than average sequences of the same base composition.

Using combinatorial and energy minimization models, we can map the distribution of folding properties in composition space and identify compositions most likely to yield ribozymes under evolutionary search.
31 DESERT GRASSLAND RESPONSES FOLLOWING LIVESTOCK EXCLUSION ON THE SEVILLETA NATIONAL WILDLIFE REFUGE, NEW MEXICO.
Daniel E. Ryerson, AND Robert R. Parmenter

Responses of plant communities to the exclusion of livestock vary widely, due to variation in plant species composition, soils, and climate. In this study, we evaluated vegetation community changes in six vegetation types on the Sevilleta National Wildlife Refuge over a 20 year period following livestock removal in 1973. Thirty line transects were established and sampled by the Bureau of Land Management within and around the SNWR in 1976. Transects had been resampled in 1986, and we resampled them in 1996. Repeated measures ANOVA of percentage cover measurements showed no significant overall changes in total grass and shrub cover, either inside or outside the refuge; however, there was an overall increase in forbs and litter. At the community level, significant changes in species composition were observed; snakeweed shrubs (Gutierrezia sarothrae) decreased in cover, while black grama (Bouteloua eriopoda) grass cover increased. Each grassland community exhibited varying degrees of change, with black grama communities being the most dynamic. Areas outside the refuge, which were subjected to continuous grazing, showed similar responses to areas inside. On this study site, climate dynamics appeared to be the major influence on vegetation change.

32 THE LATITUDINAL GRADIENT OF DIVERSITY IS MORE THAN SPECIES RICHNESS
Dawn M. Kaufman

The latitudinal pattern of richness is pervasive—spatially, temporally, and taxonomically. Yet, 30 years of intensive research have yielded no general explanation for the pattern. I contend that this lack of progress is caused primarily by the fact that the 20+ existing hypotheses are not falsifiable because they only predict the known pattern. Therefore, I proposed an abiotic-biotic hypothesis (Kaufman,1995) that invokes a combination of limiting abiotic factors (most important at high latitudes) and biotic interactions (most important in the tropics). This mechanism predicts differences in the richness-latitude pattern between the temperate zone and the tropics. In addition, the abiotic-biotic hypothesis predicts that several other phenomena besides species richness vary in concert with latitude. These phenomena include species' range size (positive relationship with latitude; Rapoport's rule), level of dominance of the most common species (positive), and range characteristics such as the variability of the edge (negative). The above patterns have been found and corresponding data will be presented as integral parts of an integrated explanation of the latitudinal pattern of diversity.

33 Deficits in Phosphatidylinositol-specific Phospholipase C are involved in Fetal Alcohol Exposed Neurobiologic Defects.
Ed Weeber

Prenatal alcohol exposure produces multiple defects in the neurobiological mechanisms underlying the induction and maintenance of long term potentiation (LTP), an experimental model for learning and memory, in the hippocampus and medial frontal cortex. Deficits in LTP seen in fetal alcohol exposed (FAE) rats are dependent, at least in part, upon changes in the functional integrity of the metabotropic glutamate receptor - phosphatidylinositol-specific phospholipase C (PLC) signaling system. We have determined the distribution and activities of PLC-β isozymes in rat brain and compared PLC-β activities of FAE, pair fed control and ad libitum rats in the hippocampus and medial frontal cortex.
The Department of Biology at the University of New Mexico offers excellent opportunities for education and research in many areas of modern biology: botany, cell biology, evolution, ecology, microbiology, molecular biology, physiology, and zoology. The Department is the largest academic unit on the UNM campus, with 34 full-time faculty members, more than 800 undergraduates, and approximately 110 graduate students.

Outstanding facilities for undergraduate and graduate research are available on and off campus. The department is housed in three buildings: Castetter Hall, Marron Hall, and the Biology Department Annex. A full range of computer facilities are available for all students, faculty, and staff. The Milne Landscape Ecology Laboratory supports a computer facility for students and faculty who are researching relationships between spacial patterns and processes in ecological systems. Newly remodeled molecular biology laboratory assists teaching and research for faculty, students and staff using state-of-the-art equipment for sequencing and synthesizing DNA. Additional specialized laboratory facilities are found at the University Medical Center and the Lovelace Institute in Albuquerque. The Sevilleta LTER Field Station at the Sevilleta National Wildlife Refuge 80 km south of Albuquerque, includes housing as well as a laboratory and computer facility. A newly constructed research greenhouse was recently built with funds from the NSF. The Museum of Southwestern Biology has an excellent collection of plants, invertebrates, fish, amphibians, reptiles, birds and mammals. Students and faculty also conduct research at field sites throughout the Southwest and Rocky Mountain Region, and in the Gulf of California. Field project are often undertaken even further afield, in Latin America, Australia, Africa, and the Antarctic.

**Undergraduate Research Programs**

We encourage undergraduates to participate in research. The possibilities range from volunteer work, work study, and non-work study jobs, to independent research projects. Students can arrange research projects with individual faculty members or they may in one of several research programs. Several of these programs are striving to attract minorities and women in an effort to benefit students of all ethnic backgrounds and underrepresented groups. Independent research through any of these programs can lead into our departmental honors program.

**Graduate Programs in Biology**

Master's and doctoral degrees are offered at the Department of Biology at UNM with emphases in the areas of arid land ecology, behavior, behavioral ecology, botany, cellular and molecular biology, community ecology, ecosystem ecology, evolutionary biology, invertebrate zoology, microbiology, parasitology, population biology, and vertebrate zoology. The Department offers excellent opportunities for graduate education and research in many areas of modern biology. The research degree is the heart of the graduate program. The department offers the Ph.D., M.S. (I), and M.S. (II) degrees. M.S. (I) is a research degree with the same philosophy as the Ph.D. It is not a prerequisite of the Ph.D., but may lead to work on that degree. The M.S. (II) is not a research degree and normally does not lead to work in the doctoral program. It is intended primarily for individuals who wish to supplement their baccalaureate programs with additional course work.

Further information about all Biology programs can be obtained from the Departmental Main Office:

Department of Biology
The University of New Mexico
Albuquerque, NM 87131-1091
505/277-3411
http://biology.unm.edu
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APPENDIX K

DEPARTMENTAL

SEMINAR

SERIES

Dr. Eric L. Charnov, Professor of Biology, University of Utah, “Scaling and Invariance Rules in Evolutionary Ecology,” September 12, 1996.

Dr. Jon Harrison, Professor of Zoology, Arizona State University, “Acid–Base Homeostasis and the Design of Insect Respiratory and Alimentary Systems,” September 19, 1996.

Dr. Mark Winey, Department of Molecular, Cellular and Developmental Biology, University of Colorado—Boulder, “The Role of Mps1 Kinase in Yeast Cell Cycle Control,” October 10, 1996.


Dr. Scott Snyder, Sloan Postdoctoral Fellow, Department of Biology, The University of New Mexico, “Behavioral Basis of Host Specificity Among Species of Frog Lung Flukes,” November 21, 1996.


Dr. Ken Schoenly, Professor of Biology, International Rice Research Institute, “Biodiversity Issues and Invertebrate Community Structure of Tropical Rice Ecosystems: Theoretical and Practical Considerations,” December 12, 1996.

Dr. Elizabeth Zimmer, Principal Investigator, Smithsonian NMNH Lab of Molecular Systematics, “Ribosomal Gene Tracers of Plant Molecular Evolution,” January 30, 1997.


Dr. Sharon Emerson, MacArthur Fellow, Department of Biology, University of Utah, “Sex and the Single Frog (in Borneo),” February 13, 1997.

Dr. James Ehleringer, Department of Biology, University of Utah, “Monsoons, Climate Change, and Plant Distributions,” February 27, 1997.


Dr. Samuel McNaughton, Department of Biology, Syracuse University, “Process Dynamics and Organization of Terrestrial Grazing Ecosystems: Serengeti and Yellowstone,” March 13, 1997.


Dr. Michael P. Yaffee, Department of Biology, University of California–San Diego, “Mechanisms of Mitochondrial Inheritance,” March 27, 1997.

Dr. Ann S. Evans, Department of Biology, The University of New Mexico, “What is Seed Dormancy? An Evolutionary Perspective,” April 3, 1997.


Dr. Deborah Goldberg, Department of Biology, University of Michigan, “Community-level Consequences of Competition in Plants,” April 10, 1997.

APPENDIX L

BSNM
ANNUAL
NEWSLETTER,
Vol. 12, MAY 1997
OUR DEPARTMENT had another exceptional year despite the budgetary problems experienced by UNM. We added two new assistant professors, Drs. Scott Carroll and Gretchen Hofmann; Dr. Jennella Love also joined the department as a Research Assistant Professor. We also experienced increased enrollment, increased extramural funding, continued research productivity, and expanded success in development and enhancement of our core facilities. In fact, the department was first in the college in number of outside grant dollars and generated almost 20% of the student credit hours for Arts and Sciences. The scholarly activities of our faculty during the past year resulted in the publication of eight book chapters, 48 articles in scholarly journals, five popular articles and 56 abstracts; invited seminars and plenary presentations were given by UNM biologists at 67 institutions.

Outside funding for research and teaching programs continued its upward trajectory. Grant dollars increased by 16.3%, with expenditures of almost five million dollars from outside sources. Unfortunately, the staff needed to process this increased workload has remained essentially constant. Among our new projects with major funding was the National Long-Term Ecological Research Network Office, a National Center for Emerging Viruses, and a new MBRS grant. The department also has been awarded significant space in the old bookstore adjacent to Castetter Hall, and Drs. T. Lowery, R. Parmenter, H. Snell and T. Yates have been awarded two NSF grants totalling 1.3 million dollars to support its renovation. All of our undergraduate and graduate programs have continued to flourish.

Success in recent hirings, student recruitment and retention, in research productivity, at acquiring outside financial support, and the extraordinary efforts of our faculty, staff, students and friends have done much to strengthen our capacity to meet a steadily increasing demand for education in Biology at UNM. Given a consistent lack of adequate support through the funding formula, however, our resources, both human and financial, remain inadequate to keep pace with the demand. Your support of the Department is more important now than ever.
Geologists in the Department of Biology?
(or the Legacy of 61A Castetter Hall)

On October 1, 1996, the Department of Interior's National Biological Service (NBS) was transferred to the U.S. Geological Survey (USGS) and renamed the Biological Resources Division (BRD). Although this action has resolved a variety of vexing bureaucratic concerns, it may baffle occupants of the Biology Department who share space with these former employees of NBS and who were just getting used to the name "National Biological Service." Others are wondering if "geologists" really are in the Biology Department. To put things in perspective, it is useful to go back 22 years when this whole drama unfolded.

In 1974, Norman J. Scott came to UNM to establish a southwestern field station of the U.S. Fish and Wildlife Service's (USFWS) National Fish and Wildlife Laboratory (NFWL). Norm set up shop in the basement of Castetter Hall in Room 61A, a room previously used by Jim Findley's graduate students, one of whom was Mike Bogan (more on him later). From here, Norm and a cadre of students and field assistants studied and reported on desert ecosystems. Some of these former students who passed through the door of Room 61A may sound familiar: Robert Reynolds, Bruce Woodward, Pat Mehlfouf, Rick Smartt, Sandra Limerick and Charlie Painter. In later years, other temporary technicians and students included Marilyn Altengrabch, Lucy Aquino, Lee Fitzgerald, Randy Jennings, Carol Malcolm and Jim Stuart. In 1981, NFWL merged with the Denver Wildlife Research Center. In 1982, Dr. Tom Fritts came from Tulane University to join the USFWS field station. He soon added a new emphasis to the office (Guam's brown tree snake problem) and together, he and Norm served on graduate research committees, participated in the growth of the Museum of Southwestern Biology herpetology collection, and continued to study southwestern wildlife. Throughout these often hectic years the one person most responsible for maintaining order (and some semblance of sanity) was Rayann Rosino, Secretary and Office Manager. Tom left in 1988 for the National Museum of Natural History, Norm left in 1993 for a California field station, and Rayann left in 1993 for the USFWS (again). This left the door open for a new federal presence in Room 61A.

In 1993, Dr. Michael Bogan and Cindy Ramotnik arrived at the UNM campus, bringing with them a federal collection of 35,000 vertebrates from Fort Collins, CO. Twenty years before, after receiving his PhD from UNM, Mike left Albuquerque to work for the USFWS' NFWL at the National Museum of Natural History in Washington, DC. Who would have guessed that he would return to his alma mater and occupy the very same room he used as a graduate student? Within months of their arrival, Mike and Cindy (and 1,500 other federal researchers) were transferred to a new Department of Interior agency, the NBS. This agency was short-lived, and almost three years to the day, NBS became one of four divisions within USGS. The official name of the office in Room 61A is the Arid Lands Field Station. It is administered by the Midcontinent Ecological Science Center (MESC) in Fort Collins, CO, one of 16 science centers in the Biological Resources Division. MESC is under the leadership of Dr. Rey Stendell.

Currently, the Arid Lands Field Station consists of five permanent employees, Mike Bogan (Project Leader), Cindy Ramotnik (Collections Manager), J.C. Richardson (Office Manager and former employee at El Morro National Monument), Jim Stuart (Wildlife Biologist) and Ernie Valdez (Wildlife Biologist). The staff is supplemented by additional technicians during the field season. Station personnel continue to study wildlife issues in the southwest as did their predecessors. Examples of some current projects include: habitat use of bats in the Jemez Mountains; baseline inventories for mammals in National Parks on the Colorado Plateau; patchsize, biodiversity and wildlife values in fragmented Rio Grande bosque; (continued on the next page)
Fifth Annual Research Day Awards

Last year’s presentations of undergraduate and graduate biology research were held on Friday, March 29, 1996. Fifteen oral presentations were made and 34 poster presentations filled the greenhouse hallway of the Biology building. The organizing committee consisted of Carol Brandt, Claire Carpenter, Amy Ditto, Dr. Astrid Kodic-Brown, Dr. Sam Loker, Dr. George Stevens, Dr. Randy Thornhill and Dr. Terry Yates. Many other Biology faculty, staff and graduate students served as judges of the presentations.

The capstone speaker for the 1996 Research Day was Dr. C.J. Peters, Chief, Special Pathogens Branch, Division of Viral and Rickettsial Diseases, NCID, CDC, who spoke on “Emerging Infections: Filoviruses as an Example.” Dr. Peters has been affiliated with the U.S. Public Health Service: National Institute of Allergy and Infectious Diseases and the Department of Immunopathology: Scripps Clinic and Research Foundation, and has received many honors and recognitions, among them the Surgeon General’s Award, The Legion of Merit, and the Secretary of Health and Human Services Award. Dr. Peter’s research includes the pathogenesis and epidemiology of viral diseases, including Hantavirus and hemorrhagic fevers, the development and testing of anti-viral vaccines, and the genetics and immunology of host-virus interactions.

Financial support for this year’s Research Day was provided by Dr. George Stevens and the National Institutes of Health Minority Biomedical Research Program.

The winners of the oral presentations were:

- **Graduate:**
  - First Place: Diane L. Rowland
  - Second Place (tie): Matthew E. Crawford; Patrick W. Zwartjes

- **Undergraduate:**
  - First Place: Gerald M. Herrera
  - Second Place: Damien T. Scott
  - Third Place: Jason Lett

The winners of the poster presentations were:

- **Graduate:**
  - First Place: David B. Bates
  - Honorable Mention: Scott Burt; Wade D. Wilson

- **Undergraduate:**
  - First Place: James R. Thibault
  - Second Place (tie): T.M. Malecki; Kirsten Meyer
  - Honorable Mention: Anne Marie Armijo, Eldon Blueyes, Marianita Gorman, Jason Mitchell, Joe Valentine, Audrey Wells and Sheldwin Yazzie; Stephanie Atencio; Michela Baca; David C. Quintana

and studies of the effects of forest management practices on the Sacramento Mountain salamander. In addition to studying systematics and ecology of southwestern mammals, Mike is an Adjunct Research Professor in our department and serves on graduate research committees. Cindy oversees and curates the BRD collection of more than 35,000 amphibians, reptiles, birds and mammals, and approximately 500,000 specimens of fishes. The collection includes a unique assemblage of fishes from the Colorado River Basin and mammals from federal lands in the Rocky Mountain–Intermountain West. J.C. has assumed the responsibility of maintaining sanity, Jim provides expertise on mammals and herptiles, and Ernie assists with mammal projects.

Now that the transfer to the USGS is complete, station personnel look forward to devoting their energy to a long, fruitful association with UNM in general, and the Biology Department and the Museum of Southwestern Biology in particular. Drop by Room 61A to say hello and discover for yourselves that these USGS employees are in fact biologists in a “rock-solid” organization. For additional information, check out the MESC home page at http://www.mesc.nbs.gov; the Arid Lands Field Station home page can be found at http://www.mesc.nbs.gov/southwes/arid_lands.html.
THE BIOLOGICAL SOCIETY OF NEW MEXICO

The Hughes Undergraduate Research Program

The Biology Department's Howard Hughes Undergraduate Research Program (HHURP) is currently in its fifth year of the five-year grant. The purpose of this grant has been to increase the number of undergraduate students who pursue postgraduate research education and to encourage careers in the biomedical sciences. This is accomplished by providing hands-on laboratory experience in cellular and molecular biology labs within the department. The program supports student research opportunities during the academic year for UNM students, and a 10-week Summer Research Program for UNM students and students from around the country. Both programs are designed to give students the opportunity to carry out individual laboratory research projects under the supervision of a professor in our department.

There were 180 applications last spring for the 15 positions available during the summer of 1996. Six of those positions were filled by UNM students, and nine other students joined us from colleges and universities in Texas, Iowa, Colorado, Massachusetts, Alabama and Puerto Rico. They also invited a local high school biology teacher to participate. Last summer they had the exciting opportunity to visit the Santa Fe Institute as the guest of Dr. Ellen Goldberg, the Institute's new President, who was previously UNM's Director of Research Administration.

HHURP continues to work closely with the NSF-sponsored Research Experience for Undergraduates (REU) Program, which takes place at the Sevilleta LTER. The HHURP and REU students pay reciprocal visits to one another's study sites to exchange ideas and broaden their scientific scope.

Dr. Joan Gibson, Ethicist with UNM Medical School and Public Policy Group, visited a joint meeting and delivered a talk entitled "Science in Society: Our Work in a Social Context."

At the end of each summer, the Hughes Program and the REU Program host an all-day symposium to give the students of both programs the opportunity to present their research findings in a more formal setting; 26 student researchers participated in this event. Five of the UNM students from last summer have continued their research during this academic year: Tamara Rimsah (Dr. Paul Kerkof), "A Preliminary Study of the Expression of Transforming Growth Factor (TGF-Beta 1) in a Mammary Adenocarcinoma;" Amanda Guth (Dr. Rob Miller), "Molecular Characterization of the Terminal Deoxynucleotidyl Transferase Gene in the Opossum, Monodelphis domestica"; Tom Cushing (Dr. Mary Anne Nelson), "Neurospora Genome Project: Tissue-Specific Gene Expression;" Erin Heinemeyer (Dr. Mary Anne Nelson), "The Neurospora SNZ and SNO Genes;" and Cecelia Pike (Dr. Gordon Johnson), "The Role of Iron in Nitrogen Fixing Soybeans."

In addition to the five students, the HHURP is supporting six more students who are conducting their research in areas of fungal molecular biology and genetics, lymphocyte development, enzyme adaptation, extra-cellular matrix biology, immunology, parasitology and other topics. Dr. Kathryn Vogel continues to serve as Program Director for HHURP and Dr. Gordon Johnson served as the faculty advisor for special projects for the fall semester. All of the Hughes students presented their research findings at the Annual Research Day hosted by the Biology Department at UNM this spring (1997). To date, Biology's HHURP has awarded research opportunities to 82 students. Many of our previous Hughes students are now immersed in graduate education or medical school. In addition to student research support, the program has also been able to provide equipment and technical personnel to allow a hands-on molecular and cell biology laboratory course to be taught every semester and each summer. That course was taught by Dr. Donald Natvig, and during the spring and summer of 1997, the course is being taught by Dr. Paul Kerkof.

In February 1996, Howard Hughes Medical Institute introduced its World Wide Web home-page site (http://www.hhmi.org), which is filled with information about HHMI-supported advances in biomedical research, science education programs, opportunities for students and other related topics. We are also very pleased to announce our own WWW home-page (http://biology.unm.edu/~hughes/Homepage.html), designed and implemented by the Hughes students last spring, in which you will find information on our HHURP, application materials, and information on some of the students who have participated in the program. Please visit both of these sites to learn more about HHMI and the Hughes Program in Biology at UNM. Any inquiries or comments should be directed to Laura Freed, Administrative Assistant, Hughes Research Program, Department of Biology, The University of New Mexico, Albuquerque, NM 87131-1091; e-mail: ljfreed@unm.edu.

May 1997
THE BIOLOGICAL SOCIETY OF NEW MEXICO

MSB Divisions Have Another Properous Year

The Division of Mammals of the Museum of Southwest ern Biology (MSB) has had a very productive past year sparked by growth in key component areas, including the MSB’s Publication Series, and new opportunities in research, particularly on emerging viruses (in the US, South America and Central Europe), bats, and global climate change.

The most significant news concerns breaking new ground—literally. Approvals of space and funding have been made for the renovation of the old UNM Bookstore building, soon to house all MSB and US Geological Survey (USGS) collections, the Sevilleta Long Term Ecological Research (LTER) program, the national LTER network office (which is moving from the University of Washington), the National Center for the Study of Emerging Viruses, and portions of UNM’s Media Arts program. This state-of-the-art museum facility is scheduled to open in the fall of 1998. The planning, renovation and move into the new museum have been funded by National Science Foundation (NSF) grants to Drs. Terry Yates, Howard Snell and Robert Parmenter ($960,000, with matching funds from the University) and another major NSF grant to Drs. Timothy Lowrey and Yates ($313,000). These funds and renovations will help house the more than 1,000,000 specimens of the combined divisions of the MSB.

The Mammal Division again had a banner year in collections development. With the exception of the National Museum of Natural History, this Division has experienced more growth (both in terms of absolute numbers and of relative growth as a percentage of the collection size) than any of the other top 20 museums in the country over the past 10 years! Many thanks are due to the 27 people employed in the division, led by curators Drs. Yates and Michael Bogon, and collections’ managers Dr. William Gannon and Ms. Cindy Ramotnik. Dr. Yates’s research program can be accessed through the World-Wide Web at http://biology.unm.edu/~tyates. The Museum’s web page may be accessed at http://sevilleta.unm.edu/msb/msb-home.html. The Mammal Division’s Hantavirus Research Program has been subsumed into the newly established National Center for the Study of Emerging Viruses, a new initiative funded by the National Institutes of Health (NIH). Other major initiatives in Hantavirus research also continue in cooperation with the Indian Health Service, the Centers for Disease Control & Prevention, and the NIH. The Hantavirus program personnel have been sampling the mammalian biota of New Mexico for five years now; to date, they have logged more than 90,000 trap nights, with over 8,000 captures of 24 different species of mammals.

The former National Biological Service offices were transferred from the Department of the Interior to the USGS, and their name changed to Biological Resources Division (BRD) (see “Geologists in the Department of Biology?” this issue). Transfer problems slowed the planned integration of the BRD’s important regional collections with those of the MSB; we hope to begin rapid integration of the two collections soon. Further information about the BRD may be obtained from their web page, at http://www.mesc.nbs.gov/southwes/arid-lands.html.

Dr. Linda Contos, New Main Campus Veterinarian

On December 5, 1996, the Rio Grande Botanical Garden and the Albuquerque Aquarium opened to the public; together with the Rio Grande Zoo, they are known collectively as the Albuquerque Biological Park. With the opening of the “Biopark,” Dr. Michael Richard, the .50 FTE Main Campus veterinarian (serving both the Biology and Psychology Depts.) of the past 10 years, decided to resign his campus position so that he could go full-time at the Biopark.

After feting Mike goodbye, we welcomed his successor, Dr. Linda Contos. Originally from Chicago, Linda earned a double major in Electrical Engineering and Biophysics (bioengineering) at the University of Illinois–Urbana–Champaign. After a few years as an electrical engineer in avionics, Linda went to veterinary school at Ross University (St. Kitts). While there she met John Heidrich (PhD, Biology, UNM), who was teaching microbiology. Linda and John moved to Tampa, where they were in private practice for two years. After marriage, they purchased a veterinary clinic in Albuquerque and moved here; they now have a 4-year-old son. For the past eight years, Linda has practiced clinical veterinary medicine with an emphasis on avian and exotic animals (reptiles, primates, llamas). John taught Anatomy & Physiology for our Department for several years, but left when they received a NIH–SBIR grant to study an antiviral drug using Feline Leukemia Virus–positive cats. Linda is also a part-time graduate student in the UNM Public Health master’s program. Welcome, Linda, to our department!

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The genome project is but one of a dozen programs in the Biology Department to offer nearly 100 undergraduates research opportunities each year.

The finicky nature of research funding is offset by the camaraderie and ingenuity of professors in the department allowing students to participate in the wide variety of programs offered. For example, students working on the genome project, funded by the National Science Foundation, can remain under the umbrella of the Hughes Program—now in its fifth year of funding by the Howard Hughes Medical Institute.

"This wonderful interplay between the various programs allows us to get so much more accomplished. The goal here is that as well as learning, real science gets done and students end up being coauthors on papers that are being published," Vogel says.

Participants in the Hughes Program get their first chance to formally present their research during a symposium each August. This hands-on approach to learning prepares students for other areas of study and teaches interpersonal skills that can be incorporated into every area of their lives, Vogel says.

The undergraduate research experience provides individual interaction with professors, affords opportunities for teamwork and helps students become familiar with the different ways science is communicated through literature, the Internet and other emerging technologies.

"Students learn and remember the facts because they have used them with their hands and with their minds, applying the facts to the research that they are involved in," Vogel explains.

The department's growing reputation as a research site continues to attract some of the best students in the country.

"Even though I'm going into medicine, I'm learning a lot of techniques in these programs that I can apply to any future research," adds UNM Presidential Scholar Stephanie Atencio.

Because science is an active undertaking and transforms constantly, to teach students only what is agreed upon as probably accurate at the time a course is offered gives them only a partial view of what biology is, Vogel explains.

"I always tell my students in immunology that 50 percent of what I'm teaching them now is going to be different in 10 years. The problem is I don't know which 50 percent," she says. "All I can do is teach them what is thought to be accurate now, and, in addition, try to teach them how to continue to update their information and how to be able to change their view of what the facts are—and that's research."

Listening to a class lecture or reading in a textbook that facts are based on experiments and new experiments conducted in the future may change a previous understanding can leave students unconvinced, Vogel says.

(continued on the next page)
BRAKE FOR ALGAE is the bumper sticker that caught my attention at the door to the office of Dr. Louise Lewis where I was to meet her and Dr. Paul Lewis for this interview. Paul is one of Biology’s newest tenure-track professor, and his wife, Louise, is a new instructor. With their expertise in phylogeny, they add substantially to the Biology Department, which seems to be continually expanding its dimensions. In her office, I found many psychology, I’m sorry, phycology journals giving depth to Louise’s love of seaweed. I also found the pair very enjoyable to talk to and just bursting at the seams with information.

Having met and married at Ohio State University, their graduate institution, both Paul and Louise did postdocs in North Carolina, moved on to the Smithsonian Institution, and then made their way to us. Why did they want to come to New Mexico? As Paul explains it, the job description was an unusually perfect fit.

Paul and Louise were chosen to fill in some gaps in the Biology faculty. Paul is currently teaching “C++ for Biologists” so that biology students have an introduction to computer programming that is tailored to their specific needs. There is a growing need within the biological community for computer programming skills. As computers become both faster and more accessible, it becomes easier to test complex biological hypotheses using computer simulation techniques. Paul is trying to give biology students, in one semester, a basic programming tool kit that they can apply to their own research problems.

This spring semester Louise taught “Plant Anatomy,” which the Department hasn’t had the resources to offer for a number of years. In the future, Louise plans to teach phylogeny (not to be confused with psychology, as was done on her undergraduate transcript!) (sorry, Bio students, seaweed, not Freudian sexual stages). This spring Paul taught “Statistical Genetics and Phylogenetics.” Both Paul and Louise have web pages for their classes (which can be accessed through the departmental web page [http://biology.unm.edu]), where a browser can get information about their courses and the students in the courses can get their assignments.

They intend to stay in New Mexico because of the unusually perfect fit. As Louise says, “I was excited about coming here, but the longer I’m here, the more I realize that this is a perfect place for us.” In addition to the winter ski slopes, the spicy food, and their home near UNM, the Biology Department has made New Mexico very comfortable for them because it is a large and diverse department that is giving them a “well-rounded education.” They like being able to go out to lunch with an immunologist and having an office down the hall from zoologists, “even if they are herpetologists,” says Louise. This is a refreshing change for them since most recently Louise came from a department that was strictly botany and Paul from a statistics department. Louise says that her UNM Biology experience “helps me think about new approaches to research, see how other people solve their problems, and, often times, the problems are the same or similar enough that I can think about using that same approach.”

General consensus has it that Paul and Louise are pretty nice folks. Sam Loker, Professor, says, “They are great colleagues in every respect. They are contributing more than their fair share with respect to teaching and service responsibilities and doing it with a positive, constructive attitude, which is greatly appreciated. Paul has lived to tell about teaching Biology 121; Louise is getting her baptism under fire in Biology 219. Both have become actively involved in their own research work. They have been extremely helpful to me personally in assisting peo-

Laurie Mellas is a staff writer in the UNM Public Affairs Department. This article originally appeared in the Fall 1996 issue of Quantum, a publication of the UNM Public Affairs Department; reprinted with permission.

(continued on page 8)
ple in my lab with an article on orthonectid phylogeny. The bottom line is that they are doing exactly what we hope new faculty will do—reinvigorating the intellectual climate, inspiring older colleagues to raise their energy levels, and adding new dimensions to the department—all this is done with a good attitude!”

Both Lewis’ work with phylogenies, which are family trees that relate species instead of individuals. As Paul says, “We combine efforts. There are patterns that come up in [Louise’s] work which I incorporate into methodology.” When people make models, they get their ideas from real data, and Paul uses Louise’s data to test his algorithms because they provide realistic complexity.

Louise calls herself a practitioner of phylogenies. She works with green algae to reach an understanding of the biosystematics of the species. Ranging from soil to marine environments, green algae are quite diverse despite being lumped into one order, Chlorococcales, which is known in the trade as the “garbage dump” of green algae. Louise’s biggest concern is that the taxonomy is so confusing that it inhibits further study. Since the morphology is simple, it is difficult to know which algae are most closely related. “Vegetative morphology is the result of convergent evolution. In every lineage of green algae examined so far, there has been an independent reduction of morphological complexity, especially in those algae which are specialized for living in soils,” Louise says. “I’m trying to unravel what these things are related to.” She looks specifically at the genus Bracteacoccus, which has a world-wide distribution. Some of the questions she asks are: “Can we look at present distribution and infer how that distribution came about? Is it an historical distribution? Were they there before the continents spread or is the distribution the result of recent dispersal? Can we use DNA sequence data to figure it out? Is dispersal really good or is the morphology so simple that what we’re calling the same species isn’t really the same?” For Louise it is “a mystery game.”

During a postdoc at Duke, Louise investigated evolution within a different group of “primitive” green plants, comparing complex thaloid (or flat) with leafy liverworts. She analyzed the gene for the rubisco enzyme that is involved in the first step of the Calvin cycle. Found in the chloroplasts, it makes up 1/4 of the protein in the leaf. She found that the flat liverworts evolve more slowly than other plants; something in the substitution process of this gene makes them change more slowly. With Paul’s help she hopes to find an explanation for the different rates. Comparisons still need to be made with other cellular compartments like the mitochondrion and the nucleus to determine the extent of the phenomenon. Luckily, there is a growing data base of other people’s work on nuclear genes. But Louise points out that the number of people doing this work is small because most botanists are interested in flowering plants—“no one wants to work on slime.”

Paul’s Ph.D. is in systematics and biogeography. He started getting interested in computers when it came time to analyze his data. Now Paul’s research has been putting the UNM Biology server computer to the test. “I am using a genetic algorithm approach to solve phylogenetic problems,” he says. When it is not busy with web pages, Paul has the server cranking on his phylogenetic programs. “My program is used for finding
the best phylogenetic tree for a data set." The use of this type of algorithm to solve phylogenetic problems has only recently received attention. He lets a population of "individuals" (each of which specifies a solution to the problem) evolve for a couple hundred generations while the computer carries out mutation, selection and recombination on these individuals.

The problem with trying to find phylogenetic trees is that the more species you want to consider, the more complicated it gets. The algorithm, which is a recipe for solving a problem, gives the computer a set of instructions. "Genetic algorithms are used to find solutions to many complex problems; they allow a population to evolve through natural selection." They are commonly used to solve practical problems like scheduling traffic lights in a city. At first you use random assignments of times for the stoplights; eventually, if you let it run long enough, it comes up with a very good solution. The first generation of solutions are pretty bad. The ones that are better solutions contribute more to the next generation and the population has better fitness. As an example, he used the problem of scheduling the Biology 121 T.A.s in his computing class. At first, they had random assignments that eventually evolved to fit everybody's schedule.

For Paul, the problem is speed. Once he ran a phylogeny program for 39 days when the entire western U.S. suffered a power outage. After starting it over, it ran for another 30 days before a system crash stopped it again. That is why "I'm interested in finding quicker ways," he says. As he mentioned this, he looked towards the floor, and I imagined that he was at that moment still working on the problem and I tried to prepare myself for an instant flash of insight and the possibility of him suddenly bursting out of the room, exclaiming "I got it!"

Pleasantly remembering my conversations with Paul and Louise Lewis, I am looking for a good way to give a final word on the pair. But Dov Sax, Ph.D. student and Biology Graduate Student Association co-president, sums it up well: "What's so refreshing about them is their attitude. Their attitude is one of oneness and eagerness to participate. They are willing to sit down with undergraduates, willing to sit down with graduate students, willing to consider revising the curriculum, and willing to go play soccer."

Dr. Roger Conant Wins Ingalls Award

In June 1996, Dr. Conant, world-renowned herpetologist and an Adjunct Professor in our department, received the David S. Ingalls, Jr. Award for Excellence, presented by The Cleveland Museum of Natural History. Eighty-seven-year-old Dr. Conant is the fourth recipient of this prestigious award, given for excellence in research, education or conservation in one of the fields of natural science represented by the Museum. He is considered by many to be the most important herpetologist of the 20th century. His peers praise him not only for his tireless work in promoting knowledge of and educational interest in reptiles and amphibians, but also for his championing of zoos as institutions for education and conservation. Dr. Conant is currently writing his memoirs, to be published soon.
Adjunct Professors: Building Blocks in our Intellectual Foundation

NATIONWIDE, higher education is experiencing intrusion from politicians. This has resulted, within the last decade, in tougher scrutiny of faculty productivity (not all bad), tighter (meaning less) funding (to do more), and the infamous "downsizing." At the level of the department, this means that the greatest limiting resource is the lack of faculty line items (i.e., full-time equivalent [FTE] faculty positions). The number of declared undergraduate majors in our department can help set this limited resource in its proper perspective: the Biology Department at UNM now has more than 1,200 declared majors! For us to reach the same faculty:major ratio that our sister department, Geology, enjoys we would need to hire 100 new faculty immediately! On a regional/national scale, we have documented that biology departments like ours, that generate 20,000+ student credit hours/year in comparable comprehensive universities, have anywhere from 80-150 FTE faculty. Our FTE faculty in Biology now number 37.

We recognized more than a decade ago that the administration at UNM would never place itself in a position to aggressively increase FTE faculty in our department in spite of the data we could generate and/or the comparisons we could draw. Thus, in 1983, we began a determined campaign to help increase our intellectual foundation by seeking professional biologists who could contribute to our program in different ways, but who would cost UNM virtually nothing, save a "paper appointment." As a result, we have increased the number of adjunct faculty from about five in 1983 to 106 in 1996. These individuals come in all flavors and colors. For example, some (e.g., Drs. CONANT, CORLISS, DICKERMAN, FRENKEL) are world-class scholars who have retired from our program, but still stay professionally active (e.g., DRs. CRAWFORD, DEGENHARDT, FINDLEY, RIEDESEL) and still others are our own postdocs and research associates, who toil on a daily basis keeping research programs moving along in our department.

In this edition of our annual newsletter, we would like to honor two of our very active Adjunct Faculty and tell you a little bit about each and how each contributes to the Goodness of Biology at UNM.

LEE COUCH

Lee and Bob relax after a hard day in the field.

BYU, Colorado State University, Bucknell University, University of Washington, to name a few). Some are Professors Emeriti, who have retired from our program, but still stay professionally active (e.g., DRs. CRAWFORD, DEGENHARDT, FINDLEY, RIEDESEL) and still others are our own postdocs and research associates, who toil on a daily basis keeping research programs moving along in our department.

In this edition of our annual newsletter, we would like to honor two of our very active Adjunct Faculty and tell you a little bit about each and how each contributes to the Goodness of Biology at UNM.

LEE COUCH

Ms. Lee Couch (Duszynski) is an Adjunct Research Associate in our Department, but this is not just a pretty
title to go with a pretty face. Lee is Chairman of Biology at Albuquer-
que T-VI, where she teaches 13-15 courses during each 11-month
school year (this is not a typo!). In addition to that, she works 20
hours each week in DR. DONALD
Dusznyski's research lab, coordi-
nating the lab activities devoted to
two NSF-supported research pro-
grams and playing "lab mom" to
Don's five graduate and four un-
dergraduate students, who also
work (slave) there. Along with
those activities, she publishes reg-
ularly, submits grant proposals to
state, federal and international
agencies, presents papers at re-
gional, national and international
parasitology meetings, and has
just returned from Washington
where she served on a National
Science Foundation review panel
for the most recent competition of
Research Experience for Under-
graduate proposals. Currently, she
is participating in a number of
international research efforts in-
volving the parasites of indige-
nous animals: in the Galápagos
Archipelago (with HOWARD AND
HEIDI SNELL), at Cape Bird, Ross
Island, Antarctica (with Adjunct
Research Assistant Professor,
GARY MILLER), in Israel (with
mammalogist EVIATAR NEVO), and
in Africa (with J.P. HUGOT, a
French nematologist from the Par-
is Museum of Natural History).
Finally, she has just been awarded
a large research contract by Rhone
Poulenc Ag Company.

While a Biology graduate stu-
dent working with Dr. SAM LOKER
at UNM, Lee was recognized as
our department's Outstanding
Teaching Assistant during Spring
Semester, 1990. She has continued
her excellence in the teaching are-
na at T-VI. In 1993, she was nomi-
nated from within the Albuquer-
que community for Albuquerque's
Best Educator—People's Choice
Award, and this year Lee was
ominated by her T-VI students
and recently was inducted into
Who's Who of America's Teachers.

ROBERT DICKERMAN

R. DICKERMAN is an interna-
tionally recognized scholar and, in many
ways, he is a Renaissance Man of
sorts, having published about 200
scientific papers in areas as seem-
ingly disparate as virology, mam-
malogy and ornithology. He is a
Research Associate of the Ameri-
can Museum of Natural History, a
Fellow of the American Ornitholo-
gists' Union, has held a Fogerty
Senior International Fellowship,
and is a former President of the
Linnean Society of New York.
Prior to his association with Bio-
logy at UNM, he was an Associate
Professor of Microbiology at the
Cornell University Medical Col-
lege in NYC. In the late 1980s, his
son, ALLAN DICKERMAN, came to
UNM to work on an MS degree
with DR. TERRY YATES, and the lure
of the southwest was just too
much for Bob. He couldn't stand
to see Allan having all this fun
alone, so he retired from Cornell
and moved to the serene environs
of Bernalillo, NM, in 1990. Since
then he has been a Research Asso-
ciate Professor in our department.
In 1991, he assumed the addi-
tional role of Acting Curator of
Ornithology in our Museum of South-
western Biology (MSB); the bird
museum has thrived with Bob's
relentless and dedicated devotion
to it (for which he receives no
financial compensation!). Bob
does a lot more than just curate
specimens on a daily basis. He
continues to travel worldwide
(Africa, Central and South Ameri-
ca), he continually collects speci-
mens, which he arranges to have
deposited in our MSB, and, in
1993, he established the MSB-Orn-
thology fund, starting it off with
a generous, personal contribution.
Also in 1993, it was Bob who ar-
 ranged for and carried out a very
important exchange of bird speci-
mens with the San Diego Natural
History Museum (SDNHM). To
highlight and reiterate what we
reported in last year's BSNM
Newsletter, a collection of bird
skins made by Frank Stephens in
NM in 1875–76 was finally re-
turned to MSB–Ornithology by
the SDNHM; the SDNHM re-
ceived, in exchange, specimens of
California birds that represented
surplus material in the Amadeo
Rea collection—a collection that
Bob had previously obtained as a
donation to the MSB. In other
words, the Stephens' collection
was basically obtained free-of-
charge except, of course, for Bob's
unrewarded effort. Pretty slick
maneuvering, especially since the
Stephens' collection is of both
historic and biological importance
to NM and constitutes the MSB's
oldest NM bird skins.

This year, according to the 1996
New Mexico Ornithological Society
(NMOS) Bulletin (Vol. 24, No.3),
Bob helped UNM's Centennial
Library of Science and Engineer-
ing secure the donation of Dr.
Telford Hindley Work's (1925–95)
ornithological library collection by
Dr. Work's wife, Dr. Martine
Jozan-Work. There are approxi-
ately 110 volumes in the collect-
ion, each with a bookplate recog-
nizing this gift; a future NMOS
Bulletin plans to list the collec-
tions' volumes.

DIANA NORTHUP, the Centennial
Library's Biology librarian (who is
also a graduate student in our
department with Dr. CLIFF DAHM
as her graduate advisor), tells us
that Bob has been working on
several projects to improve the
Centennial Library's ornitho-
logical collection. Among these
efforts is the establishment of a
memorial trust for the purchase of
ornithological books for the Cen-
tennial Library in the name of

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(Adjunct Faculty continued from page 11)

ALLAN R. PHILLIPS, the late preeminent alpha taxonomist of the 20th century. The trust will be funded by proceeds from the sale of a Festschrift published in early 1997 to honor Dr. Phillips. The Festschrift contains a biography, bibliography, annotated list of taxa described with full data and current depositions of type material, and an overview of Dr. Phillips' contributions to ornithology; it also has more than 20 submitted papers with four taxa described, including a revision of the southern populations of the Spotted Owl.

In addition to his scholarly and curatorial contributions, Bob also plays an active role in the education of our undergraduate and graduate students. He travels to Belize with Don Duszenski each March to lend his experience and special expertise to all the undergraduate and graduate students taking our Tropical Biology class.

Professors Couch and Dickerman are very special people and important components of our rich and exciting program in Biology at UNM. Current and former students alike, all owe Bob and Lee, in particular, and all of our other Adjunct Faculty, in general, a very large debt of gratitude for all they do, especially since most of their contributions cost the NM taxpayers nothing. A very heartfelt thank you!

LOLITA R. (FRITZ) BINFORD (MS 1952) has a MPH in Environmental/Occupational Public Health from the University of South Florida, and is working in Tampa as a microbiologist. Her professional interests include tropical/subtropical diseases, tuberculosis, and parasitology. Her personal interests are gardening, travel, oil painting, and environmental/health/safety issues. She is married to Dr. Jessie S. Binford, Jr., a bacteriologist.

TED L. BROWN (BS 1966, MS 1970) was a graduate student of Dr. William Degenhardt's (who is now one of our Emeriti faculty). Ted works as an Environmental Specialist for the Vector Control Program, N.M. Environment Department in Santa Fe. He is the editor of the N.M. Herpetology Society and Secretary of N.M. Environmental Health Association. He still enjoys collecting reptiles and amphibians, and is also interested in outdoor and wildlife photography.

H. JAMES CLIFFORD (BS 1963) received his PhD in Chemistry from UNM in 1970. He is currently a Professor and Robert G. Albertson Distinguished Professor of Physics at the University of Puget Sound in Tacoma, WA. He enjoys teaching, reading and curriculum development, and in his leisure, plays "a poor game of golf."

JAMES W. CUTLER (BS 1967), who lives in Rio Rancho, NM, is retired from the National Park Service, and now works part-time as a school bus driver. He enjoys running, hiking, fishing and woodwork in his leisure time.

THEODORE B. FLECK (BS 1940) received his MA from Columbia University. Although he is now retired, he is a docent at the Arizona-Sonora Desert Museum in Tucson, and delivers meals for St. Mary's hospital. He is an active bowler and is an "enthusiastic observer" of other sports.

FREDERIC A. GIERE (PhD 1953) is a retired Professor Emeritus and Chairman of Lake Forest College. He is still an Adjunct Professor of Urology at Northwestern University Medical School in Chicago, where he continues to fabricate specialized electrophoresis equipment. His donation to the BSNM was given in memory of his graduate advisor at Syracuse University and at UNM, Dr. Wilburn J. Eversole, Professor of Physiology.

GRETHE QUÉLLE KINZIE (BS 1957) is a cytogenetic technologist at the University of Utah in Salt Lake City.

ALLAN J. LANDWER (PhD 1994) is in his third enjoyable year of being an Assistant Professor of Biology at Hardin-Simmons University in Abilene, TX. Allan won the Hardin-Simmons University's research award, known as the Cullan Award for Research, for 1995-96. He is currently focusing his research on the physiological ecology of thermoregulation in Sceloporine lizards.

JOHN E. LEDER (BS 1965) received his MA from the University of Washington, and currently is an environmental scientist living in Seattle with his wife, Anne. He is a soccer referee in his leisure time.
CHRISTIANNE LEHMANN-O’CONNER (BS 1991) is an elementary school teacher of science and Spanish in Albuquerque.

RODERICK LUHN (BS 1972) received his MD from UNM in 1977, and is currently a Navy physician living in Norfolk, VA, with his wife, Betty Ann. Rod’s interests include adolescents and the “intelligent protection of environment and species.”

STEPHANIE MIERA (BS 84) received a BS in Pharmacy at UNM in 1987. She was a manager at Lovelace’s Westside Clinic, but is now a staff pharmacist position at the Mayo Clinic in Rochester, MN.

BRENT PARKER (MS 1984) received his DVM from Colorado State University, and is currently a veterinarian in private practice in Santa Fe, NM.

PAUL ROATH (BS 1980) received a BSMT in 1981 from UNM and a PhD in cellular and molecular biology from North Dakota State University in 1995. He is currently a post-doc with the USDA, working on the nutritional effects on pathology of Coxsackie B3 virus, a small, single-strand RNA virus, which is infectious in humans and causes lesions in the heart, pancreas and CNS.

GERALD P. RODRIGUEZ (BS 1962) has been a physician/gynecologic surgeon in Santa Fe, NM, for the past 23 years. He enjoys computers, Internet surfing and travel.

ALISABETH A. THURSTON-HICKS (BS 1987) obtained her MD from UNM in 1992. She completed her residency in psychiatry in June, 1996, and became the Medical Director of a community mental health center in Canon City, CO, in July. She enjoys bicycling, skiing and backpacking.

L. CAROLE VINCENT (BS 1992) is married to Robert Wilson and is now living in Redmond, WA. Carole reports “currently spending all my time at home raising my 3-year-old and 1-year-old children.” She also enjoys bird watching and sightseeing; she adds, “Washington is great!”

HENRY C. WATKINS (BS 1992) is a medical student pursuing a Doctor of Osteopathic Medicine in California so he can learn to be “the best and most humanistic physician” he can be, and adds, “Thank you for my invaluable education.” When he is not studying (“almost never-ending”), Henry enjoys skiing, backpacking, fishing and other outdoor activities. He also finds time to play sports, and plays both the acoustic and electric guitar.

THOMAS H. SOLENGERBER (BS 1969) received his MD in 1974 from the Medical College of Virginia. He is currently a Fellow in Maternal Fetal Medicine at the Washington University School of Medicine in St. Louis, MO.
THE BIOLOGICAL SOCIETY OF NEW MEXICO

The Biological Society of New Mexico is a tax-exempt organization under the New Mexico Nonprofit Corporation Act and the United States Internal Revenue Code. The object of the Society is to establish and maintain endowments, trusts, foundations, and other funds, all for the purposes of encouraging, fostering, and pursuing excellence in education in the Department of Biology at The University of New Mexico.

Tax-exempt gifts may be given with designation to be used for specific purposes, such as those identified below, as long as the purpose fits the objectives of pursuing excellence in biological education and research at UNM.

Donations and annual membership fees, unless otherwise specified, are placed in our Unrestricted Gift Account. These funds are used primarily to support both undergraduate and graduate student recruitment, research, travel to meetings to present papers, spring graduation, and awards for teaching excellence. In addition, we have many other accounts that may be of special interest to you.

L.D. Potter Endowed Chair in Plant Ecology

This chair, named in the honor of Loren D. Potter, who retired in 1985, recognizes and highlights the importance of plant ecological studies as they pertain to our natural resources. The current holder of the Potter Chair is Dr. Diane L. Marshall.

Melinda Bealmear Scholarship

Melinda Bealmear was a staff member in our Main Office, who died in a tragic car accident in October 1986. Our graduate students, faculty and staff, along with help from her parents Dorothy and Dale, established a scholarship fund in her memory.

We would like to accrue enough principal so that the annual interest could support the program of a needy graduate student in Biology.

Tropical Biology Fund

This fund was established in 1995. The goal is to have an endowment that will help defray the cost that our undergraduate students must pay when they enroll in courses that have out-of-state or out-of-country field trips.

Museum of Southwestern Biology—Mammals

The purpose of this account is to support all aspects of mammalogical research conducted by UNM Biology faculty and graduate students. This fund was developed by Drs. Jim Findley and Terry Yates to supplement state-appropriations and enhance research and teaching in mammalogy programs.

Museum of Southwestern Biology—Ornithology

Established by Dr. Robert Dickerman, the purpose of this account is to support all aspects of ornithological research by UNM Biology faculty and graduate students.

Arrangements for donations to other MSB divisions can be made with the MSB Director, Dr. Howard Snell.

Faculty Excellence Fund

We started this fund to support faculty travel to professional meetings where they present the results of their work.

Membership

Any person contributing $20 or more annually becomes a member of the Society and will receive the annual BSNM newsletter.

ALL MEMBERSHIPS & CONTRIBUTIONS ARE TAX EXEMPT.
Please respond even if you can’t contribute. If you haven’t responded before, we’d really like to hear from you and learn about what you’re doing. If you can help us financially, or with donations in kind, please let us know how you want your contribution used:

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<td>Bealmear Scholarship</td>
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<td>Riedesel Physiology Fund</td>
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<td>Doollittle Scholarship in Botany</td>
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<td>Tropical Biology Fund</td>
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TOTAL AMOUNT ENCLOSED: $_______

Name ___________________________ UNM Degree(s) ________ Year(s) ________

Other Degrees ___________________________ Spouse ___________________________

Complete Current Mailing Address ____________________________________________

Phone No. ___________________________ Current Occupation ______________________

Fax No. ___________________________ E-mail Address ____________________________

Activities and interests: _____________________________________________________
(please use additional pages as needed)

THANKS FOR YOUR CONTINUED INTEREST & SUPPORT!!

Please mail memberships and contributions (by check, payable to “The Biological Society of New Mexico”) to:

Secretary-Treasurer
The Biological Society of New Mexico
Department of Biology
The University of New Mexico
Albuquerque, NM 87131-1091

May 1997
APPENDIX M

GRADUATE STUDENTS & FACULTY ADVISORS
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<tr>
<th>Student</th>
<th>Advisor</th>
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## GRADUATE STUDENTS AND FACULTY ADVISORS FY 1996–97

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A. Significant Events During Academic Year 1996-97

The past academic year has been a very busy one for the Department of Chemistry. Continued effort has been directed toward the stabilization of the fragile situation with regard to the faculty which had been identified by the graduate program review team in 1993. This fragility has resulted from the ongoing and impending loss of many of the more senior faculty and the potential loss of some of the faculty hired in the course of building the program which has been underway for the past dozen years. Continued efforts have also been underway to provide the additional high-quality space which the review team strongly emphasized that the Department needed if the growth pattern of the preceding dozen years is to continue and the gains made to be consolidated. Unfortunately, this year the department was forced to close an ongoing search due to the hiring freeze. Instead the position was converted to a computational position which was funded from non-state resources. Because of the timing of this position, the candidate who is hired will not join the faculty until August of 1998.

2. Faculty

Several faculty personnel changes occurred during the course of this past academic year. Drs. Patrick and Debra Mariano from the University of Maryland arrived on campus and began their research activities. The Marianos are both senior organic chemists and both are well funded. The University allowed Chemistry to retain the overhead generated by the Marianos for the first three years in order to meet the fiscal conditions of their employment. This is an exceptional idea as it greatly minimizes the financial pain of dealing with large set-up packages. The set-up funding from the Marianos was the source for the matching money required by the NSF for the instrument grant which was funded this year.
Furthermore, we purchased about $250,000 worth of equipment from these funds to build the department infrastructure.

Currently UNM’s Chemistry department has the smallest faculty of any of the peer institutions so faculty numbers are a major concern. Losses from the physical chemistry area are a special concern. Walters has taken a position in Scholes Hall, Allen has become chair and Ortiz moved his program to Kansas last year. The department is critically short of faculty in this area and fortunately, we are authorized to make an appointment in this area this coming year.

As a temporary solution to the problem of covering our classes, a search for a Lecturer was conducted during 1994-95. Although the number of applicants was very small, two people, Dr. Jack Houser and Dr. Dana Brabson, were hired from the pool and began assisting with our lower division instruction in Fall 1995. This solution has worked quite well, however we propose that near the end of the five year terms of Drs. Brabson and Houser we begin to search for a senior educator who can restructure our freshman offerings.

The issue of faculty size is of critical import. As the first graph shows, UNM is not only smaller in faculty size that our identified peer institutions but much smaller. Furthermore, our faculty is quite senior and subject to further losses through retirement. If one considers the number of student credit hours taught by the various institutions represented in the first graph below the picture is also quite grim here at UNM. The second graph shows the student credit hours in chemistry per chemistry faculty member. Once again, UNM is very high in this ranking. We are exceeded only by the faculty at the University of Texas at Austin in credit generation. UT has several very large freshman chemistry sections which generate large amounts of student credit hours from a single faculty member. Fortunately, Michael Fischer the Dean of A&S is aware of our situation and has been helpful with positions and set-up funding to address this
issue. While the hiring of Chemistry faculty is expensive and can only proceed at the pace at which the start-up funding can be located, every effort must be made to continue to increase the department faculty numbers.
3. Curriculum

With the exception of freshman chemistry which has been impacted by the teaching of these courses at TVI, the demand for chemistry courses continued to grow this past year. Response to this new demand has required the continuing addition of new laboratory sections in Quantitative Analysis, and Organic Chemistry. In Organic laboratory, we are now limited by the number of drawers of glassware which can be checked out to students. A number of the sections are offered in the evening, and on Saturday morning to make them available to the growing number of non-traditional students who cannot attend the usual weekday/ daytime sections. The Saturday sections in Organic Chemistry Laboratory have been especially popular.

The department has continued to offer an honors track for our B.S. majors. In the 96-97 academic year, Professor Ondrias will be on sabbatical at Los Alamos Scientific Lab. He has been offering Chem 131L-
132L, the honors freshman course. In his absence. Professor David Keller will give these sections. Professor Holder will once again offer the honors Organic lectures, Chem 307-307. We feel the honors track is an important component of our curriculum. Professors Deck and Hampton-Smith continue to offer the course they began recently, Chem 415L, with excellent success. All classes offered by the chemistry department are listed in Appendix B.

4. Facilities

The renovation of the heating, ventilating and air conditioning system in the Riebsomer wing of the Chemistry building which was begun in December of 1995 has been completed. The renovation was funded from a proposal to the National Science Foundation along with state matching money. Funding in the amount of $1.3 million was awarded by the NSF with matching funds of $1.7 million required to claim the NSF grant. The project improved the quality and safety of the instructional and research laboratories in that wing. It will also represent a component of the work called for in phase 11 of the programming document for Chemistry space that was completed four years ago. It greatly improved the safety and functionality of our facilities. However, it did not provide the additional space required by the Department. The project was complex and benefited from an excellent Contractor, Shumate Constructors.

An alternative approach to resolving the space problem was sought through continued consideration of the long-discussed Science and Technology Research Center. An agreement was reached among the chemistry faculty that, since the Research Center was the building the University seemed to be willing to build, we should seek the space we need in that building. Biology and Earth and Planetary Sciences were contacted and invited to participate in a joint use building providing needed space to those three departments. With this support, a proposal for planning funds for such a building was sought from the 1994 legislative session and $250,000 was provided. The planning so far carried out has led to an agreement with the Provost that these three departments and Computer Science will share the space created. The size of the budget has also been determined. However, how the space is to be divided amongst these users remains a source of considerable contention. Unless there are delays, the plan should be ready for presentation to the 1998 legislative session.
This academic year the department suffered a chemical spill which could have been an event causing significant injury. We were lucky and only minor injuries were sustained by two individuals. Approximately one cup of elemental Bromine was spilled in the basement of Clark Hall. This material which is a respiratory irritant and lacrymator caused the evacuation of our entire building. There was a significant response from the police, fire and medical agencies. The spill was reason to evaluate our internal procedures and resulted in a report which summarizes the incident and makes some recommendations for change. This report is included in the Appendix as component number seven.

5. Graduate-Program

The Graduate Recruitment and Selection Committee was again very active under the leadership of Professor Chris Enke, the Associate Chairman for Graduate Recruitment, and succeeded in attracting an average size group of new graduate students to the department for the coming year. The return to a larger class reflects the Committee’s efforts to increase significantly the quality of students available to the graduate program. Other methods are being sought to alleviate the on-going problem of needing to use graduate students who are less than fluent in English to teach undergraduate laboratories. Professor Christie G. Enke has agreed to continue to serve as Associate Chair for Graduate Recruitment in the 97-98 academic year. Appendix A summarizes the recruiting activities.

A tiny increase in the sum available for stipend support that was granted by the Dean has made it possible for us to offer $12,700 teaching assistantships for the class to enter in August 1997. This stipend will be raised to $13,700 provided the Teaching Assistants are diligent in their duties. Dr. Joe Ho, the Laboratory Supervisor has continued his efforts to reduce the average number of laboratories each Teaching Assistant must teach from six per year to five per year. We have continued to guarantee the incoming graduate students a position for the summer and the best students are given added inducements in the form of Daub fellowships in the first year. Although our basic offer is still not as competitive as we would like it to be, the recent change in stipend represents major progress toward building a competitive graduate program. We are grateful to the Dean for his continuing support for our achieving this goal. Next year we will be awarding the entering students a TA Contract at a somewhat reduced rate. This is so
that we will be able to create a two tier reward structure for the TAs. As in any group, there are excellent contributors and those who are not as committed. We hope to entice the students to put more energy into their teaching activities by this means.

6. Undergraduate Program

We had our eighth annual departmental commencement following the general commencement ceremonies at the football stadium, followed by an elegant catered buffet luncheon served on our patio. This year we were not joined by the department of Biochemistry in our graduation ceremony. Over 100 graduates and guests attended, with Dr. Allen presenting certificates to those receiving the B.S., B.A., M.S. and Ph.D. degrees, and to award winners.

Our own undergraduate program produced a small but well prepared group of graduating majors this year. Several will attend graduate or professional schools this fall. Two female and three male students earned a B.S. degree. Nine students, three men and six women, including a total of three Hispanics and one black student also earned the B.A. degree. In addition to these students who completed chemistry degrees, twenty-one men and twenty-three women earned a minor in chemistry. At the graduate level, four students earned the M.S. degree (one man and three women), and six men, including three Asians and three women, including two Asians, finished the Ph.D. degree. Individuals receiving degrees in Chemistry during the 1995-96 academic year are listed below.

Undergraduate Program

STUDENTS RECEIVING THE B.A. DEGREE IN CHEMISTRY 1996-97

Lisa M. Benski  
Kim Meadows  
Chun Hung Chan  
Kimberly McMurry  
Megan Morvilius  
Pedro Calderon  
Kenneth V. Salazar  
Priscilla Cheatham  
Karla Melendez
STUDENTS RECEIVING THE B.S. DEGREE IN CHEMISTRY 1996 - 1997

Lisa Weber
Helen Johnson
Eric Stevenson

Jack Greiner
Hugh Selby

STUDENTS COMPLETING THE M.S. DEGREE IN CHEMISTRY 1996-97

Tanvir Mahmud
Hua Tang

Alex Bailey
Maggie Zraly

STUDENTS COMPLETING THE DOCTOR OF PHILOSOPHY DEGREE IN CHEMISTRY 1996-97

Leo Archer
Seema Singh
Chong Ying Xu
Songbiao Zhang
Do Kun Cha
Luis Espinoza
Tiehua Piao
May Nyman
Xingzhi Song

Summer 1996
Summer 1996
Summer 1996
Summer 1996
Fall 1996
Fall 1996
Summer 1997
Summer 1997

Prof. Mark Hampden-Smith
Prof. Mark Hampden-Smith
Prof. Tom Niemczyk
Prof. Mark Hampden-Smith
Prof. Su-Moon Park
Prof. Tom Niemczyk
Prof. Su-Moon Park
Prof. Mark Hampden-Smith
Prof. John Shelnutt

GRADUATE STUDENTS IN CHEMISTRY 1996-97

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APPENDIX A

APPLICATIONS RECEIVED FOR GRADUATE STUDY IN CHEMISTRY
U.S. CITIZENS
1996-97

APP - APPLICATIONS RECEIVED
APR - APPLICATIONS APPROVED
DIS - APPLICATIONS DISAPPROVED
INC - APPLICATIONS INCOMPLETE
DEC - APPLICATIONS APPROVED BUT DECLINED OFFER

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Sub-Total Undergraduate Lower Division: 2178 students, 8725 credit hours.

Sub-Total Undergraduate Upper Division: 2040 students, 4820 credit hours.
### CHEMISTRY COURSE OFFERINGS

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Sub-Total Undergraduate Upper Division: 106 312

Sub-Total Undergraduate: 4324 13857

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Sub-Total Graduates 388 1093

GRAND TOTAL - ALL STUDENTS 4712 14950
### SPONSORED RESEARCH

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### FACULTY AND STAFF OF THE DEPARTMENT OF CHEMISTRY

#### PROFESSORS:

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<td>DUNAWAY-MARIANO, Debra, Ph.D.</td>
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<td>HAMPDEN-SMITH, Mark, Ph.D.</td>
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FACULTY AND STAFF OF THE DEPARTMENT OF CHEMISTRY

PROFESSORS:

NIEMCZYK, Thomas M., Ph.D. 1972 Michigan State University
OGILBY, Peter R., Ph.D. 1981 University of California, Los Angeles
ONDRIAS, Mark R., Ph.D. 1979 Michigan State University
ORTIZ, Joseph V., Ph.D. 1981 University of Florida
PAINÉ, Robert, Ph.D. 1970 University of Michigan
PAPADOPOULOS, E. Paul, Ph.D. 1961 University of Kansas
PARK, Su-Moon, Ph.D. 1975 University of Texas, Austin
WALTERS, Edward A., Ph.D. 1966 University of Minnesota

ASSOCIATE PROFESSORS:

KELLER, David, Ph.D. 1984 University of California-Berkeley
MCLAUGHLIN, Donald R., Ph.D. 1965 University of Utah

ASSISTANT PROFESSORS:

DECK, Lorraine, Ph.D. 1989 University of New Mexico
EVANS, Deborah, Ph.D. 1995 University of Pittsburgh
HAMPTON, Philip D., Ph.D. 1989 Stanford University
KIRK, Martin L., Ph.D. 1991 University of North Carolina
VILLEGAS, Ignacio 1991 University of Georgia

EMERITUS PROFESSORS:

CATON, Roy D., Ph.D. 1963 Oregon State University
HOLLSTEIN, Ulrich, Ph.D. 1956 University of Amsterdam
LITCHMAN, William M., Ph.D. 1965 University of Utah
SCHAFFER, Riley, Ph.D. 1967 University of Chicago

VISITING FACULTY:

NONE
POSTDOCTORAL AND RESEARCH FELLOWS:

CHEN, Tuqiang 1995 University of New Mexico
CLEMEN, Lucy 1994 University of Pittsburgh
FRANKE, Fransiska, Ph.D. 1992 Rensselaer Polytechnic Institute
GAMLIN, Janet 1996 University of British Columbia
GAN, Xinmin 1995 Kinki University
JASPER, Steve, Ph.D. 1995 Indiana University
JENTZEN, Walter 1994 Institute of Experimental Physics in Bremen
JI, Qinchung 1996 Michigan State University
MEDFORTH, Craig 1988 University of Liverpool, U.K.
SONG, Xingzhi 1996 University of New Mexico
SU, Zhuoyi 1997 University of Maryland
WOOD, Gary 1987 University of Maryland
ZAKJEVSKI, Viatcheslav, Ph.D. 1979 Institute of New Chemical Problems Academy of Sciences, USSR

ADJUNCT PROFESSORS:

ALAM, Todd Research Assistant Professor
CAMPBELL, David Lecturer III
DORKO, Ernest Adjunct Professor
DUESLER, Eileen Research Associate Professor
ENGLEMAN, Rolf, Jr. Adjunct Professor
HAALAND, David Adjunct Professor
HO, Kuangchiu Lecturer III
ROWE, Robert Adjunct Assistant Professor
SHELNUTT, John UNM/SNL Adjunct Professor
SHIREVE, Andrew P. Adjunct Assistant Research Professor
SMITH, Karen Ann Adjunct Assistant Research Professor
STALLARD, Brian Adjunct Assistant Professor
WHALEY, Thomas Adjunct Associate Professor
WILKINS, Ralph G. Adjunct Assistant Research Professor

APPENDIX D
FACULTY AND STAFF OF THE DEPARTMENT OF CHEMISTRY

RESEARCH SCIENTIST:

FACULTY AND STAFF OF THE DEPARTMENT OF CHEMISTRY

RESEARCH SCIENTIST:

SMITH, Karen An, Ph.D, 1984, University of Illinois - Oversees, maintains, and operates the Department's NMR spectrometers, trains students and faculty in their use, and consults with faculty and students concerning the solution of chemistry problems using NMR.

SCIENTIFIC GLASSBLOWER: (and Part-Time Lecturer III)

CAMPBELL, David, R. - Manufactures state of the art glassware as requested by faculty and graduate students across the campus.

RESEARCH ENGINEER I:

HARTSWICK, Lewis - Electronics Facility Manager, repairs and maintains instrumentation.

RESEARCH ENGINEER II:

SHAHVAR, Hoshang, B.S., 1981, University of New Mexico - Manufactures state of the art electronic equipment as requested by faculty and graduate students.

OTHER STAFF:

ADAMS, Ron, LAN Administrator: - Performs Local Area Network (LAN), World Wide Web (WWW), and stand-alone PC hardware and software support, and provides DeskTop Publishing (DTP) expertise in graphic design, page layout and Web page authoring.

BAUER, John - Research Tech/Life Sciences: - Performs multi-step tests, analyses, results of experiments, specimens and samples and provides support to students in learning and functional activities within the lab setting.

BUSH, Gary, Research Tech/Life Sciences: - Performs multi-step tests, analyses, results of experiments, specimens and samples and provides support to students in learning and functional activities within the lab setting.

CANO, Daniel, Research Tech/Life Sciences: - Performs multi-step tests, analyses, results of experiments, specimens and samples and provides support to students in learning and functional activities within the lab setting.

CANELARIO, Ricky, Supply/Stock Clerk: - Assists the Department and UNM personnel with all aspects of ordering, receiving, billing and inventory of chemicals and supplies.
OTHER STAFF:

DUNAGAN, Julie, Editorial Tech: - Responsible for transcription, proofreading and typing complex manuscripts and other documents for publication or other distribution for the Department of Chemistry.

GARCIA, Felicia, C.R.L.S. Accountant I: - Coordinates and processes orders and documents to Accounts Payable for payment; audits the FRS and maintains control of all C.R.L.S. accounts.

GILLESPIE, Dorothy, Administrative Assistant I: - Performs tasks and activities related to faculty, staff, undergraduates and graduates.

HILTON, Carl, C.R.L.S. Operations Manager II - Responsible for the overall operation of C.R.L.S. including budget, buying and inventory control and EPA/OSHA regulations and compliance.

HONEY, Donna, Administrative Assistant I: - Responsible for assisting the accountant in verifying accounting data and documents and maintaining accounting documents.

MINSEN, Ovella, Admissions Assistant I: - Responsible for processing student applications for admissions status and residency for foreign and U.S. graduate applicants to the Department of Chemistry, The University of New Mexico.

MORRATO, Anna, Department Administrator III: - Manages, controls and supervises the fiscal system, daily administrative operations and assists the Chairman with departmental matters.

PENHALL, Michele, Storekeeper III - Prepares sale invoices, inventory entries and places orders while overseeing the receiving and proper stocking and delivery of orders.

SOBLICK, Leonard, Accountant II: - Responsible for compiling, analyzing and reviewing data and statistics pertaining to revenues and expenditures; prepares, examines and verifies accounting data and documents and maintains accounting records.

STANLEY, Kriss, C.R.L.S. Systems Analyst III: - Assists Department and UNM personnel with all aspects of ordering, receiving, billing and inventory of chemicals. Responsible for all computer operations in C.R.L.S.

UTTERBACK, Koelle, Coordinator - Graduate Program: - Assists graduate and undergraduate students.
APPOINTMENTS TO STAFF:

CANELARIO, Ricky, Supply/Stock Clerk
DUNAGAN, Julie, Editorial Tech
GARCIA, Felicia, C.R.L.S. Accountant I
HONEY, Donna, Administrative Assistant I
MINSEN, Ovella, Admissions Assistant I
SOBLICK, Leonard, Account II

CHANGES TO STAFF PERSONNEL: No changes to Staff Personnel.

SEPARATIONS: ESSERY, Cheryl, Junior Scientific Glassblower resigned from the Department to take a position with Oak Ridge Laboratories.

FRANK, Sandra, Accountant, resigned from the Department to take a position with First Security Bank.

APPENDIX C
DEPARTMENT OF CHEMISTRY
UNIVERSITY OF NEW MEXICO
SEMINAR SPEAKERS
1996-1997

25 August 1996 Dr. Shashi Karna, Seiler Laboratory, U.S. Air Force Academy
Theory and Modeling of Nonlinear Optical Materials

01 September 1996 Dr. S. Atlas, Los Alamos National Laboratory

15 September 1996 Dr. H. Noth, Universitat Munchen, Germany
Low Coordination in Boron and Aluminum Chemistry

13 September 1996 Professor Donald Kouri, University of Houston,
Generalizations of the Time-Independent Schrodinger Equation: Memory of the Preparation of the System

11 October 1996 Professor David Clark, Los Alamos National Laboratory
Actinide Environmental Chemistry
DEPARTMENT OF CHEMISTRY  
UNIVERSITY OF NEW MEXICO  
SEMINAR SPEAKERS  
1996-1997

14 October 1996  Professor Chuck Winter, Wayne State University  
Chemistry of Precursors to Titanium Disulfide Films

25 October 1996  Professor Michael Colvin, Sandia National Laboratories, Livermore, CA.  
Ab Initio Quantum Chemistry on Massively Parallel Computers

01 November 1996  Dr. Phillip Hampton, The University of New Mexico  

08 November 1996  Professor Vincent Huynh, Emory University  
Reaction Intermediates in Oxygen Activation Reaction By The Soluble Methane Monooxygenase From Methylococcus Capsulatus (Bath)

22 November 1996  Professor Jerry Atwood, University of Missouri at Columbus  
Supramolecular Aspects of Anion Binding

06 December 1996  Professor Edward Solomon, 1996 Milton Kahn Lecturer of Stanford University  
Oxygen Intermediates in Copper Enzymes

13 January 1997  Professor Feng Gai, Harvard University  
The Photophysics of Bacteriorhodopsin (bR): New Insights from Femtosecond Time-Resolved Near-IR Spectroscopy

24 January 1997  Professor R. Thomas Baker, Los Alamos National Laboratories, Chemistry Division  
Studies Toward Alkene Hydroamidation: Reactivity of New Late Metal Amidate Complexes, [M] - NRC(0)R

07 February 1997  Professor Eric Maatta, Kansas State University  
Hybrid Organic-Inorganic Systems: Organooamido Polyoxometallates

14 February 1997  Professor Dave Garner, University of Manchester, U.K.  
Towards the Total Synthesis of the Molybdenum Cofactor
DEPARTMENT OF CHEMISTRY  
UNIVERSITY OF NEW MEXICO  
SEMINAR SPEAKERS  
1996-1997

21 February 1997  
Professor Alan Balch, University of California, Davis  
Solvoluminescence and other Remarkable Properties of Gold (I) Complexes

07 March 1997  
Professor Peter Rossky, University of Texas, Austin  
Electronic Relaxation in Solution

14 March 1997  
Professor Jim Terner, University of Virginia Commonwealth  
Resonance Raman Spectroscopy of High-Valent Peroxidase Intermediates

08 April 1997  
Professor Nickolas C. Norman, University of Bristol, England  
Diborane (4) Compounds: Synthesis, Structure, and Reactivity

11 April 1997  
Professor Manuel P. Soriaga, Texas A&M University  
The Interfacial Chemistry of Palladium Electrodes: Studies by Electron Spectroscopy and Scanning Tunneling Microscopy

18 April 1997  
Professor Richard Kemp, Union Carbide Corp.  
Recent Chemistry in Ziegler-Natta Polymerization Catalysis

25 April 1997  
Professor Mike Eastman, Northern Arizona University  
Polymerization Reactions of Organic Monomers on the Surface and in The Gallery Regions of Layered Silicates

09 May 1997  
Professor Debra Dunaway-Mariano, University of New Mexico  
Evolution of Enzyme Catalysis: Mechanism and Origin of 4-Chlorobenzoyl-CoA Dehalogenase

RESEARCH EQUIPMENT:

Major pieces of equipment (more than $10,000.00 unit price) acquired during the reporting year:

771144  
500 MHZ FT NMR Spectrometer  
$556,430.00

767317  
QTM Complete System For High Sensitivity Steady State Fluorescence  
$30,113.00
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PROPOSALS SUBMITTED FOR FY 96-97

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## PROPOSALS SUBMITTED FOR FY 96-97

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CONVOCATION CEREMONY 11 MAY 1996
UNDERGRADUATE AWARDS

Gregory Claycomb  Dean Uhl Award
Jack Greiner  Dean Uhl Award
Helen Johnson  Dean Uhl Award
Lisa Whalen  Dean Uhl Award
Daniel Banas  Ann Kahn Award
Steven "Derek" Turner  Paul Mozley Award
Torre Rhoades  CRC Handbook

GRADUATE AWARDS

Terri Constantopoulos  Al Schnoebelen Award
(for outstanding graduate student)
Scott Pennino  Clark/Person Award
(for outstanding teaching assistant)
May Nyman  Smith Dow Award
(for outstanding graduate student)
The past year saw the continued growth of the Department of Communication and Journalism at the University of New Mexico in (1) the further strengthening of its Doctoral Program in Intercultural Communication, and (2) the Department's efforts to meet the sharply increased pressures for enrollment in its undergraduate courses in Communication and Journalism. The Department was created in 1991 with the merger of two former departments, which led (1) to a major growth in the number of undergraduate students majoring in Communication and in Journalism, (2) to an expansion of the Department's funded research program to about a million dollars per year, and (3) to a new Doctoral Program, begun in 1995 with a specialization in intercultural communication. The Doctoral Program was rated as number one in the field of intercultural communication by expert raters for the Speech Communication Association in 1996.

UNDERGRADUATE STUDIES IN COMMUNICATION AND JOURNALISM

The Department offers two undergraduate degrees: (1) a BA in Communication, with sequences in organizational communication, interpersonal communication, intercultural communication, and rhetorical communication, and (2) a BA in Journalism and Mass Communication, with sequences in print journalism, broadcast news, broadcast management, advertising, and public relations. The 500 majors in the Department include 300 in Communication, and 200 in Journalism and Mass Communication.

More than 35 percent of the Department's Journalism and Mass Communication majors are minorities, mainly Hispanics and Native Americans. This figure is one of the highest proportions of minority students in Journalism and Mass Communication in a U.S. university today, according to annual surveys of departments and schools of journalism and mass communication.

In 1996-1997, the Department of Communication and Journalism had the largest unfilled demand for its undergraduate courses of any department at UNM. The University's ITEL (telephone registration) system identified 910 students who were shut out of their attempted enrollment in courses that were filled to capacity and closed in Fall Semester, 1996. More than 2,700 students enrolled in the Department's courses in Spring 1997, another new record (by 200 enrollments). The large number of students shut out of the Department's courses occurred despite the University providing special funding for a dozen additional course sections in 1996-1997. The courses with the most pressure for expanded enrollment are C&J 130, Public Speaking; C&J 151, Writing for the Mass Media I; C&J 221, Interpersonal Communication; C&J 270,
Communication for Teachers; C&J 323, Nonverbal Communication; C&J 325, Intercultural Communication; and C&J 327, Persuasion.

Dr. Jean Civikly-Powell, Associate Chair of the Department, coordinates course scheduling, directs efforts to improve the effectiveness of the Department's teachers, and chairs the selection committee for part-time instructors. She directs the training program for teaching assistants (TARC) and international teaching assistants (ITAs). The TA training is coordinated by Civikly-Powell, assisted by Teaching Assistants Jennifer Spencer, Carina Wilmot, and Nicole Thigpen. Professor Civikly-Powell also oversees the Department's Mediation Clinic, with the help of Teaching Assistant Alicia Testa.

Professor Hank Trewhitt coordinates the Department's annual student exchange program with German mass media institutions, in which a dozen majors in Journalism and Mass Communication travel to Germany each summer for a tour of German newspapers, and radio and television systems.

Professor Tom Jewell directs the UNM Forensics Program, assisted by Teaching Assistant Jordan Mills. Jewell also serves as the coordinator of student internships for the Department, and teaches courses in persuasion, interpersonal communication, and the senior seminar for Communication majors.

Professor Bob Gassaway serves as Associate Chair and Director of Undergraduate Studies.

The Department's BA Program in Journalism and Mass Communication was recommended for reaccreditation by the Accreditation Council for Education in Journalism and Mass Communication (ACEJMC) on the basis of the Department's Self-Study Report, and a three-day site-visit by an ACEJMC team led by Dr. Ed Bassett of the University of Washington. The Department comes up for reaccreditation every six years. The 12 main criteria considered by the ACEJMC include budget, salaries, faculty scholarship, curriculum, facilities, and the diversity of faculty and students. The site-visitors recommended that improvements be made in student records and advising (this recommendation is presently being implemented). Professor Bob Gassaway headed a faculty/student committee that prepared for the reaccreditation process.

The 1996-97 academic year was a time of notable growth and development for the UNM Chapter of the Public Relations Student Society of America (PRSA). Co-Presidents Kerrie Cubberly and Bonnie Englehardt continued the work begun in the 1995 establishment of the PRSSA chapter by Heidi Carr (MA, 1996) and Professor Estelle Zannes, the first PRSSA faculty advisor. Professor Dirk Gibson became the faculty advisor to the UNM PRSA in 1996.

PRSA projects in 1996-97 included chapter development and recruitment of new members, a seminar on PR uses of the Internet and World Wide Web, and the Chapter's entry into the Bateman Case Study competition. Major 1996-97 activities of A+ Public Relations, the undergraduate public relations firm, included drawing up an organizational system, creating an Account Supervisor/Account Executive structure, creating contract forms and complying with UNM and PRSA policies. Most attention was devoted to attracting and serving clients. Clients in 1996-1997 included AVISTA Video Histories, the
Albuquerque Hispano Chamber of Commerce, the March of Dimes, Joy Junction, and the UNM Department of Communication and Journalism. A+ provided a number of services to these clients, including strategic planning, special events planning and implementation, media relations, press release preparation and placement, Home Page design, brochure and newsletter production, among others.

The Freedom Forum provided a grant of $90,000 to the Department of Communication and Journalism for 1996-1997 to enable Patrícia Gonzales to join the teaching staff as a professional-in-residence. The Freedom Forum grant also allowed the Department to implement a Student Support Center in Room 215, in which Gonzales works with four student writing coaches to offer writing assistance and computer use to all students, but with special efforts toward improving minority recruitment and retention. With Professor Bob Gassaway, Gonzales has traveled to various high schools in the Southwest that have high enrollments of Native American and Hispanic students, to meet with students and teachers to discuss the special opportunities for minority journalists. In addition to teaching four courses in journalism and mass communication during the 1996-1997 academic year, Gonzales organized a one-day workshop on April 11th, “Telling the News from a Red and Brown Perspective,” and, with Gassaway, will offer a summer workshop for high school minority journalists. Gonzales, with her husband, Roberto Rodriguez, writes a nationally syndicated column about Hispanic matters.

Professor Estelle Zannes’ students enrolled in her C&J 334, Political Campaigns course in Fall, 1996, adopted a voting precinct in Albuquerque for the November Presidential election. They won a $1,000 award from the League of Women Voters for achieving a high rate of voter turnout by residents of their adopted precinct. The students in the course decided to give the prize to a worthy cause.

In Spring Semester, 1997, Everett M. Rogers and Bill Hart, Teaching Assistant, offered C&J 473/595, Diffusion of Innovations, over the EDEN (Electronic Distance Education Network) system to 45 reception sites in New Mexico. Some 30 students enrolled in the course at the UNM Main Campus, and an equal number at the remote sites, especially at the UNM North locations at Santa Fe and Los Alamos. Hart managed a Home Page for the diffusion course and utilized an e-mail system and a list serve to connect the students who were enrolled in the course. They asked questions, exchanged information, submitted written assignments, and entered suggested readings and examples of the diffusion of innovations. Rogers and Hart also had regularly-scheduled “office telephone hours” for discussions with their distanced students.

Ed Lewis, owner and publisher of Essence magazine, provided $5,000 in 1996-1997 for fellowships for undergraduate and graduate students who are African-Americans. The fellowships were awarded by a selection committee to Michelle Ellis, who is pursuing an MA degree, and to Vincent Kok-Sey-Tong, Martha Emery, and Lauri White, who are undergraduates.
STUDENT INTERNSHIPS

The Department’s Internship program, directed by Tom Jewell, enjoyed substantial growth during the 1996-1997 year, both in terms of the number of interns participating and the number of organizations offering internships. The number of students completing internships was 34 in Spring 1996, 20 in Summer, 1996, and 31 in Fall, 1996. More than 150 local organizations requested interns in public relations, government relations, organizational development, sales, human relations, television, radio, and newspaper and magazine reporting. Additionally, 37 organizations outside of the state of New Mexico requested UNM interns.

Interns receive from one to three credits, depending on the number of hours invested in an internship. Most students opt to work approximately 150 hours per semester in order to receive three credits. Students must (1) keep a daily log of their work, (2) write a paper about their internship, and (3) obtain a letter of evaluation from their sponsor. Most internships are unpaid.

Professor Dirk Gibson will manage the Department’s internship program in 1997-1998. Tom Jewell and Dirk Gibson are preparing new forms and procedures to help match interns and sponsors more efficiently. Jewell’s Senior Seminar class is setting up a web-page on the Internet where application procedures, forms, and other information about available internships will be provided.

FACULTY PERSONNEL CHANGES

Dr. Richard Schaefer, formerly on the faculty at Texas A&M University, was appointed Assistant Professor effective Fall, 1996, as was Dr. Dirk Gibson, formerly at Georgia Southern University. Professor Fred Bales was on sabbatical leave during Fall Semester, 1996.

Dr. Karen Foss was promoted to Professor, and Dr. Brad “J” Hall was promoted to Associate Professor, in 1996.

Karen Foss served as Director of the Women Studies Program at the University of New Mexico from 1995-1997. She returns to full-time teaching in the Department for the 1997-1998 academic year.

Visiting Assistant Professor Nagesh Rao accepted a tenure-track assistant professorship at the University of Maryland in Fall, 1997. Professor Jack Condon moved to half-time teaching (in Spring semesters only). Associate Professor Hank Trewhitt retired in May, 1997.

HONORS AND AWARDS

Dr. Jean Civikly-Powell received the University’s Presidential Teaching Fellow Award for 1995-1997. She was also appointed to serve as the Program Coordinator of the University’s New Faculty Orientation, “Teaching-Wise.”

An Honors Program for undergraduate majors who will have at least a 3.5 grade point average at the time of their graduation was activated in 1995. These students receive a BA degree cum laude, summa
cum laude, or magna cum laude. About 50 of the 500 undergraduates in the Department are eligible for the Honors Program.

Linda Daley, an MA student and teaching assistant in the Department, won a full-time paid internship in a national competition by the National Cancer Institute (NCI). Linda plans and evaluates cancer prevention communication campaigns for NCI at their headquarters in Bethesda, MD. She will return to UNM in summer, 1997 with data for her MA thesis.

Professor Hank Trewhitt was selected for the Zimmerman Award by the UNM Alumni Association in 1996.

In Summer, 1996, Everett M. Rogers served as the Ludwig Earhard Professor at the University of Bayreuth, in Germany, where he gave a series of lectures on the diffusion of innovations. In May, 1997, Rogers was awarded an honorary doctorate by the Ludwig-Maximilians University of Munich.

Everett M. Rogers presented the keynote address, “Communication Study in Latin America and North America,” at a February conference held in Mexico City that was jointly hosted by SCA (Speech Communication Association) and FELAFACS (the Latin American Association of Faculties of Communication Schools). The field of communication in Latin America has grown in recent decades to about 270 schools of communication, enrolling approximately 150,000 students. In comparison to its counterpart in North America, communication study in Latin America is more critical in perspective, and emphasizes mass communication (although organizational communication is now also growing to strength). Rogers will compare and contrast North American and Latin American communication study in a paper at the World Communication Association conference in San José, Costa Rica, in July, 1997.

Dr. Nagesh Rao was named Outstanding Teacher of the Year at the University of New Mexico in May, 1996.

SUMMER INSTITUTE IN INTERCULTURAL COMMUNICATION

Professor Jack Condon has participated in the Portland Summer Institute in Intercultural Communication for 21 years since its founding at Stanford University. In 1996 and in 1997, Condon was joined by Nagesh Rao, Peer Svenkerud, Everett M. Rogers, and Corinne Shefner-Rogers in offering four courses at the Summer Institute. Some 900 participants from 30 countries participated in the 1996 Summer Institute. Several MA students and doctoral participants in the Department have participated, in the Portland Institute, including Krista Alford, Carina Wilmot, Elaine Raybourn, Kevin Gore, Bill Kelly, Tomoko Masumoto, Aya Matsushima, and Kathryn Sorrells.

Four courses will be offered at the 1997 Summer Institute by teachers from UNM:
1. Experiencing the Rhythms of Culture, John Condon (with Keith Terry).
DOCTORAL PROGRAM IN INTERCULTURAL COMMUNICATION

The most important single development in the Department during recent years has been the launching of the Doctoral Program in Intercultural Communication. Six doctoral participants were admitted in 1995, eight in 1996, and eight individuals were offered admission in 1997.

These doctoral participants are involved (1) in teaching C&J 101, Introduction to Communication; C&J 110, Introduction to Mass Communication; C&J 130, Public Speaking; C&J 221, Interpersonal Communication; C&J 240, Organizational Communication; C&J 262, Radio and TV Performance; C&J 270, Communication for Teachers; C&J 323, Nonverbal Communication; C&J 325, Intercultural Communication; C&J 327, Persuasion; and C&J 358, Research Methods; and (2) as members of various research teams in the Department. First-year doctoral participants enrolled in six core courses: C&J 528, Statistical Methods, Fall, taught by Nagesh Rao; C&J 600, Communication Theory: History and Philosophy, Fall, Ev Rogers; C&J 601, Communication Theory Construction, Spring, Ken Frandsen; C&J 628, Quantitative Research Methods, Fall, Bob Gassaway; C&J 625, Advanced Intercultural Communication Seminar, Spring, Jack Condon and Miguel Gandert; and C&J 638, Qualitative Research Methods, Spring, Brad Hall (in 1996) and Jim Barker (in 1997).

The second year of doctoral study emphasizes course specialization, and the third year focuses on dissertation research.

The doctoral participants play an important role in planning the Doctoral Program, including serving as voting members of Department committees on faculty hiring, budget, graduate studies (including admissions), computer equipment, etc.

In October, 1996, the cadre of eight new doctoral participants, and several of their faculty members, traveled for three days to Acoma (Sky City), NM; Window Rock, AZ for discussions with tribal leaders of the Navajo Nations and its media; and to the San Juan County DWI Program, a drunk driving prevention program in Farmington, NM whose culturally appropriate prevention activities are being studied by UNM communication scholars. A high point of the trip was participation in a sweat lodge that is one component of the San Juan County DWI Program. The doctoral participants and their teachers benefitted from direct exposure to the tri-cultural setting of New Mexico.

Professors Jack Condon and Miguel Gandert taught C&J 625, Advanced Intercultural Communication in the Spring Semester, 1997, for doctoral participants, utilizing the multiple cultures of New Mexico to convey understandings of intercultural communication. Condon, Gandert, and their seminar participants traveled (1) to Santa Fe for a conversation with Dr. Richard Warren and Dr. Edward T. Hall about the origins of the field of intercultural communication, (2) to Northern New Mexico at Easter to
observe and photograph penitentes, and (3) to the El Paso/Juarez area to understand U.S./Mexico border relations.

Doctoral participants Bill Hart and Elaine Raybourn played a key role, with Professors Jack Condon, Nagesh Rao, Ev Rogers, Peer Svenkerud, Brad Hall, and Diana Rios, in designing a new freshman-level course, C&J 125, Communication across Cultures, which will be taught at UNM beginning in Fall, 1997 by Bill Hart. This course deals primarily with understanding the three cultures of New Mexico. A goal of this course is to assist students of diverse backgrounds in their first-year adjustment to campus life.


The Doctoral Program was ranked as the number one doctoral program in intercultural communication among U.S. universities in a ranking survey conducted by the Speech Communication Association in 1996. The rankings also placed the UNM Doctoral Program in the second quartile of all doctoral programs in communication theory and research, organizational communication, applied communication research, and instructional communication, and in the fourth quartile in rhetorical communication.

Faculty and doctoral participants wrote a series of workbooks for students in three of the Department's large-enrollment courses:


After the first year of publication, earnings from the sale of these workbooks will be utilized for graduate student research and travel to conferences. Workbooks are planned for three additional courses in the Department during 1997-1998.

Ann Mayer-Guell passed her doctoral comprehensive examinations in January, 1997, and is now employed by Anderson Consulting in Dallas. She is gathering data for her dissertation on virtual organizations.

MA PROGRAM IN COMMUNICATION

About 40 students are enrolled in the Department's MA Program in Communication. About 20 are supported as teaching assistants and/or research assistants. Some 15 individuals accepted admission to the
MA Program for Fall, 1996; 12 for admission in Spring, 1997; and 18 individuals were offered admission for Fall, 1997.

The MA Program provides specialization in the five areas of the Department's academic strength: Mass communication, intercultural communication, organizational communication, rhetorical communication, and interpersonal communication. In recent years, the Department has also gained considerable strength in health communication.

In 1996, the Department of Communication and Journalism established its web site on the World Wide Web. The web site contains information about the Department (such as research projects, faculty information, graduate students, and course descriptions and listings), information about the University of New Mexico (such as a link to Libros), and information about Albuquerque (such as links to web sites about the City of Albuquerque, local media, and relocation help). The Department's web site was developed by Bill Hart, a doctoral participant, and faculty members Bob Gassaway, Ken Frandsen, and Miguel Gandert. The Department's web site can be accessed at the following address: http://www.unm.edu/~cjdept.

The Department established an MA Program in Communication at the UNM North Branch Campus at Santa Fe and Los Alamos in 1995. Professors Stephen Littlejohn, Jim Barker, Peer Svenkerud, Everett M. Rogers, and Judith Hendry offered graduate-level courses at the Los Alamos and Santa Fe Campuses during the 1996-1997 academic year. Requirements and admission procedures for the MA Program are the same as on the Main Campus.

The following MA theses in Communication were completed in the past year or are nearing completion.

8. Heidi Carr (1996), Critical Viewing Skills: Can a Distinction between Reality and Fantasy Be Taught?
10. David Diamant (1997), Questioning the Sensemaking Process during Organizational Change: The Creation of a Model that Integrates Order and Disorder.
18. Emily Plec (1997), Selling Safety to Adolescents: A Rhetorical Analysis of Televised Public Service Advertising Campaigns.

UNM MEDIATION CLINIC

Kathy Domenici, an MA graduate of the Department and a part-time instructor, with Professor Jean Civikly-Powell and Adjunct Professor Stephen Littlejohn, established the UNM Mediation Clinic in
1994 to provide teaching, service, and research on mediation. Domenici, Littlejohn, and Civikly-Powell offer an undergraduate course in the Department, C&J 330, Mediation. Teaching Assistant Alicia Testa helps direct the Mediation Clinic, which serves the UNM community, including students, faculty, administrators, and staff in mediating conflict situations. Mediation involves interpersonal communication between disagreeing parties, assisted by mediators who act as nonjudgmental facilitators of the communication process. The Mediation Clinic provides mediation training workshops to individuals at UNM and to those off-campus. In January, 1997, Littlejohn and Domenici hosted a group of scholars from Argentina for a week of discussions about mediation.

FUNDED RESEARCH PROJECTS

The Department of Communication and Journalism at the University of New Mexico conducts a number of funded research projects. These research projects provide research assistantships and research opportunities for MA and Ph.D. students. Doctoral participants learn the important skills of designing successful research proposals. In addition to a variety of scholarly research projects that are carried out by individual faculty members, graduate students, and undergraduate students, the following funded research projects are presently underway:

1. EFFECTS OF MADD VICTIM IMPACT PANELS ON DRUNK DRIVING.

This research project, funded by the NIAAA (National Institute for Alcoholism and Alcohol Abuse) is now in its third of three years. Total funding is $952,775. Dr. Gill Woodall is Principal Investigator, Dr. Everett M. Rogers and Dr. Phil May (Director of CASAA) are Principal Co-Investigators. The research team includes Dr. Michele Polacsek, Dr. Nagesh Rao, Rick Burris, and Elaine Raybourn, and Elaine Hunt is Project Secretary. This research evaluates the effects of Mothers Against Drunk Driving (MADD) Victim Impact Panels (VIP) on first-time DWI (Driving While Intoxicated) offenders. Do the Victim Impact Panels deter future drinking and driving on the part of first-time DWI offenders in Albuquerque? The answer to this research question is particularly important in New Mexico, which generally leads the nation in the rate of alcohol-related traffic fatalities.

A monthly VIP consists of several victims making dramatic, emotional presentations about the impacts that a DWI crash has had on their lives. A presenter may break down during a VIP presentation while describing how her/his child was killed in a drunk driving crash. Panelists urge the audience members to accept responsibility for their drunk driving, and not to drink and drive again.

The research project follows first-time DWI offenders for two years in order to determine the longer-term effects of the VIPs on recidivism rates. Some 500 first-time DWI offenders are randomly assigned either (1) to receive the VIP training, or (2) not to receive this training. Both treatment and control groups receive training of a more informational nature, in the form of a court-mandated DWI School,
which consists of six training sessions dealing with the physiological effects of alcohol, the New Mexico DWI law, etc. The UNM investigators conduct personal re-interviews with the 500 DWI offenders one year after their VIP training session, in order to determine the longer term effects of the highly emotional VIP session.

2. EFFECTS OF THE SAN JUAN COUNTY DWI PROGRAM.

During 1996, Professors Gill Woodall, Everett M. Rogers, and Nagesh Rao, and Research Assistants Elaine Raybourn and Paul Swartwout, and Research Associates Rick Burris and Verne Westerberg, began evaluating the effects on repeated drunk driving of the San Juan County DWI Program, a unique 28-day training and treatment program for DWI offenders. This research is funded by a $50,000 grant from the Robert Wood Johnson Foundation. Since January, 1995, the approximately 750 DWI offenders per year in San Juan County (Farmington, NM) are sentenced to spend 28 days in a special facility, where they receive training to discourage drunk driving. For several months after their release from incarceration, their behavior is monitored by staff members of the San Juan County DWI Program.

During the first two years of operation of this DWI prevention program, a recidivism rate of 4.8 percent was achieved, which is much lower than the 18 percent recidivism of first-time DWI offenders in the first year following their initial arrest in the state of New Mexico. A likely reason for the effectiveness of the San Juan County DWI Program is its cultural appropriateness. Some 70 percent of the DWI offenders are Navajo. Program staff include Navajo counselors and monitors. The 28-day training includes a sweat lodge, talking circles, and other culturally-appropriate treatment activities. The UNM research team determines the effectiveness (1) of this culturally-appropriate training, and (2) of a VIP, on the DWI offenders in the San Juan County Program.

The 28-day San Juan County DWI Program was modified from a similar program conducted in Prince Georges County, MD. Presently, the San Juan County Program is diffusing from San Juan County to McKinley County (Gallup) to Doña Anna County (Las Cruces), and to Bernalillo County (Albuquerque).

A report describing the San Juan County DWI Program is available on request.

3. AMERICAN INTERNS IN JAPAN.

This research project began in 1996 to investigate the effects of a sojourn in Japan on American interns who have been trained in technical Japanese language courses and in other aspects of Japanese history and culture by the U.S./Japan Center at the University of New Mexico. Professors Jack Condon, Everett M. Rogers, and Dirk Gibson; Research Assistant Tomoko Masumoto; and Teaching Assistants Bill Kelly and Bill Hart are involved in this research project.

During 1996-1997, a pilot study was conducted of 14 interns prior to, and following, their sojourn in Japan. Next, a larger sample of interns will be studied, first from the University of New Mexico, and
then the sample will be broadened to include interns trained at certain of the 11 other university sites. This research is supported by the U.S./Japan Center at UNM.

4. UNIVERSITY-BASED RESEARCH CENTERS.

Beginning in 1996, personal interviews were conducted with the directors of 55 research centers at the University of New Mexico, in order to understand the process of technology transfer through which research findings from these multi-disciplinary research centers are conveyed to receptors outside of the university. Professors Everett M. Rogers and Brad 'J' Hall; Michio Hashimoto, Visiting Research Scientist; and Research Assistants Marcel Allbritton, Karyn Scott, Bill Hart, Kristen Speakman, and Molly Timko are, or were, involved in this research. Next steps in this project include an in-depth study of six of the 55 research centers, and a study of the 17 spin-off companies from the 55 research centers.

The University of New Mexico has doubled the amount of externally funded research in the past 10 years to about $200 million per year. Almost all of this increase occurred through its 55 research centers, about half of which were established in the past five years. The typical research center at UNM was founded by a scholar-entrepreneur, is multi-disciplinary in nature (in that faculty and graduate students from more than one academic department are involved), and serves as a boundary-spanner between the university and the organizations (such as private companies, Federal R&D labs, and state and Federal agencies) that provide funding.

A paper and a report describing this research are available.

5. AN ENTERTAINMENT-EDUCATION RADIO SOAP OPERA FOR FAMILY PLANNING AND HIV/AIDS PREVENTION IN TANZANIA.

Since 1993, communication scholars at UNM have evaluated the effects of "Twende na Wakati" (Let's Go with the Times) a radio soap opera that deals with family planning and with HIV/AIDS prevention in Tanzania. The Tanzania Project is the first entertainment-education soap opera whose effects are evaluated by means of a quasi-experiment over time, in which one area of Tanzania (Dodoma) did not receive the radio broadcasts, while the rest of the nation receives the broadcasts.

The effects of the entertainment-education soap opera are evaluated Professors Everett M. Rogers, Nagesh Rao, and Peer Svenkerud; Consultant Peter Vaughan; and Research Assistants Krista Alford, Suruchi Sood, and Shaheed Mohammed, working in collaboration with POFLEP (Population and Family Life Education Programme), a research center in Arusha, Tanzania. Data were gathered from a sample of about 3,000 Tanzanian households in 1993, 1994, 1995, and 1996. Data on the effects of "Twende na Wakati" were also gathered from new adopters of family planning at 79 Ministry of Health clinics in the treatment and control areas. The entertainment-education soap opera was also broadcast after 1993-1995 in the...
former control area of Dodoma. A third and fourth year of the radio soap opera are broadcast throughout Tanzania.

The research findings indicate that the radio soap opera has had strong effects on the adoption of family planning and HIV/AIDS prevention. A progress report from the Tanzania Project, an MA thesis, and several papers are available on request. Funding for the Tanzania Project was provided by the Lang Foundation ($10,000), the Rockefeller Foundation ($99,750), the Weyerhaeuser Family Foundation ($50,000), and the United Nations Fund for Population ($117,000).

The Tanzania Project led to a similar research design in India for evaluation of the effects of a radio soap opera, "Tinka Tinka Sukhi", whose broadcasts began in February, 1996. This research, funded by a grant from the Packard Foundation, is led by Professor Arvind Singhal of Ohio University and Dr. Peter Vaughan, and is conducted in collaboration with the Centre for Media Studies in New Delhi, directed by Dr. Bhaskara Rao. UNM Research Assistant Suruchi Sood is also employed on this research project.

6. CULTURAL MAINTENANCE AND THE MASS MEDIA FOR HISPANIC AUDIENCES IN NEW MEXICO.

Dr. Diana Rios, with support from the Southwest Hispanic Research Institute (SHRI) and the Center for Regional Studies (CRS), continues to investigate the effects of the mass media on culture change and preservation among Spanish and Mexican heritage people in the Albuquerque area. How do Spanish/Mexican heritage audiences use the mass media for cultural maintenance and for cultural assimilation? The Albuquerque Project is a comparative analysis with Rios' earlier study in Austin, Texas. Research Assistant Meridith Alvarez is involved in Rios' research.

7. MINORITY ALCOHOL AND SUBSTANCE ABUSE PREVENTION.

Dr. Nina Wallerstein (UNM School of Medicine) is Principal Investigator and Gill Woodall is Co-Principal Investigator for this five-year project, funded by NIAAA at $1,610,332, which began in 1994. This Project evaluates the Adolescent Social Action Program (ASAP), a substance abuse prevention program for minority youth in New Mexico.

8. PROJECT SIRVE.

Project SIRVE (Server Intervention Research, Verification, and Evaluation) consists of (1) telephone interviews with liquor license holders about the Server Training Act in New Mexico, (2) a pseudo-patron study in which trained actors simulate intoxication in liquor establishments to determine whether they would be served, and (3) in-depth interviews with servers about server training. This research project is funded by the National Institute on Alcohol Abuse and Alcoholism (NIAAA), and carried out in
collaboration with Dr. Bob Saltz of the Prevention Research Center at the University of California at Berkeley.

This three-year research project was funded by NIAAA in 1995 at $923,861 for several waves of pseudo-patron surveys, random telephone interviews with servers, and qualitative interviews with servers. Gill Woodall is Co-Principal Investigator; the Project SIRVE staff also includes Dr. Michele Polacsek and Research Assistant Randall Starling.

9. ENVIRONMENTAL HEALTH COMMUNICATION.

The Bernalillo County Department of Environmental Health (BCDEH) provided a grant of $50,000 in 1995-1997 for (1) formative evaluation research on how the BCDEH could more effectively convey to its audiences the services that are available to them, and (2) a series of training workshops provided to BCDEH staff. Personal interviews, focus group interviews, and observation were utilized by the project staff of Professors Everett M. Rogers, Michele Polacsek, Jean Civikly-Powell, and Peer Svenkerud; Research Associate Corinne-Shefner-Rogers; and Consultant Leslie Fagre. Needs (1) for pamphlets, videos, and other media materials, and (2) for staff training in public speaking and in mediation skills, were identified. These media materials and training courses were then designed, implemented, and evaluated in a second phase of the Project.

10. COMMUNICATION FOR NUCLEAR WEAPONS DIVERSIFICATION.

Professor James R. Barker is Principal Investigator, and Professors Estelle Zannes and Janice Schuetz are Co-Principal Investigators, of a project on Research and Development of Communication Messages and Practices for the Nuclear Weapons Diversification and Industrial Partnerships Program, funded in 1995 for 18 months at $75,600 by Los Alamos National Laboratory. The UNM communication scholars work in collaboration with Los Alamos scientists to develop methods and processes for disseminating information regarding the Laboratory's Nuclear Weapons Diversification Program to various audiences, including oil and gas industry executives, U.S. Department of Energy officials, and members of Congress.

11. ORGANIZATIONAL COMMUNICATION IN THE GAS OPERATIONS DIVISION OF PUBLIC SERVICE OF NEW MEXICO (PNM)

Professor James R. Barker is Principal Investigator, and Everett M. Rogers and Karyn Scott are Co-Principal Investigators, of a 1996-1997 research project funded by a grant from PNM. The investigators gathered data on employee participation, communication, and satisfaction. Research Assistant Karyn Scott expects to complete her doctoral dissertation from this research.
12. ENVIRONMENTAL JUSTICE IN KINNEY BRICK

Professors Everett M. Rogers and Peer Svenkerud and Research Associate Corinne Shefner-Rogers received a grant of $20,000 from the U.S. Environmental Protection Agency (EPA) for collaborative research with the Mountain View Community Association to investigate the role of community action in Kinney Brick, a low-income neighborhood in Bernalillo County, to ameliorate its severe water and sewage problems. This project involves data-gathering from a community survey and from archival materials in order to gain understanding of the community empowerment process. These lessons learned will then be conveyed to community leaders in the 200 areas of Bernalillo County with documented water pollution.
FACULTY, STAFF, PART-TIME INSTRUCTORS, TEACHING ASSISTANTS
AND RESEARCH ASSISTANTS, 1996-1997

**Faculty**

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<tr>
<th>Name</th>
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<tr>
<td>Fred V. Bales</td>
<td>Associate Professor</td>
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<tr>
<td>James Barker</td>
<td>Assistant Professor</td>
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<tr>
<td>Jean M. Civikly-Powell</td>
<td>Professor, Associate Chair, and Director of the Teaching Assistant Resource Center (TARC) and the Mediation Clinic</td>
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<tr>
<td>John Condon</td>
<td>Professor</td>
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<tr>
<td>Karen Foss</td>
<td>Professor and Director of the Women Studies Program</td>
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<tr>
<td>Kenneth D. Frandsen</td>
<td>Professor and Associate Dean, College of Arts and Sciences</td>
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<tr>
<td>Diane Furno-Lamude</td>
<td>Associate Professor</td>
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<td>Dirk Gibson</td>
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<td>Bradford &quot;J&quot; Hall</td>
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<td>Miguel Gandert</td>
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<td>Bob M. Gassaway</td>
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<td>Thomas E. Jewell</td>
<td>Lecturer III and Director of Forensics</td>
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<td>Michele Polacsek</td>
<td>Visiting Assistant Research Professor</td>
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<td>Nagesh Rao</td>
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<td>Diana L. Ríos</td>
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<td>Everett M. Rogers</td>
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<td>Richard Schaefer</td>
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<td>Janice E. Schuetz</td>
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<td>Peer Svenkerud</td>
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<td>Henry L. Trewhitt</td>
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<td>W. Gill Woodall</td>
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<td>Estelle Zannes</td>
<td>Professor</td>
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**Adjunct Professors**

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<td>Stephen Littlejohn</td>
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<td>Mike Osborn</td>
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<td>Suzanne Osborn</td>
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**Professional-in-Residence**

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<td>Patрисia Gonzales</td>
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**Visiting Research Scientist**

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<td>Arne Holte</td>
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<td>Morton Stefensen</td>
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**Part-Time Instructors**

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<td>Joe Day</td>
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<td>Kathy Domenici</td>
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<tr>
<td>Nicole Thigpen</td>
<td>Fall, Spring</td>
</tr>
<tr>
<td>Molly Timko</td>
<td>Spring</td>
</tr>
<tr>
<td>Carina Wilmot</td>
<td>Fall, Spring</td>
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<tr>
<td>Soo-Jin Yoon</td>
<td>Fall, Spring</td>
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<td>Staff</td>
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<tr>
<td>Kerrie Cubberly</td>
<td>Work-Study Assistant</td>
</tr>
<tr>
<td>Elaine Hunt</td>
<td>MADD Project Secretary</td>
</tr>
<tr>
<td>K. Jenison Klinger</td>
<td>Department Administrator</td>
</tr>
<tr>
<td>Patrick Kiska</td>
<td>Electronic Technician</td>
</tr>
<tr>
<td>Dianna Ortiz</td>
<td>Department &amp; Undergraduate Secretary</td>
</tr>
<tr>
<td>Kim Summers</td>
<td>Graduate Administrative Assistant</td>
</tr>
</tbody>
</table>
Barker, James R.


Jean Civikly-Powell

Condon, John C.

Foss, Karen A.


Fumo-Lamude, Diane


Gandert, Miguel


Miguel Gandert (1996), Blue Mesa Review #8, Albuquerque, University of New Mexico, Department of English, Contributing Photographer.

Miguel Gandert (1996), Miguel Gandert Documents the Indo-Hispanic Culture of Native New Mexico, Serbin Communications, Photographers’ Forum.

Gibson, Dirk C.


Gonzalez, Patrisia

Patrisia Gonzalez and Roberto Rodriguez (in press), Gonzales and Rodriguez: Uncut and Uncensored, Berkeley, University of California, Department of Chicano Studies.


Hall, Brad T.


Jewell, Thomas E.

Rao, Nagesh


Ríos, Diana I.


Rogers, Everett M.


Schaefer, Richard J.

Schuetz, Janice


Svenkerud, Peer


Trewhitt, Henry


Woodall, W. Gill

THE ANNUAL REPORT
OF THE
DEPARTMENT OF EARTH AND
PLANETARY SCIENCES

July 1, 1996 to June 30, 1997
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I. GENERAL DEPARTMENTAL INFORMATION
FACULTY AND STAFF

PROFESSORS:

Rodney C. Ewing, Ph.D., Stanford University, 1974. (Regents Professor)
John W. Geissman, Ph.D., University of Michigan, 1980.
Karl E. Karlstrom, Ph.D., University of Wyoming, 1981.
Cornelis ("Kase") Klein, Ph.D., Harvard University, 1965.
Albert M. Kudo, Ph.D., University of California, San Diego, 1967.
Barry S. Kues, Ph.D., Indiana University, 1974.
Leslie D. McFadden, Ph.D., University of Arizona, 1982.
James J. Papke, Ph.D., University of Minnesota, 1964. (Regents Professor)

ASSOCIATE PROFESSORS:

Michael E. Campana, Ph.D., University of Arizona, 1975.
David Gutzler, Ph.D., Massachusetts Institute of Technology, 1986.
Stephen P. Huestis, Ph.D., University of California, San Diego, 1976.
Jane Selverstone, Ph.D., Massachusetts Institute of Technology, 1985.
Gary Smith, Ph.D., Oregon State University, 1986.

ASSISTANT PROFESSORS:

Yemane Asmerom, Ph.D., University of Arizona, 1988.
Frank Pazzaglia, Ph.D., Pennsylvania State University, 1993.
Peter Fawcett, Ph.D., Pennsylvania State University, 1994.

SENIOR RESEARCH PROFESSORS:

Wolfgang E. Elston, Ph.D., Columbia University, 1953.

RESEARCH PROFESSORS:

Charles K. Shearer, Jr., (Institute of Meteoritics), Ph.D., University of Massachusetts, 1983.

RESEARCH ASSOCIATE PROFESSORS:

Adrian J. Brearley, (Institute of Meteoritics), Ph.D., University of Manchester, Great Britain, 1984.

PROFESSOR EMERITUS:

J. Paul Fitzsimmons, Ph.D., University of Washington, 1949.
RESEARCH STAFF:

Peter Burns, Post-Doctoral Scientist, Ph.D., University of Manitoba, 1994.
Mostafa Fayek, Post-Doctoral Scientist, Ph.D., Saint Petersburg State University, Saint Petersburg, Russia, 1992.
Mary Caress, Post-Doctoral Scientist, Ph.D., University of California, Santa Barbara, 1995.
James Connolly, Research Associate (Institute of Meteoritics), M.S., University of New Mexico, 1981.
Steve Getty, Senior Research Associate III, Ph.D., Brown University, Rhode Island, 1990.
John Husler, Senior Staff Chemist, M.S., University of New Mexico, 1968.
Rhian H. Jones, Senior Research Associate (Institute of Meteoritics), Ph.D., University of Manchester, Great Britain, 1986.
Rick Livaccari, Post-Doctoral Scientist, Ph.D., University of New Mexico, 1994.
Kirsten Menking, Post-Doctoral Scientist, Ph.D., University of California, Santa Cruz, 1995.
Mark L. Miller, Senior Research Associate, Ph.D., University of New Mexico, 1992.
Roberto S. Molina-Garza, Senior Research Associate, Ph.D., University of Michigan, 1991.
Horton Newsom, Senior Research Associate, (Inst. of Meteoritics), Ph.D., University of Arizona, 1981.
Aurora Pun, Post-Doctoral Scientist, Ph.D., University of New Mexico, 1996.
Michael N. Spilde, Research Associate (Institute of Meteoritics), M.S., South Dakota School of Mines and Technology, 1987.
Padinare V. Unnikrishna, Post-Doctoral Scientist, Ph.D., Utah State University, 1995.
Michael Wiedenbeck, Senior Research Associate, (Inst. of Meteoritics), Ph.D., Australian National University.
Huifang Xu, Senior Research Associate, Ph.D., Johns Hopkins University, 1993.

ADJUNCT PROFESSORS:

Gary Acton, Ph.D., Northwestern University, 1990.
George Arnold, Ph.D., University of Maryland, 1954.
Warren S. Baldridge, Ph.D., Caltech University, 1978.
M. Susan Barger, Ph.D., Pennsylvania State University, 1982.
Alan Cheetham, Ph.D., Columbia University, 1959.
Michael Fehler, Ph.D., Massachusetts Institute of Technology.
Raymond Fletcher, Ph.D., Brown University, 1967.
Ernest S. Gladney, Ph.D., University of Maryland, 1974.
Robert J. Glass, Ph.D., Cornell University, 1988.
Fraser E. Golf, Ph.D., University of California, Santa Cruz, 1977.
Stephen Harlan, Ph.D., University of New Mexico, 1992.
Charles D. Harrington, Ph.D., Indiana University, 1970.
Grant H. Heiken, Ph.D., University of California, Santa Barbara, 1972.
A. William Laughlin, Ph.D., University of Arizona, 1969.
Spencer G. Lucas, Ph.D., Yale University, 1983.
Sean McKenna, Ph.D., Colorado School of Mines, 1994.
Matthew Nyman, Ph.D., Virginia Polytechnic Institute and State University, 1992.
Donald Peterson, Ph.D., Stanford University, 1961.
Aurora Pun, Ph.D., University of New Mexico, 1996.
John Shomaker, Ph.D., University of Birmingham (United Kingdom), 1995.
Daniel B. Stephens, Ph.D., University of Arizona, 1979.
Erik Webb, Ph.D., University of Wisconsin, Madison.
Stephen G. Wells, Ph.D., University of Cincinnati, 1976.
Thomas Williamson, Ph.D., University of New Mexico, 1993.
Kenneth Wohletz, Ph.D., Arizona State University, 1980.
Crayton Yapp, Ph.D., Caltech, 1980.

STAFF:

Christopher Adcock, Lab Technician (IOM)
George Carnako, Building Systems Mechanic
Mabel T. Chavez, Editorial Assistant II
Sara Lentz, Staff Assistant, Institute of Meteoritics
Grant Fowler, SIMS Technician, Institute of Meteoritics
Yongxiang Guo, STEM Lab Technician
Gilbert E. Griego, Harding Mine Maintenance Mechanic
Patricia Haleli, Editorial Assistant II
Sally E. Hayes, Accounting Technician
Cindy Jaramillo, Staff Assistant
Robert Macy, Electronics Technician
Robyn Santillanes, Department Administrator
Florine Rietmeijer, Lab Aide
Mary Sisley-Franson, Administrative Assistant, Institute of Meteoritics

VISITING SCIENTISTS (in residence, 1996-1997):

Dr. Weiliang Gong, Institute of Geochemistry, Chinese Academy of Sciences, visiting scientist working with R. Ewing.
Dr. Boris Burakov, Khlopin Radium Institute, St. Petersburg, Russia, working with R. Ewing, Jan. - March, 1997.
Dr. Bernard Groberty, Aarhus University, Denmark, April - June, 1997, working with R. Ewing.
Dr. Young Up Lee, Chonbuk National University, Chonju, South Korea, Jan. - Dec. 1997, working with G. Smith.
DEPARTMENTAL STANDING COMMITTEES, 1996-97

GRADUATE COMMITTEE
K. KARLSTROM
M. Elrick
R.C. Ewing
J. Papike
F. Pazzaglia
J. Selverstone

UNDERGRADUATE COMMITTEE
L.D. McFADDEN
L. Crossey
S. Huestis
C. Klein
L. Woodward

SCHOLARSHIP COMMITTEE
B. KUDO
L. Crossey
M. Elrick
S. Huestis

FACILITIES COMMITTEE
J. GEISSMAN
Y. Asmerom
R.C. Ewing
J. Papike
C. Shearer

COMPUTER COMMITTEE
D. GUTZLER
J. Connolly
P. Fawcett
M. Miller
F. Pazzaglia
M. Spilde
B. Riley (Graduate student)

COLLECTIONS COMMITTEE
G. SMITH
R.C. Ewing
C. Klein

GRADUATE ADVISOR
K. Karlstrom

UNDERGRADUATE ADVISOR
L. Crossey

HONORS ADVISOR
R.C. Ewing

THIN SECTION LAB
K. Karlstrom

LIBRARY LIASON
S. Huestis

LECTURES AND COLLOQUIUM
Y. Asmerom
B. Kudo
J. Geissman

ALUMNI RELATIONS
L. Crossey

PUBLICATIONS
M. Campana
VEHICLES

M. ELRICK
Dept. Administrator
Dan Koning (Graduate student)

SEARCH COMMITTEES

1. STABLE ISOTOPE GEOCHEMISTRY
   
   C. KLEIN
   Y. Asmerom
   M. Campana
   L. Crossey
   J. Papike
   J. Selverstone

2. SILVER PROFESSOR
   
   J. GEISSMAN
   M. Elrick
   S. Huestis
   K. Karlstrom
   B. Kudo
   A. Meldrum (Grad. Student)
APPOINTMENTS AND SEPARATIONS

APPOINTMENTS TO FACULTY

Peter Fawcett, Assistant Professor (January, 1997).

SEPARATIONS FROM FACULTY

None

APPOINTMENTS TO STAFF

Robyn Santillanes, August, 1996.

SEPARATIONS FROM STAFF

Dr. Peter Burns, August, 1996.
Dr. Mostafa Fayek, March, 1997.
II. ACTIVITIES, ACHIEVEMENTS, AND PLANS
INTRODUCTION

This annual report summarizes the activities, accomplishments and plans of the Department of Earth and Planetary Sciences (E&PS), including the Institute of Meteoritics (IOM), during the 1996-97 academic year. Most details of faculty activities (Part III) are derived from biographical supplements for 1996, whereas the general discussions and information on other aspects of the Department include the period from July 1, 1996 to June 30, 1997. This inconsistency in reporting UNM data (calendar year for individuals; academic year for departments) is unfortunate, and UNM should choose one or the other period for its standardized reports. As this is the only document that comprehensively summarizes the Department's history during the past year, and is used as a source of information by many people both within and outside of the University, we have endeavored to make it as complete as possible.

During the 1996-97 academic year, the faculty of the Department of Earth and Planetary Sciences consisted of 19 regular tenured or tenure-track faculty (18.5 FTE), 2 senior Research Professors, 2 Research Professors and 2 Research Associate Professors. In addition, 14 Ph.D.-level research scientists (3 within IOM) filled a variety of non-faculty positions within the Department. Seven were scientific staff with specific responsibilities relating to analytical laboratories and departmental research endeavors; 7 were post-doctoral scientists. The Departmental faculty is thus augmented by a significant number of other doctoral-level geoscientists, who in some cases participate in teaching and advising of graduate students, and add to the research capabilities and scholarly reputation of the Department.

Permanent scientific staff also include several technicians and Research Associates, and the office administrative, clerical, and support staff also contribute vitally to the functioning of the Department. Several other geoscientists affiliated with other institutions were in residence in the Department for periods ranging from weeks to the entire year, conducting research as visiting scientists and working with faculty and staff members. The names of all these departmental personnel are included in Part I of this report.

FACULTY AND STAFF ACCOMPLISHMENTS

Position Changes in Faculty

One new faculty member, Assistant Professor Peter Fawcett, joined the faculty this year, arriving in January, 1997. Peter is a paleoclimatologist and sedimentary geologist, whose main interests are in how the Earth's climate has evolved throughout its history, and the mechanisms by which both short- and long-term climate changes occur. He received his doctoral degree from Penn State in 1994, continued there for a year as a post-doctoral scientist, and then spent a year in the atmospheric physics group at the University of Toronto, Canada, before coming to UNM.

One faculty vacancy existed during the 1996-97 year, in stable isotope geochemistry (because of Dr. Crayton Yapp's resignation in June, 1995). The Department's search to fill this position was frozen in January 1996; in Fall 1996 the search was revived. Another round of search freezes occurred in Spring 1997, but the Department was fortunate to be allowed to bring the search to completion. Dr. Zachary Sharp (Ph.D., 1987, University of Michigan), currently at the University of Lausanne, Switzerland, has accepted the Department's offer of a faculty position at the Associate Professor (tenured) level and will arrive in January, 1998. Thanks are due to the stable isotope geochemistry search committee (C. Klein, Chair; L. Crosse, J. Papike, M. Campana; J. Selverstone, and Y. Asmerom), which devoted much time and effort to this process through two years.
During the year the faculty also conducted a search for a Caswell Silver Research Professor, a position endowed by the Caswell Silver Foundation. Dr. Mousumi Roy (Ph.D., M.I.T., 1997), a geodynamicist and geophysicist, will assume this 2-year position in July 1998, after a year's post-doctoral appointment at the Southern California Earthquake Center. K. Karlstrom (Chair), M. Elrick, J. Geissman, S. Huestis, B. Kudo, and Ph.D. student Al Meldrum comprised the search committee.

**Impending Faculty Changes**

Professor Rod Ewing announced his retirement from the UNM faculty and acceptance of a faculty position at the University of Michigan beginning in August 1997. The faculty discussed this impending vacancy and concluded that we should search as quickly as possible for a mineralogist/materials scientist at a senior level to replace Professor Ewing.

Professor Lee Woodward announced his intention to retire from the Department effective December 31, 1997.

The E&PS faculty discussed the volcanology program, conducted jointly with Los Alamos National Laboratory, especially the need for a volcanologist on our faculty to help carry our part of this program forward. A volcanologist is the top priority for any new faculty position that might become available to the Department.

**Other Position Changes**

A national search was conducted for a Research Scientist to succeed Dr. Lu-Min Wang, as manager of the Transmission Electron Microscopy Lab. Dr. Wang, together with Professor R. Ewing, will be leaving for positions at the University of Michigan in late summer 1997. This search was completed in Spring, 1997, with the selection of Dr. Huifang Xu (Ph.D., Johns Hopkins, 1993). Dr. Xu arrived to take up his duties in June, 1997.

Robyn Santillanes began as Department Administrator in August, 1996, succeeding Alice Quattrocchi, but retired in June, 1997. Another search was held, resulting in the selection of Paula Holub for this position; her appointment to begin in July, 1997.

Long-time (16 years) staff member George Carnako also retired in Spring, 1997, and the Department searched and filled his position with Anthony Velardez, who will begin July 1, 1997.

Patti Halchi, half-time word-processor for the past 3 years, resigned to attend graduate school.

**Faculty Advancement and Honors**

Maya Elrick was promoted to Associate Professor (with tenure) in Fall, 1996, and Associate Professor Mike Campana was reviewed and recommended for promotion to full Professor effective Fall 1997. The Department conducted a Code 3 review of Assistant Professor Frank Pazzaglia; the results were very positive, and he will begin his second 3-year appointment in Fall, 1997. The Department also conducted A. Yemane's Code 4 review.

Mike Campana was selected to be the Director of UNM's Master's Water Resources Administration program beginning in 1997-98. This is a half-time administrative position.
Laura Cressey was appointed Associate Dean of the College of Arts and Sciences, beginning July 1, 1997. This will be a 2-year appointment, 2/3 time in the College.

Laura Cressey was chosen as one of 4 Regents lecturers in the College of Arts and Sciences for the period 1997-2000. This appointment recognizes achievements of the very highest level by UNM Associate Professors.

Two notable professional awards were conferred upon E&PS faculty this past year. Kase Klein received the 1996 Carnegie Mineralogical Award, which honors outstanding contributors in mineralogical preservation, conservation, and education. Rod Ewing was presented the 1996 Hawley Award, which honors the author of the paper in the journal The Canadian Mineralogist judged to be the best of the year. Dr. Ewing shared the award with coauthors Peter Burns and Mark Miller for the paper "U^6+ minerals and Inorganic phases: a comparison and hierarchy of crystal structures".

Les McFadden was elected to the Faculty Senate beginning in Fall, 1997, where he will join current Senator Laura Cressey.

Sabbatical Activities

One faculty member, Rod Ewing, was on sabbatical leave, during the Fall, 1996 semester. Most of his sabbatical leave was spent at Aarhus University in Denmark. His work during the sabbatical can be grouped into five categories:

1. Continued research in the area of heavy-particle and solid interactions. As part of this study he developed collaborations with Danish physicists at Aarhus University for the irradiation of geologic materials and as part of the collaboration presented a short course on the amorphous state.

2. Continued research on phases (zircon and monazite) that may find application as durable hosts for the disposition of excess weapons plutonium.

3. Continued studies of the crystal chemistry and topology of actinide-bearing oxides, oxyhydroxides and silicates.

4. Worked with a Ph.D. candidate (Keld Jensen at Aarhus University) on a description of the mineralogy and geochemistry of the Oklo natural reactors.

5. Continued pro bono work on behalf of the National Research Council (the operating arm of the National Academy of Sciences) in the area of nuclear waste management. He chaired an international workshop on "Glass as a Waste Form and Vitrification Technology" in May in Washington, D.C. Much of the following six months was devoted to completing the workshop report. He also served on the WIPP Committee of the NRC and was a coauthor of a major report evaluating the status of the scientific studies in support of WIPP. He was a member of an NRC delegation that visited in November numerous institutes in Moscow, as a first step to establishing research collaborations and organizing a workshop on topics of common interest to Russian and American scientists.

As a result of the sabbatical leave, Professor Ewing, completed 2 proposals, gave 6 invited presentations, and completed 13 papers for referred journals.
Instructional Activities

1. Student enrollments

Student enrollments in Department of Earth and Planetary Sciences courses during the 1996-97 academic year, as indicated by total student credit hours (SCH), was 6303, a decline of 3.4% from the previous year. These figures include academic year courses plus field courses (EPS-319,-420) taught during the summer. The Department’s SCH figures (adjusted to include these field courses) for the past 5 years are given below. Recent departmental declines in SCH mirror a general decline in UNM enrollment, (3.1% in 1996-97), thought to be mainly related to Albuquerque’s booming economy, high employment rate, and increased competition from 2-year institutions. There is also some evidence of a pervasive decline in enrollment in science courses across campus, possibly due to an increase in transfer students who have fulfilled science requirements at other institutions.

<table>
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<tr>
<th>Year</th>
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<tr>
<td>1992-93</td>
<td>8190</td>
<td>6.7</td>
</tr>
<tr>
<td>1993-94</td>
<td>7249</td>
<td>- 11.5</td>
</tr>
<tr>
<td>1994-95</td>
<td>6763</td>
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<tr>
<td>1995-96</td>
<td>6524</td>
<td>- 3.5</td>
</tr>
<tr>
<td>1996-97</td>
<td>6303</td>
<td>- 3.4</td>
</tr>
</tbody>
</table>

The number of declared undergraduate E&PS majors stood at 71 during the Spring, 1997 semester. During Fall, 1996, 31 M.S., and 16 Ph.D., students were pursuing degrees in the Department. In Spring, 1997, there were 32 M.S., and 14 Ph.D., students. Additional, more detailed information about the graduate students and their activities and accomplishments are presented in Part IV of this report.

2. Degrees Awarded (Fall 1996 through Summer, 1997)

17 Bachelors Degrees

B.A. - Madigan Chandler, Jeanette M. Cordova, Eric Gauerke, Mary Reynolds, Luann Steele, Sue Vorenberg, and Barbara Whitworth.


12 Masters Degrees


3 Ph.D. Degrees

3. Adjustments in Normal Course Offerings

Current faculty vacancies did not have a significant effect on course offerings as the other faculty filled in on some courses. As in the past, graduate students taught 3 lecture sections of EPS-101 (one at Kirtland AFB) during the year, in order to broaden their preparation for academic careers. A few other courses were taught by part-time instructors or members of the Department's research staff, but as is our tradition, members of the regular faculty taught the great majority (84%) of our course offerings during the year. Several new courses were offered for the first time, including EPS-251 (Meteorology; cross-listed with the Geography Department) by D. Gutzler, and EPS 402 (Environmental Mineralogy) and -204 (Gem Minerals and Gems), both by C. Klein. EPS-204, taught in the evening during the spring, was a great success, attracting an enrollment of 52. Two sections of EPS-300 (topics in geology) were conducted. One, "Volcanoes of North America", by LANL volcanologist Ken Wohletz and the Department's W. Elston, had an enrollment of 50, far more than expected. Adjunct Professor Susan Barger reprised her seminar on Materials Science of Art Objects in the other EPS-300 section. B. Kudo, in addition to departmental teaching, also taught the course on Natural Sciences in University College.

4. Summer Course Offerings

During summer, 1996, the Department conducted its 7-week Beginning and Advanced Field Geology sequence (EPS-319 and EPS-420), instructed by J. Geissman and K. Karlstrom, respectively, as well as a section of EPS-101. The field geology courses are now attracting as many or more students from other universities than majors from our Department. Late in the summer of 1996, G. Smith and several Los Alamos National Lab volcanologists again held EPS-451 (Field Volcanology), based at UNM's Young Ranch facility near Cochiti. The course was fully enrolled with a diverse group of students, mainly from other states and some foreign countries. EPS-319, -420, and -101 were scheduled for summer, 1997, together with EPS-300 (Volcanoes in Human Affairs, taught by G. Heiken, of LANL), and EPS-365 (taught by H. Newsom, of IOM).

5. Curriculum Changes

There were no significant curriculum changes in any of our programs in 1996-97.

Research and Publication

The faculty, research staff and students of the Department continued their high level of productivity in research in 1996-97. Research—contributing to human knowledge in one's discipline—is an essential and fundamental function of the Department of Earth and Planetary Sciences at UNM. The Department's status and respect within its discipline depends primarily on the quality and quantity of its research, just as a university's stature depends mainly on the scholarly activities of its entire faculty. In addition, active research programs form an essential teaching tool in keeping students up to date, in educating them not only about facts but also about how knowledge is gained, and (especially with graduate students) providing support for thesis/dissertation work and in the mentoring process of future geoscientists.

During calendar year 1996 members of the Department and Institute of Meteoritics (including faculty, research scientists and students) produced about 280 publications, in the following categories:
Books Edited: 4
Scholarly Papers
Refereed Journals: 75
Edited Volumes: 45
Geological Maps: 2
Notes, Extended Abstracts, etc.: 35
Technical Reports: 7
Published Abstracts: 113
TOTAL: 281

As in past years, graduate students and even some undergraduates participated significantly in the Department's publication effort. Some 22% of refereed papers published in 1996 had student coauthors and students contributed to about 41% of the published abstracts based on presentations made at professional meetings; in many cases students were the presenters. These figures testify to the importance the faculty places on involving students in research and in presenting the results of their research through professional talks and publications, an important part of their preparation for careers in the geosciences. All 1996 departmental publications are listed by author in Part III-2 of this report.

Faculty and research scientists also continued their success in attracting external funding to support their research. About 70 different externally funded grants and contracts were in effect among Department and Institute of Meteoritics scientists in FY 1996-97, (see Part III-3 for a complete list), having a total value of about $6.0 million. At a single representative point in this year (December 31, 1996), the total value of active grants and contracts was about $4.8 million, a figure that provides a snapshot of external funding activity during the year. New grants, worth about $2.0 million, were awarded to Department and Institute of Meteoritics personnel in FY 1996-97. Total indirect costs returned to the University by departmental (excluding Institute of Meteoritics) grants in 1996-97 was more than $260,000.

The great majority of these awards was from Federal agencies, especially the National Science Foundation, Department of Energy, the National Labs, and the National Aeronautics and Space Administration. Competition for these awards with scientists across the country has always been rigorous, but has become increasingly severe in recent years, which makes the success of the Department and IOM in 1996-97 all the more noteworthy. The amount of new research funding received each year by the faculty and research scientists exceeds the entire state/university-supported budget of the Department. Not only do these grant and contract funds support a large proportion of departmental research, and benefit the University as a whole through the overhead funds they generate, but many graduate students are supported as research assistants by these funds as well (see Part IV). Also, because most of these external funds are expended in the state, they represent a significant addition to New Mexico's economy.

In addition to publications and grant/contract-supported research, the E&PS faculty and research staff also pursued a wide variety of other research projects during 1996-97 that were not externally funded or published upon during the year (see Part III-4). One particularly interesting outgrowth of departmental research was the invention of a process of electron lithography of orthophosphate materials, by Ph.D. student Al Meldrum, Professor Rod Ewing, and L.A. Boatner.

Other Scholarly Activities

Most of the faculty and research staff participated widely in professional societies and organizations, presenting numerous talks and poster sessions, organizing and chairing symposia, leading field trips, and serving as officers. Such activities are a form of service to the profession, but also increase professional recognition,
contacts, the exchange of ideas and potential for joint research, and leads to greater visibility for UNM and the work of its faculty. This participation is summarized in Part III-5 of this report, and other professional activities are listed in Part III-6.

The faculty's total involvement in professional activities is too lengthy to completely survey here, but some of these contributions were especially important nationally and internationally, and are worth mentioning.

Several faculty participated as panel members for various Federal agencies, providing review, guidance, and comment at the national level. For NSF, J. Geissman served on the earth sciences instrumentation and facilities program panel; K. Karlstrom on the continental dynamics panel; and J. Selverstone on the tectonics panel. A. Brearley (IOM), H. Newsom (IOM) and F. Rietmeijer served on several different NASA review panels. R. Ewing served on National Academy of Sciences/National Research Council Panels on the Waste Isolation Pilot Plant, and on an international workshop on glass as a waste form and verification technology, and also as co-chair of Basic Energy Sciences panels on radiation effects in nuclear waste forms, and on radiation effects in ceramics and on a National Advisory Council on environmental policy and technology for the Environmental Protection Agency. J. Papike is a member of the Advisory Committee for the Institute of Geophysics and Planetary Physics for Los Alamos National Lab and the University of California. M. Campana served as Chair of the technical committee for the 3rd USA/CIS joint conference on environmental hydrology and hydrogeology in Tashkent, Uzbekistan.

Participation by the faculty and research staff as Associate Editors and on Editorial Boards of international journals was substantial in 1996, as indicated by the following list: A. Brearley (American Mineralogist), M. Campana (Environmental and Engineering Geoscience: Hydrogeology Journal), L. Crossey (Geology, Geological Society of America Bulletin), R. Ewing (Journal of Materials Research, Journal of Nuclear Materials), J. Geissman (Chief editor, Geological Society of America Bulletin; Geology), D. Gutzler (Journal of Climate), C. Klein (Precambrian Research; McGraw-Hill Encyclopedia of Science and Technology); L. McFadden (Catena); H. Newsom (Geochimica et Cosmochimica Acta); J. Selverstone (Journal of Metamorphic Geology), G. Smith (Geological Society of America Bulletin, Sedimentology: Journal of Sedimentary Research).

Notable contributions to professional societies include J. Papike's service as Council Member of the Mineralogical Society of America; R. Ewing, Vice-President, International Union of Materials Research Societies and C. Klein, Treasurer, International Mineralogical Association.

Several faculty participated in professional and scholarly activities outside the U.S. during 1996-97, including Canada, Mexico, Belize, Great Britain, Poland, Denmark, Spain, Italy, Germany, Switzerland, Greece, France, Russia, China, Hong Kong and Australia. Such activities help to advance UNM's reputation world wide. Most of these visits are quite rewarding, but one, to China in August, 1997, was not. Roberto Molina-Garza and John Geissman, with Adjunct Professor Spencer Lucas, travelled to western China to conduct field research on a well-exposed Permian-Triassic boundary section, with Chinese colleagues. However, their Chinese hosts did not honor the research agreement, stopped field work, confiscated specimens that were to be studied in the U.S., and hindered the return of the UNM crew. Their experience was profiled in a news article in Science (Nov. 1, 1996), and matters concerning return of the specimens remain unresolved a year later.

University and Public Service

Service to the University and to the public is an important component of the Department's activities. During the past year, Geology faculty participated on numerous College and University committees. Both J. Geissman and L. Crossey served on the Faculty Senate during 1996-97 and L. McFadden was elected to the Senate to begin in Fall, 1997. The faculty also served as a resource of expertise in the geosciences for individuals, groups and organizations outside the University (see Parts III-7 and III-10 for lists of these activities). Members of the Department routinely identify rock, mineral, fossil and suspected meteorite specimens for the
public, give talks to civic groups and public school classes, judge in science fairs, answer questions for radio, TV
and newspaper reporters, and host open houses for local gem and mineral groups.

An important resource provided by the Department to the University and the public is maintenance
(without specified University support) of two public museums, one devoted to geology (rocks, minerals, fossils,
New Mexico geology) and the other to meteorites. These museums are open each weekday, are free, and are
visited by thousands of school children and adults each year. A free pamphlet provides information for a self-
guided tour, and faculty and graduate students on occasion lead tours when arrangements have been made in
advance. A more complete description of activities involving the Department's museum and geological
collections is presented later in this report.

The Department also maintains the Harding Pegmatite mine in southern Taos County, donated to UNM
by Dr. Arthur Montgomery, as an unusual mineral-collecting locality and outdoor geological laboratory. Mr.
Gilbert Griego, a Department staff member, is the long-time caretaker of the property. Last year about 2,200
people visited the Harding Mine. An article in the June, 1996 issue of New Mexico Magazine led to a large
increase in visitation this year, and the Fall, 1996 issue of Quantum also featured an article on the mine. The
Department welcomes visitors, but permission from the Chairperson must be obtained prior to each visit.

One E&PS faculty member, the young and dynamic Frank Pazzaglia, was one of 3 faculty chosen to
appear in a series of TV ads for UNM, which aired on KNME-TV from January - March, 1997. The
Department was also featured this past year with stories in Mirage (on former Emeritus Professor, Sherm
Wengerd), and Quantum (Jim Papike and Chip Shearer's research that was part of the "Life on Mars" debate;
plus the Harding Pegmatite Mine), as well as in more than a half-dozen lengthy newspaper articles.

GENERAL DEPARTMENTAL ACTIVITIES

Facilities

1. Capital Improvements

There were no major capital improvements to Northrop Hall in 1996-97. Part of the area in the stairwell
along the north side of the building was cleaned up and a shed installed for storage of field equipment for L.
Crossey's research projects.

2. Science-Technology Building

Some concept and architectural planning for the proposed new Science-Technology Building, which
would house the Computer Science Department and provide expansion space for E&PS, Biology, and Chemistry
continued during 1996-97. The approximately $26 million building would be situated just west of Northrop Hall
and provide about 60,000 ft of usable space, of which E&PS would be allocated about 20%. The University
intends to bring the building before the 1998 legislature as a high-priority capital request.

3. Analytical facilities

A proposal by the Institute of Meteoritics and the Department to acquire a new scanning electron
microscope was successful, and its arrival is scheduled for July, 1997. Funds were provided by NSF and NASA
($90,000 each) with remaining matching funds provided by the University, including the Department. The
instrument is a JEOL-5800LV with a variety of digital imaging capabilities, EDS detector capable of light element
analysis, and cathodoluminescence detector. Installation of the new SEM will take significant user pressure off the Microprobe (especially in high-resolution imaging work), and provide numerous potential users a state-of-the-art SEM facility. The older Hitachi 5450 SEM will be sold or donated when the new instrument arrives, as the Department lacks suitable laboratory space for both.

During Spring the Intel Corporation contracted for extensive use of the TEM laboratory for a period of two years, which will fortuitously offset the loss of grant support for the lab with the departure of Professor Ewing and Dr. Wang in July 1997.

Sustaining the operation and maintenance of the Department's analytical laboratories (mainly from grants and user fees) is for the most part successfully accomplished, but in some cases rather precariously. The costs of instructing students in these labs, service contracts and technician salaries is a persistent drain on their budgets, which may be exacerbated by declines in the user base. Relatively little assistance can be provided directly by the Department, and annual University support for the operation of our multi-user analytical labs, which are really university facilities, was nil this past year.

4. Other Research/Teaching Facilities

Some funds allocated to the Department by the College for instructional equipment in October, 1996, were combined with departmental funds to purchase a new 9-passenger field vehicle, which arrived in March. Together with a similar new vehicle purchased last year, these have improved the reliability and safety of the Department's vehicle fleet, used for numerous field trips, for faculty and student research, attending professional meetings, etc. The Department also purchased a new petrographic microscope for use in the student microscope lab.

5. Computing Facilities

The department's computing capabilities were substantially upgraded during the year. The department purchased four new workstations for the student computing facility in room 224 - one new Power Macintosh and three new AMD 586 Windows NT 4.0 workstations; the older (less powerful but perfectly functional) student computers were moved into the front office, where they have substantially improved the productivity of the staff. Network access was expanded adding the ability to activate 24 new connections on the second and third floors of Northrop Hall, providing increased accessibility to the Department's file server, and to the Internet. Members of the Quaternary Studies group (Professors Pazzaglia, Fawcett and Gutzler) purchased two new Sun workstations to support their research.

The Department continued to add to its World-Wide Page, and through the efforts of R. Ewing began to establish a connected site that will house a large volume of information on the Harding Pegmatite. A workstation was placed in the physical geology laboratory for use by EPS-105 students.

NMGS Field Conference

The Department co-hosted the annual New Mexico Geological Society Field Conference, September 25-28, 1996, a 3 day excursion into the Jemez Mountains, attended by about 160 people. B. Kues co-chaired the conference and he and L. McFadden were among the coeditors of the 500-page book for the conference. Seven E&PS faculty and upwards of 15 current and former students in the Department contributed papers to this volume.
Library Journal Cancellations

After an extensive round of journal cancellations totalling about $11,000 in May, 1996, the Department, at the request of Centennial Library, cancelled an additional 3 geoscience journals ($3,000 in subscription costs) in Spring, 1997. Because of continuously escalating journal prices and insufficient library budgets, it appears that Centennial Science and Engineering Library is moving increasingly towards computerized retrieval systems and interlibrary loan in meeting needs for journal articles, with the Library's actual journal holdings becoming progressively reduced to a relatively small core of "essential" journals.

Science Standards in Public School Education

In August, 1996, the New Mexico State Board of Education deleted the teaching of organic evolution from the state's science education standards, in favor of a statement allowing many theories (including religious ideas) to be taught in Science classes. Efforts to convince the Board to reconsider, and to follow the National Research Councils National Science Education Standards with respect to evolution, included resolutions by E&PS and other departments, the UNM Faculty Senate, and many other institutions and groups around the state. A bill introduced into the 1997 State Legislature requiring evolution to be taught received the support of the Department, and several E&PS faculty and research scientists (especially L. McFadden, J. Geissman, and S. Getty) testified on behalf of the bill before legislative committees. However, the bill did not pass. Efforts to re-establish sensible science standards that include fundamental concepts such as evolution are continuing.

Department Involvement in University Initiatives

1. Outcomes Assessment

The University mandated this year that all departments must develop outcomes assessment goals and plans for its undergraduates, as part of UNM's outcomes assessment plan required for its accrediting agency. Although believing that grades in courses and positions obtained upon graduation are the best measures of "outcomes", the Department was required to develop other assessment methods and had no choice but to comply. We identified one general and 6 specific goals for the undergraduate programs and for each goal, various assessment methods, were devised. Some of the assessment methods for a few selected goals were implemented, together with collection of various types of data on undergraduate majors, and this information was incorporated into this year's report. More data, and additional assessment methods will be phased in over the next 2 years. It remains to be seen whether this time-consuming exercise will be useful to the Department.

2. Post-tenure review

At the insistence of the faculty senate and mandated by the Board of Regents, an annual review of tenured faculty was initiated university wide. Although the Department did not favor the plan adopted, believing that less frequent reviews are satisfactory, the Chair conducted the annual review in Spring, 1997. All of the tenured faculty were found to be performing satisfactorily.

3. During Spring, 1997, a materials equipment network and committee was formed by Associate Provost for Research Nasir Ahmed. A committee of this type, which the Department has been advocating for several years, will establish a data-base of University equipment facilities, assist in reviewing equipment proposals and help in identifying mechanisms for coordinated and more cost effective maintenance and management of the University's analytical facilities. Jim Papike played a leading role in organizing this committee, and chairs the Arts and
It is hoped, among other things, that the committee will facilitate the rational and nonduplicative use of university resources in acquiring new large analytical instruments, and persuade the central administration that steady support for the operation and maintenance of the University's multi-user labs would be an appropriate investment.

4. The University completed UNM pact this year, which was a large effort to better define staff job classifications, duties and responsibilities, establish a simplified set of job titles, and create more accurate grades and more relevant pay scales. Many of the Department's staff were reclassified as a result of UNM pact, with a few receiving increased salaries but most experiencing no change in salary. Following the initial reclassification in January, 1997, several requests for reconsideration were submitted and successfully resolved, resulting, for example, in significant increases in grade and some increase in salary for several of our research scientists and technicians.

**Guest Lecturers**

Each year the Department invites a large number of earth scientists from other institutions to visit and present lectures based on their research to faculty and students. This very important departmental activity is an essential part of educating E&PS students, widens faculty interactions with colleagues, both nationally and internationally, and offers us the opportunity to inform colleagues about our research and facilities. Many of these visitors speak at the weekly Thursday morning colloquium. After each talk, groups of graduate students escorted the speaker to lunch.

Professional lectures given in the Department during the 1996-97 academic year are listed below:

September 5, 1996; Suzanne Baldwin, University of Arizona. "Cooling, Exhumation and Uplift of Crustal Terranes: A Thermochronologic Perspective"
September 12, 1996; Tracey Cascadden, University of New Mexico. "El Calderon and Candelaria Cluster Volcanoes and their Eruptive Products, El Malpais National Monument"
September 19, 1996; Mike Wells, University of Nevada, Las Vegas. "The Initial Orientation of the Raft River Extensional Shear Zone: Implications for the Rheological Control on Shear Zone Localization."
October 3, 1996; K. Lohmann, University of Michigan. "Reconstruction of High Resolution Records of Paleoclimate from Integrated Elemental and Isotopic Proxies in Marine Bivalves"
October 4, 1996; K. Lohmann, University of Michigan. "Continental Seasonality: Examination of Recent and Ancient Fresh-Water Clams"
October 10, 1996; Kathy Nagy, Sandia National Laboratory. "The Role of Templating Surfaces in the Nucleation and Growth of Clays"
October 24, 1996; L. Hinnov, Johns Hopkins University. "Frequency Modulation Analysis of Cyclic Stratigraphy: A fundamental Test for Astronomically Forced Sedimentation"
November 7, 1996; John Horel, University of Utah. "Modeling the Atmosphere: Regional Weather and Climate Prediction Over the Western United States and the Tropical Americas"
November 14, 1996; Gary Axen, University of California, Los Angeles. "Rolling Hinges: Tests and Evidence for Migrating Uplift of Detachment Footwalls-or-Fractured Fairytales: Do Flapping Footwalls Really Fly?"
November 21, 1996; Danny Katzman, EMR Program Management Co. "Geological Applications to Environmental Problems at Los Alamos National Laboratory"
November 25, 1996; J. David Rogers, Richard H. Jahns GSA Distinguished Lecturer. "The St. Francis Dam Disaster Revisited"
December 5, 1996; Steve Reneau, Los Alamos National Laboratory. "Streams of the Pajarito Plateau: Quaternary Landscape Change and Recent Contaminant Transport"
December 12, 1996; Chris Paola, University of Minnesota. "Sedimentary Basins: Beautifully Simple, Fascinatingly Complex"

December 13, 1996; Chris Paola, University of Minnesota. "Reversible and Irreversible Sediment Entrainment and the Form of Stream Networks"

January 23, 1997; Bernard Housen, University of Minnesota. "Insights into the Deformation Style of Active Decollements From Fabric Measurements" Caswell Silver Research Professor Candidate

January 30, 1997; Gene Humphreys, University of Oregon. "Plate Tectonics and Non-Plate Tectonics in the Western U.S."

January 31, 1997; Mousumi Roy, Massachusetts Institute of Technology. "Crustal Rheology and the Large-Scale Dynamics of Strike-Slip Faulting" Caswell Silver Research Professor Candidate

February 6, 1997; Bruce Jakosky, University of Colorado. "Life on Mars and in the Universe"

February 7, 1997; Elizabeth W. Boyer, University of Virginia. "Landscape Scale Hydrological Controls on the Variation of Dissolved Organic Carbon in a Headwater Catchment" Caswell Silver Research Professor Candidate

February 13, 1997; Mark Person, University of Minnesota. "Basin-Scale Hydrologic Modeling: Problems, Solutions and Applications" sponsored by GSA.

February 14, 1997; Dr. David Gutzler, University of New Mexico. "A Hybrid Coupled Ocean-Atmosphere Model for El Niño Studies"

February 20, 1997; Dr. Wolf Elston, University of New Mexico. "The 2.06 Ga Bushveld Catastrophe, South Africa: Evidence, Causes and Consequences"

February 28, 1997; Emilio L. Pueyo, University of Zaragoza. "Thrust Kinematics inferred from paleomagnetic data: An example from the Pyrenees, Spain"

March 3, 1997; Dr. Mark Gibbs, University of Chicago. "Late Ordovician Atmospheric CO₂ and Glaciation"

March 6, 1997; Brian McPherson, New Mexico Tech. "Overpressures in Sedimentary Basins: Anomalous or Normal?"

March 13, 1997; Wallace Broecker, Columbia University. Caswell Silver Distinguished Lecturer. "Do the Himalayas Play an Important Role in Long-Term Climate Change?"

March 14, 1997; Wallace Broecker, Columbia University. Caswell Silver Distinguished Lecturer. "Is Water Vapor the Villain in Climate Change?"

March 27, 1997; Michael W. Howel, University of South Carolina. "Mediterranean Sapropels: The Interplay Between Productivity, Basin Hydrography and Climate," sponsored by JOI.

April 3, 1997, Joseph Meyer, University of Wyoming. "Bioavailability of Metals to Fish: Incorporating Geochemical Speciation Modeling into Aquatic Toxicology"

April 4, 1997; Dr. Ray D. Twisten, Sandia National Laboratories. "Material Science Through Electron Microscopy"; TEM Lab Manager Candidate

April 7, 1997; Dr. Su Wang, Seagate Technology, Anaheim, CA. "Application of TEM in Materials Science and Mineralogy"; TEM Lab Manager Candidate

April 10, 1997; Samuel Mukasa, University of Michigan. "Tectonic and Magmatic Evolution of Gondwanaland's Pacific Margin"

April 14, 1997; Carey Gazis, Dartmouth College. "Chemical weathering in the Himalayas as based upon major ion chemistry and strontium isotopes of rocks and waters"; Stable Isotope Geochemistry Candidate

April 14, 1997; Dr. Zhengkui Xu, University of Illinois Urbana. "TEM Study of Advanced Ceramic Materials"; TEM Lab Manager Candidate

April 15, 1997; Carey Gazis, Dartmouth College. "Stable isotopic evidence for a short-lived volcanic hydrothermal event"; Stable Isotope Geochemistry Candidate

April 15, 1997; Dr. Huifang Xu, Arizona State University. "TEM/AEM of Minerals, Aerosols, and Oxidation States of Fe"; TEM Lab Manager Candidate

April 17, 1997; Simon Poulson, University of Wyoming. "From magmatic assimilation of sulfur to nitrogen in tree rings: Diverse applications of stable isotope geochemistry" and "Application of stable isotope geochemistry to contaminant hydrogeology"; Stable Isotope Geochemistry Candidate

April 24, 1997; Zachary Sharp, Université de Lausanne. "A Laser GC-IRMMS technique for oxygen isotope analysis of phosphates: A paleoclimatic alternative"; Stable Isotope Geochemistry Candidate
April 25, 1997; Zachary Sharp, Université de Lausanne. "D-T-t paths during nappe formation: Evidence from quartz-calcite thermometry" Stable Isotope Geochemistry Candidate

April 28, 1997; Jean Hsieh, Southern Methodist University. "Using stable isotopes to probe soil, water and mineral relationship" and "Stable isotopes of pedogenic minerals in Hawaii: Some insights into weathering processes"; Stable Isotope Geochemistry Candidate

May 1, 1997; Libby Stern, University of California, Berkeley. "Stable isotope evidence of Himalayan uplift"; Stable Isotope Geochemistry Candidate

May 2, 1997; Libby Stern, University of California, Berkeley. "The influence of soils on the oxygen isotope ratio of atmospheric CO₂"; Stable Isotope Geochemistry Candidate

May 8, 1997; Basil Tikoff, University of Minnesota. "The Weak (Uplifts), the Strong (Basins) and the Ugly (Dextral Shearing): A Collisional Model for the Laramide Orogeny"

Geology Museum and Collections

Approximately 3500 people visited the Geology Museum during the 1996-97 academic year. Most of the visitors were school children from as far away as Los Angeles (see Appendix I for a list of school class visitors).

The Museum received specimen donations from Steven and Susan Bringe of Albuquerque, and Florence LaBruzza, also of Albuquerque. In addition, donated funds were used to purchase 5 new exhibit-quality specimens. The UNM Geology Museum and Collections Fund, administered by the UNM Foundation, is about half way toward endowment; revenues from this fund will be used in the future to acquire new specimens.

The Geology Museum was represented by exhibits at the Tucson Gem and Mineral Show and the Albuquerque Gem and Mineral Show in early 1997. Twelve outstanding specimens of copper minerals were exhibited at the Tucson show in February and fifteen specimens were exhibited at the Albuquerque Show in March.

ALUMNI PROGRAMS AND SUPPORT

The Department is very fortunate in being supported by a large group of active and enthusiastic alumni. Individually and collectively these graduates provide generous financial, advisory and moral support for many departmental activities, which contribute significantly to our success in our educational and research missions.

First among sources of alumni support is the Caswell Silver Foundation. Funds generated by the investments of the Foundation in 1996-97 provided full-time support for the Leon Silver/Vincent Kelley graduate student Fellow (Colin Shaw), and subsidized most of the travel of faculty to professional meetings this past year. The Foundation also supports periodically an endowed faculty chair, the Caswell Silver Research Professor; as noted earlier, a successful search for the next Silver Professor was completed this year.

The Caswell Silver Foundation also supports the Caswell Silver Distinguished Lecturer series. One Distinguished Lecturer visited the Department this past year - Professor Wallace Broecker, Newberry Professor of Geology at Columbia University. Professor Broecker was at UNM March 13-15, 1997, and presented two talks: "Do the Himalayas play an important role in long-term climate change?", and "Is water vapor the villain in climate change?" A reception was held for him the first evening of his visit, and he had the opportunity to discuss his research individually with many faculty and students. Visits of Silver Distinguished Lecturers are welcomed by the Department both for the opportunities they provide us to interact with some of the most distinguished geoscientists in the country, and to inform them about our department and the research we are pursuing.
As in previous years, the Silver Foundation made possible two $500 Meritorious Staff Awards, presented to two outstanding non-academic staff members. These awards allow the faculty to express in a tangible way its deep appreciation for the efforts of the staff in contributing to the effective operation, advancement and well-being of the Department. Recipients of these awards, presented at the Department's May Commencement Ceremonies, were Cindy Jaramillo, Administrative Assistant in the Department, and Sara Leatz, Administrative Assistant in the Institute of Meteoritics.

In addition to these major ways in which the Silver Foundation assisted the Department of Earth and Planetary Sciences during the past year, the Foundation also provided the means to accomplish other important functions, such as advertising and supporting the visits of top potential graduate students to the department, and sponsoring the receptions for the Distinguished Lecturers. Support from the Caswell Silver Foundation benefits the Department in many different ways, and thereby strengthens the Department as a whole, as well as assisting individual faculty and students in their scholarly endeavors. The Department deeply appreciates this support.

Donations and contributions from alumni, faculty and friends of the Department support about a dozen scholarship funds, mostly managed by the UNM Foundation. The interest generated by these funds annually is utilized to award scholarships to undergraduate and graduate students. Such scholarships are augmented by other scholarships awarded by the Department, scholarships and research grants from institutions outside the University, and occasionally fellowship funds from the University. A full summary of scholarships and fellowships received by Earth and Planetary Sciences students is presented in Part IV of this report. Here we note that in 1996-97, scholarships derived from alumni-supported funds amounted to $21,039 awarded to 19 undergraduate students (Leonard, Campbell and Pfeiffer Scholarships), plus $15,400 awarded to 15 graduate students (Alumni Fellowship, Miossec, Rhodes, Vann, Wanek, Wengerd and EEE Scholarships).

Next year, two new scholarships will be initiated based on contributions from alumni - the Patrick and Jean McKinney Gratton Fellowship (which alternates between the English Department and E&PS, and which began in the English Department this year), and the Vincent C. Kelley Fellowship, derived from funds contributed in memory of V.C. Kelley to the UNM and Silver Foundation.

The Department also maintains contact with its alumni through gatherings at professional meetings, newsletters and many personal and professional contacts. For example, an annual Rio Rats Reception for alumni and friends of the Department of Earth and Planetary Sciences, UNM, and geology departments at nearby schools is held each year at the American Association of Petroleum Geologists annual meeting.

PLANS AND GOALS

During the 1997-98 year, the Department will pursue several goals to increase our ability to carry out our educational and scholarly missions.

1. Conduct a search for, and hire a new faculty member in Mineralogy/Materials Science to replace Professor Rod Ewing, who resigned in July 1997 to take a position in the Department of Nuclear Engineering and Radiological Sciences at the University of Michigan. Because of the large vacancy left in an important, internationally known departmental program, and the need for a faculty member to supervise and support the operation of the Analytical Electron Microscopy lab, we anticipate that the search will be for a person at the Associate or full Professor level. It is important that this position be filled by August 1998.

2. Discuss and develop a plan for adding faculty over the next two to three years, in connection with Professor Woodward's retirement in December 1997, and the need for a volcanologist. The plan for adding faculty could be complemented or influenced by long-standing technical staff needs (see below).
3. Continue to press for the addition of two long-needed technical staff lines, specifically
   a) At least a 0.5 FTE line for management of the Department's computer and networking facilities. Currently this position is being supported mainly from unfilled staff salary lines, and other departmental funds, but 1997-98 will be the last year these sources of departmental support are likely to be available. Additional expertise is needed for maintenance of the Unix systems in the Department. Ideally a 0.75 FTE position for all Department computer functions would satisfy these needs.
   b) 0.5 FTE state-funded support for the microprobe/SEM lab technician. This is a full-time position, essential to the successful operation of these large labs, that currently is supported mainly by the Institute of Meteoritics on funds from grants and user fees.

4. Work to attain a more equitable and realistic distribution of support for the operation and maintenance expenses of the Department's teaching and research facilities. Current support for the analytical laboratories is mainly from faculty grants and user fees, but 25% (~$50,000/year) of lab expenses are created by activities relating to the education and training of students, which should be supported to a much greater extent by the University. The Department will continue to return some funds from its I & G account for the analytical labs, to the best of its limited ability, and to support, through equipment-use scholarships, student use of the labs.

5. Continue to push for needed capital improvements to Northrop Hall, including especially walling in of the external stairwell along the north side basement for a secure storage and work area. In addition, other improvements needed include renovation of room 105 to serve the needs of structural geology as well as petrology laboratories; installation of a new elevator to replace the increasingly unreliable elevator that dates back to the original construction of Northrop Hall 44 years ago; and renovation of the radioactive minerals storage area in the Collections room to alleviate an excess radon problem.

6. Continue to monitor closely and reallocate as needed, space in Northrop Hall. Presently, space is very limited and requires juggling of room uses each year to accommodate graduate students, visiting faculty, research scientists, and some laboratory functions. Expansion space (in a new Science-Technology building or elsewhere) is becoming a critical need and we will continue to participate enthusiastically in planning for a new Science-Technology building. With completion of the construction of a new classroom building on campus, the Department has requested return of two rooms (114 and 116) in Northrop Hall to its exclusive use.

7. Upgrade or add new teaching equipment and facilities, as allowed by the departmental budget and the coming year's equipment fund allocation (if any). Highest priority is a second new fully-equipped petrographic microscope with high-resolution video camera and monitor for teaching, and there are needs for other new microscopes as well. Although we have acquired 2 new field vehicles in the past 3 years, a third new one would be desirable, as was indicated in the Department's 5-year plan of 1993. Replacement of a large slab saw for cutting rock specimens for teaching and research is also needed.

8. Continue to upgrade and maintain the Department's expanded computing facilities. More workstations are needed in or complementary to the student computer pod. Ideally we would like to place workstations in several undergraduate teaching labs, and/or develop and outfit an undergraduate computer room, to integrate new instructional software for various areas of the geosciences into the curriculum of our undergraduate courses. We plan to add additional networking ports in the basement and first floor of Northrop Hall, and provide an upgraded PC to the network manager to function as a more effective back-up server.

9. Monitor course curriculum to 1) assure that faculty are being utilized efficiently in courses with adequate enrollments; 2) adjust course offerings if needed to lessen frequency of courses with inadequate enrollments; 3) adjust offerings of 300-400 level courses so that they are in better balance; currently many more of these courses are offered in the Fall; 4) Plan for expected shortfalls in faculty available to teach courses because of retirements, administrative assignments, and sabbatical and other leaves, so that there is the least possible effect on enrollments.
10. Expand data base and data gathering for outcomes assessment goals; continue with procedures begun this year and phase in additional outcomes information.

11. Compile and send out an expanded departmental newsletter to alumni and friends, and revise the current departmental faculty/programs brochure, which is sent potential graduate students and others interested in finding out about the Department.
III. ACTIVITIES OF THE FACULTY AND RESEARCH SCIENTISTS
(Calendar Year 1996)
1. TEACHING ACCOMPLISHMENTS

Yemane Asmerom

Courses taught

Spring:  
E&PS 101 - Physical Geology (46 enrolled)
E&PS 534 - Principles of Radiogenic Isotopes (3 enrolled)

Fall:  
E&PS 333 - Environmental Geology (13 enrolled)
E&PS 410 - Fundamentals of Geochemistry (8 enrolled)

I was in charge of the MEMS Summer Bridge science component.

Graduate students supervised:  
Dezbah Tso, Carter Dunaway

Graduate student committee:  
Rebecca Gardner, Sharon Minchak, Angela McLain, Mike Timmons, Adam Read

Adrian Brearley

Courses taught

Fall:  

Served as Advisor and PhD committee member for Nicolaus Hanowski and Ivan Thorsos.

Michael Campana

Courses taught

Spring 1996:  
NRMP 201 Watershed Management (University College of Belize) (6 students)

Fall 1996:  
E&PS 462, Hydrogeology (20 students)
E&PS 464, Environmental Mechanics (16 students)
E&PS 492, Problems (1 student)

Graduate Students

Student Advisement/Thesis Supervision (*indicates support provided):  
James Brainard, Sharman Carpenter, Jerry Bird*, Robert Gray, Leslie A. Hohweiler (all M.S.); Linda I. Gordan, Deborah L. Adelsperger (both MWRA).
Leslie A. Hohweiler, 1996 (M.S. thesis completed)  
"A method for predicting land subsidence as a result of groundwater withdrawal, Albuquerque, New Mexico".

Service on Thesis/Dissertation Committees:

Andrika Kuhle (M.S.), Jerry Bird (M.S.), Robert Gray (M.S.), Sharman Carpenter (M.S.), James Brainard (M.S.), Leslie A. Hohweiler (M.S.), Armand Groffman (Ph.D.), Kathleen Bower (Ph.D. in Civil Engineering), Drew Baird (Ph.D. in Civil Engineering), John Morrice (Ph.D. in Biology), Michelle Baker (Ph.D. in Biology).

B.S. Honors Thesis Supervision: Kristine E. Baker

Laura Crossey

Courses taught

Spring:  
E&PS 101 - Physical Geology (47 enrolled)  
E&PS 415 - Geochem. of Natural Waters (15 enrolled)

Fall:  
E&PS 101 - Physical Geology (73)  
E&PS 503 - Organic Geochemistry (6)  
Diss./Thesis/Ind. Study (6)

Ph.D Committees

Chair: Jennifer Loomis, Deborah Bergfeld, Armand Groffman, Angela McLain

Dissertation completed: Jennifer Loomis, "Diagenesis in the Upper Cretaceous Point Lookout Sandstone, Colorado and New Mexico".

Committee member: Bruce Allen (E&PS), Michelle Baker (Biology), John Morrice (Biology), Paula Watt (E&PS), Christy Fellows (Biology), Diana Northup (Biology), Sudeep (Civil Engineering), Matthew Trembley (E&PS).

MS Committees

Chair: Rebecca Gardner, Karen Roche

Committee member and/or committee: John Appel (1996), Jerry Bird, Carter Dunaway, Bob Gray, Skip Hohweiler (1996), Greg Wroblicky (1996), Dezbah Tso, Anna Snider

Student Grant Support

Graduate: Jennifer Loomis (full), Armand Groffman (full)

Undergraduate: Joseph Sterling (partial), Mike Munday (partial), Todd Caldwell (partial), Eric Bridgeford (partial)
Maya Elrick

Courses taught

Spring: E&PS 102 - Historical Geology (40 students)
Fall: E&PS 304 - Sedimentology-Stratigraphy (15 students)
       E&PS 540 - Carbonate Strat-Sed (5 students)

Graduate Students Advisement: Ph.D., Matt Tremblay, Carol Dehler; M.S., Anna Snider.
Thesis committee: Ph.D., Ancheng Ma, Andy Heckert; M.S., Brook Riley.

Wolfgang Elston

Courses taught

Spring: E&PS 252 - Volcanoes, benign and malign (23 enrolled)
       E&PS 492 - Problems (1 enrolled)

Curriculum development

On-going development of UNM-Los Alamos National Laboratory Volcanology Program.

Rodney Ewing

Courses taught

Spring: E&PS 101 - Physical Geology (67)
       E&PS 493 - Independent Study (1)
       Chem. Nucl. 575 - Nuclear Waste (6) [with W. Lutze]
       E&PS 599 - Masters Thesis (1)
       E&PS 699 - Dissertation (2)

Fall: SABBATICAL

E&PS 699 - Dissertation (2)
Chem. Nucl. 553 - Nuclear Waste [guest lecturer]

Short Course (8 lectures), Aarhus University, Denmark, "Amorphous Materials".

Graduate students

Ph.D. candidates (advisor): Al Meldrum (supported by RA/UNM Fellowship); Shixin Wang (supported by BES); Keld Jensen (European Union and Aarhus University).
M.S. candidates (advisor): Paula Newcomer (supported by SNL), graduated May, 1996; Kate Hecean (supported by TA and LANL).

Honors, undergraduates: Kerim Martinez.

External Reader: Laurent Pourcelot, Universite Louis Pasteur, Strasbourg, France.

Note: Al Meldrum was awarded a prestigious MSA Research Grant by the Mineralogical Society of America and the Dean's Outstanding Dissertation Award (1996-1997).

John W. Geissman

Courses taught

Spring: E&PS 307 - Structural Geology (with Karl Karlstrom) (24 enrolled)

Summer: E&PS 319L - Introductory Field Geology (19 enrolled)

Fall: E&PS 508 - Paleomagnetism and Applications (7 Enrolled)
      E&PS 401 - Seminar (14 enrolled)

Graduate students supervised: Ph.D. (co-advised); Mike Grubensky, Tim Wawrzyniec; M.S. (advisor); Eileen Romano, Marc Melker, Mike Petronis.

Exam committees: M.S., Adam Read, Mike Timmons, Mary Simmons, Meghan Hodgins.

Graduate Students financially supported: Tim Wawrzyniec, Marc Melker, Mike Petronis, Gordon Keating.

Course Development:

Continued to organize, with Roberto Molina-Garza, a non-credit weekly "seminar" meeting for the users of the paleomagnetism laboratory, focusing on laboratory improvements, current research by users of the laboratory, and controversial research topics in paleomagnetism. Continued to modify/improve undergraduate field geology course (E&PS319L).

"Guest" lecturer in E&PS 101 and E&PS 533 (Extensional tectonics).

Undergraduate Research Advising: James Ashby

Graduate Theses Completed:

Ph.D, Mike Grubensky (co-advised with Gary Smith); "Volcanic breccias: evaluation of fragment and deposit origins and distribution within composite volcanoes".

M.S, Marc Melker; "Paleomagnetism of the Oquirrh Mountains and implications for the Cenozoic structural history of the easternmost Great Basin."
David Gutzler

Courses taught

Spring: Geography 491 - Global Climate Change (new course; 11 enrolled)

Guest lectures: E&PS 516 (L. McFadden, instructor)
Geography 295 (B. Cullen, instructor)
Geology 505 (at NM Tech: B. Harrison, instructor)

Fall: Geography 351 - Systematic Climatology (27 enrolled)
E&PS 551 - Problems (1 enrolled)

Note: Geog. 491 will be offered next as E&PS/Geography 452
Geog. 351 will be offered next as E&PS/Geography 351

Undergraduate students supervised: J. Preston on Research Experiences for Undergraduates project entitled "Modulation of North American precipitation by snowpack in the southern Rockies".

Exam committees: Joel Pederson (Ph.D)

Stephen Huestis

Courses taught

Spring: E&PS 101 - Physical Geology (19 enrolled)
E&PS 115 - Geological Disasters (36 enrolled)

Fall: E&PS 101 - Physical Geology (98 enrolled)
E&PS 225 - Oceanography (27 enrolled)
E&PS 418 - Statistics and Data Analysis in Earth Science (5 enrolled)
E&PS 491 - Problems (1 enrolled)

M.S. Exam Committee: Meghan Hodgins

Ph.D. Exam Committee: Joel Pederson

Ph.D. Dissertation Committee: Timothy Wawrzyniec
Rhian Jones

Courses taught


Fall: E&PS 365 - "Exploring the Solar System". Two guest lectures, two lab sessions (30 enrolled).

E&PS 551 - "Introduction to the Laboratory Facilities of Earth and Planetary Sciences". One guest lecture (6 enrolled).

Student advisement: Ivan Thorsos, Ph.D. candidate.

Karl Karlstrom

Courses taught

Spring: E&PS 307 - Structural Geology (26 enrolled)
E&PS 307L - Structural Geology Lab (26 enrolled)

Summer: E&PS 420 - Advanced Field Geology (14 enrolled)

Fall: E&PS 417 - Advanced Structural Geology (7 enrolled)
E&PS 490 - Geologic Presentations (6 enrolled)

Undergraduate students supervised: Casey Cook and Joe Sterling were supported by the USGS statemap project, through the NM Bureau of Mines during summer and fall 1996.

M.S. thesis completed:

Jimmie Hutchison, 1996, "Relative timing of porphyroblast growth and peak metamorphism in the Lower Granite Gorge, Grand Canyon, Arizona".

Ph.D. theses completed:


Jane N. Pedrick, 1996, Polyphase Proterozoic tectonometamorphic history of the Taos Range, northern New Mexico (co-supervised with Jeff Grambling).

Amy Thompson, 1996, Deformational and metamorphic history around the 1.4 Ga Priest pluton, Manzano Mountains, New Mexico (co-supervised with Jeff Grambling).

Ph.D. students currently being supervised: Colin Shaw.

M.S. students currently being supervised: Cynthia Brown, Adam Read, Mike Timmons, Mary Simmons, Brooke Riley, Anna Breuninger.
M.S. Thesis Committee chair or co-chair (*): Anna Breuninger - partial support (NSF); Cynthia Brown - partial support (USGS); Adam Read - partial support (NSF); Brook Riley - partial support (NSF); Mary Simmons - (* with Jane Selverstone); Mike Timmons - partial support (USGS).

Thesis Committee and Exam Committee member: M.S., Tony Garcia, Meghan Hodgins, Dan Koning, Eileen Romano - Ph.D., Tim Wawrzyniec.

Cornelis Klein

Courses taught:

Spring:  E&PS 105L - Physical Geology Labs
         (faculty coordinator; 136 enrolled)

Fall:    E&PS 301 - Mineralogy (45 enrolled)
         E&PS 302L - Mineralogy Labs (44 enrolled)
         E&PS 402 - Environmental Mineralogy (7 enrolled)
         E&PS 105L - Physical Geology Labs
         (faculty coordinator; 167 enrolled)

Invited guest lecturer:


Course development:

In the fall of 1996 I taught a new course, E&PS 402, Environmental Mineralogy (2 cr.) for the first time. This course has Mineralogy, E&PS (301, 301L) as a prerequisite, and is designed to be an upper-level offering in our "Environmental Geology" track. Because of its multidisciplinary subject matter, and the lack of a good published text, copies of all the varied reference materials were collected for the reserve shelf at Centennial Library. Much of the summer months of 1996 was spent putting lecture notes and reference materials together for the fall offering. The subject matter includes: tropospheric and stratospheric dust (two guest lectures given by Dr. Frans Rietmeijer); fibrous minerals in the environment; the types of asbestos and their highly varied health hazards; optical and TEM studies of dust; risk assessment procedures; silica dust and possible health hazards; zeolites, their health hazards and application in remediation; the issue of radon; applications of layer silicates in remediation; introduction to nuclear waste and storage materials; WIPP and Yucca Mountain repositories.

In the fall, while teaching the various courses listed above, I began course development on another new course, E&PS 204, Gem Minerals and Gems, which I am presently teaching (Spring 1997) as an evening class, with an enrollment of about 55.

M.S. thesis committee member: Marc D. Melker, Jim Karner.

Ph.D. dissertation committee member: Al Meldrum, Ivan Thorsos.
M.S. exam committee member: Jim Karner, Rebecca Gardner, Mary Simmons


Albert Kudo

Courses taught

Spring: E&PS 225 - Oceanography (61 enrolled)
E&PS 303 - Igneous & Metamorphic Petrology (24 enrolled)
E&PS 303 - Laboratories
Natural Sciences 261 - (24 enrolled)

Summer: E&PS 101, Physical Geology (67 enrolled)

Fall: Sabbatical Leave, but taught E&PS 491, Problems, (3 enrolled) and directed 1 Ph.D. candidate (Tracey Cascadden), 1 M.S. candidate (Sharon Minchak), 1 Honors B.S. student (Joshua Ring). Continued serving on different committees as listed below.

Curriculum development with Natural Sciences: Innovative, hands-on, constructivist approach for teaching natural sciences to pre-service K-8 Elementary School Teachers.

Co-investigator with principal investigator, Professor Bel Campbell of Physics and Astronomy, on two grant proposals, one to Council on Higher Education/Eisenhower Foundation, that got funded. Another to NSF in collaboration with other state institutions (mainly NMSU) to fund our curriculum (the Collaboratives for Excellence in Teacher Preparation).

Thesis and dissertation committees:

Alexis Lavine (M.S.); Tracey Cascadden (Ph.D., Chair); Sharon Minchak (M.S. Chair); Stephanie Maehr-Leicester (M.S. Co-Chair); Gordon Keating (Ph.D.); James Karner (M.S.);
Chair and advisor of Honors B.S. thesis, Joshua ring.

Exam Committee: Gordon Keating.

Barry Kues

Courses taught

Spring: E&PS 101 (132 enrolled), E&PS 492 (2 enrolled)
E&PS 599 (2 enrolled), E&PS 699 (1 enrolled)

Fall: E&PS 411 (11 enrolled), E&PS 599 (1 enrolled)
E&PS 699 (1 enrolled)
Graduate Students Supervised: Tom Goodspeed (M.S.), Andy Heckert (M.S.), Ancheng Ma (Ph.D.)

Thesis completed:

Tom Goodspeed M.S., "Stratigraphic, sedimentologic, and paleontologic analysis of the Sinbad Formation of the Lower Triassic Thaynes Group, San Rafael Swell region, southeastern Utah" (S.G. Lucas, coadvisor).

Graduate Exam Committee: Armand Groffman (Ph.D.).

Undergraduate Research Supervised: Deb Corrao (REU support).

Other: Lecture to Biology Department summer REU class on geology of New Mexico and Sevilleta area, June 7.

Mark L. Miller

Courses taught

Spring: E&PS 486 - X-ray Mineralogy (6 enrolled)

Fall: Seminar, Tour of the E&PS Laboratory Facilities, (6 enrolled)

Leslie McFadden

Courses taught

Spring: E&PS 516 - Geologic Record of Climate Change (11 enrolled)

Fall: E&PS 101 - Physical Geology (99 enrolled)
   E&PS 485L - Soil Stratigraphy and Morphology (10 enrolled)
   E&PS 490 - Geologic Presentations (10 enrolled)

Guest Lecturer:

E&PS 400 - (Geoarcheology) - Soil-based studies and research in Geoarcheology

Department of Architecture and Planning - Community and Regional Planning
570: Soil-geomorphic and ecologic studies of landscapes of the Hopi-Navajo disputed lands, Arizona.

Graduate Students Supervised or Co-supervised: Paula Watt, (Funded R.A., LANL), Carol Treadwell, Scott Aby, Amy Ellwein, (M.S.), (Funded 0.25 R.A., Petrified Forest National Park Museum Association), Angela McClain, (Ph.D.), (Funded, 0.25 R.A., LANL).
Thesis Completed:

Paula Watt (Ph.D.), "Landscape evolution and soil genesis on the Pajarito Plateau and the impact of soil chemical and physical properties on contaminant uranium migration, Los Alamos National Laboratory, New Mexico".

Carol J. Treadwell (Ph.D.), "The role of semi-arid landscapes in the global carbon cycles".

Thesis Committees: John Rogers (defended, spring 1996), Merri Lisa Trigilio-Formento (defended, Fall, 1996), Antonio Garcia (defended, Fall, 1996), S. Connell (Univ. of California, Riverside) (defended, Spring, 1996).

Ph.D. Committees: A. Groffman, A. Oberling, (Dept. of Anthropology), J. Pederson.

Undergraduate Student Supervised (NSF - REU program): Marsha Abernathy (graduated, Spring, 1996).

Roberto Molina-Garza

Courses taught

Spring: E&PS 102 - Historical Geology, Valencia Campus (13 enrolled)
E&PS 225 - Oceanography, Valencia Campus (16 enrolled)

Fall: E&PS 101 - Physical Geology, Valencia Campus (23 enrolled)
E&PS 105L - Physical Geology Lab, Valencia Campus (10 enrolled)
E&PS 115 - Geological Disasters, Valencia Campus (20 enrolled)

Horton Newsom

Classes taught (guest lecturer)

Spring: E&PS 513 - Planetary materials and the evolution of the solar system (8 enrolled)

Fall: E&PS 365 - Exploring the Solar System (30 enrolled)

Research advisor: Stephanie Maehr (M.S.); Heather Weigel (Undergraduate); both supported by NSF.

Committee member: M.S. student, Stephanie Maehr.

Other teaching:

Lecture, Institute of Meteoritics Seminar, April, 3 1996, "Tungsten isotopes and core formation in the Earth and Moon".
James Papiske

Courses taught

Spring: E&PS 513 - Planetary Materials and the Evolution of the Solar System (5 enrolled)

Fall: E&PS 365 - Exploring the Solar System (30 enrolled)

M.S. Advisor for L. Bowman.
Support provided by NASA NAGW-3347

Ph.D. Graduate Advisor for A. Pun
Partial support from IOM

Ph.D. Advisor for M. Servilla
Partial support from IOM plus IGPP

Ph.D. Advisor for I. Thorsos
Research (= analytical) support from IOM

Ph.D. Dissertation Committees served on:

M.S. Thesis Committees served on:
J. Karner, L. Bowman (advisor)

Frank Pazzaglia

Courses taught

Spring: E&PS 455 - GIS and computational methods in geomorphology (16 enrolled)
E&PS 400 - Geoarcheology (23 enrolled)
E&PS 516 - Selected Topics in Geomorphology (11 enrolled)
E&PS 103 - Earth's Environment and Global Change (65 enrolled)

Fall: E&PS 481 - Geomorphology (25 enrolled)

The EPS 481 course featured a new lab book that the students are asked to purchase.

Student Advising:

I had two M.S. students defend their theses in 1996. Mr. Antonio Garcia completed all of his degree requirements and graduated in December. Tony's project is entitled "Fluvial stratigraphy and uplift in the Olympic Mountains, western Washington State". Ms. Merri Lisa Formento-Trigilio defended, but will complete her degree requirements in the Spring, 1997. Merri-Lisa's project is entitled "Tectonic geomorphology of the Nacimiento uplift, northern New Mexico". I have two additional M.S. candidates - Mr. Dan Koning and Mr. Karl Wegman. Koning has chosen a tectonic geomorphology project in the Sacramento mountains of southern New Mexico. Wegman has chosen a fluvial geomorphology project in Washington State. I am also co-advisor (along with Dr. Gary Smith) of a Ph.D. candidate, Mr. Joel
Pedersen. Joel has chosen a quantitative, processes geomorphology/sedimentology study of drainage basin response, and subsequent rift fill stratigraphy to climate and tectonics for his dissertation research.

I was a committee member for the following students in 1996: Ms. Carol Treadwell (Ph.D.), Mr. Tim Wawrzyniec (Ph.D.), Mr. Colin Shaw (Ph.D.), Mr. Steve Dominguez (Ph.D.-archeology), Ms. Karen Saffran (M.S.), Mr. Scott Aby (M.S.), Ms. Rebecca Gardner (M.S.), Mr. Jerry Bird (M.S.), Ms. Amy Ellwein (M.S.), and Ms. Andrika Kuhle (M.S.).

I am the faculty mentor for a Jemez Pueblo student, Mr. Chris Toya. Chris is a full-time field and laboratory assistant aiding in our field mapping efforts on Jemez Pueblo. Chris was supported financially through the MEMS program and through my research program (see below).

Support of student research:

I have supported a portion of Trigilio's research via an EDMAP research grant. I have subsidized summer field work for Pederson and Garcia via STATEMAP research grants. Research support for Wegman and Pederson in pending via two NSF proposals.

Jane Selverstone

Courses taught

Spring: E&PS 303 - Igneous and Metamorphic Petrology (with B. Kudo) (20 enrolled)
E&PS 303L - Petrology lab with optical mineralogy (20 enrolled)
E&PS 548 - Interactions between Deformation and Metamorphism (with K. Karlstrom) (6 enrolled)

Fall: E&PS 101 section 002 - Physical Geology (110 enrolled)
E&PS 101 section 003 - Physical Geology (37 enrolled)

Course development:

E&PS 303 – This was the first time I taught this course at UNM. I thus devoted large amounts of time to preparing new lab assignments and lectures. Also, for the first time, optical mineralogy was incorporated into this course as a 6-hour short course, which I taught twice at the start of the semester (once for each of the two lab sections in E&PS 303L).

E&PS 101 – I had never taught 101 before, so spent a large amount of time on lecture preparation and development of problem sets.

Undergraduate supervised: Laura Pletsch-Rivera, field assistant 5/96; she is currently interacting with me to develop a senior thesis project.

Graduate students supervised: (* supported by my NSF funding): *Meghan Hodgins, MS in progress, Mary Simmons, MS in progress (coadvisor with K. Karlstrom), *Timothy Wawrzyniec, PhD in progress (coadvisor with J. Geissman), Colin Shaw, PhD in progress (coadvisor with K. Karlstrom)

M.S. Thesis committees: Cynthia Brown, Adam Read, Patrick Mattie, New Mexico Tech; defended 10/96, Anna Brueningcr, Mike Petronis, Sharon Minchak.

M.S. Exam committees: Meghan Hodgins, Mary Simmons, Cynthia Brown, Sharon Minchak.
Charles Shearer

Courses taught

Spring:  E&PS 513 - Planetary Materials and the Evolution of the Solar System (5 enrolled)
         E&PS 503 - Organic Geochemistry (Guest Lecture on Martian Life).

Fall:   E&PS 365 - Exploring The Solar System (30 enrolled).

Graduate Student Committees:
Stephanie Maehr, Laurie Bowman, and Tracey Cascadden, ICP-MS Instruction: Stephanie Maehr, Sharon Minchak, Deb Bergfeld, Rebecca Gardner, Nick Hanowski, Kate Helean, and Tracey Cascadden.

Gary Smith

Courses Taught

Spring:  Advanced Physical Geology, E&PS 548 (4 enrolled)
         Geoarcheology, E&PS 400, 26 students (co-taught with other E&PS and Anthropology faculty)
         Seminar, E&PS 401 (12 enrolled)

Summer:  Field Studies in Volcanology, E&PS 451 (16 enrolled)
         Guest lecture in Summer Archeology Field Session, Anth. 375F.

Fall:    Historical Geology, E&PS 102, 36 students
         Guest lectures (2) in Physical Geology, E&PS 101

New Course Development:

Lecture and laboratory syllabi for EPS 102, Historical Geology, were completely revised to introduce more material on paleoclimate, paleoceanography, and Quaternary earth history and to make laboratories more inquiry based. Changes were made in response to a survey of 102 students undertaken in Fall 1995.

Advanced Physical Geology was developed as a new course for graduate students and qualified seniors.

Geoarcheology was developed as a new course, cross-listed in Anthropology and co-taught with Bruce Huckell, Les McFadden, Frank Pazzaglia and Wirt Wills.

Graduate Students: (* indicates support provided)


Service on other Ph.D dissertation or examination committees:  Tracey Cascadden, Mark Servilla, Carol Treadwell, Paula Watt, Tim Wawrzyniec, Philip LeTourneau (Anthropology), Thomas Wilch (NMIT).
M.S. advisees: Andrika Kuhle*, Alexis Lavine, John Rogers

Service on other M.S. thesis committees: Scott Aby, Karen Roche, Karl Wegman, Brook Riley

Lu-Min Wang

Courses taught:
Fall: E&PS 538 - Analytical Electron Microscopy (8 enrolled)

Graduate Students advised:
Ph.D. committee (co-advisor) for Shixin Wang and Al Meldrum
M.S. examination committee for Paula Newcomer (co-advisor) for Kate Helean
Ph.D. examination committee for Ming Huang (Dept. of Chemical and Nuclear Engineering)

Mike Spilde

Courses taught
Spring: E&PS 552 - "Problems Class, Advanced Microprobe Analysis", (6 enrolled)

Tutorial training:
Tutorial training on the SEM for 2 UNM graduate students.
Tutorial training on the SEM for NM Museum of Nat. History staff member.
Tutorial training on the microprobe for 1 UNM faculty and 2 graduate students.
Tutorial training on the microprobe for UNLV faculty member.
Conducted guest lectures and demonstrations on the microprobe for Anthro. 570
"Geoarcheology", April 23 and November 7, 1996.

Padmara Unnikrishna

Courses taught (guest lecturer)
Fall: E&PS 462 - Hydrogeology (20 enrolled)
E&PS 464 - Environmental Mechanics (16 enrolled)

Lee Woodward

Courses taught
Spring: E&PS 101 - Physical Geology (78 students)
E&PS 428 - Regional Tectonics (9 students)
Fall: E&PS 255L - New Mexico Field Geology (17 students)
E&PS 491 - Problems (1 student)
2. 1996 PUBLICATIONS

**Books Edited**

Diagenesis and fluid flow: concepts and applications  
*L.J. Crossey, R. Loucks and M. Totten* (editors)  

The Jemez Mountains region  
F. Goff, B.S. Kues, M.A. Rogers, L.D. McFadden and J.N. Gardner (editors)  

Chondrules and the protoplanetary disk  
R.H. Hewins, R.H. Jones** and E.R.D. Scott (editors)  

Continuing education manual on geomorphic expression of active tectonics  
*F.J. Pazzaglia* and N. Pinter  

**Refereed Journal Papers**

A general mathematical model for the interpretation of tracer data and transit time calculation in hydrologic systems  
I.E. Amin and *M.E. Campana*  

High-resolution temporal record of Holocene groundwater chemistry; tracing links between climate and hydrology  
J. Banner, M. Musgrove, *Y. Asmerom*, L. Edwards and J. Hoff  

Carbon isotope exchange during polymetamorphism in the Panamint Mountains, California, USA  
D. Bergfeld*, P.I. Nabelek and T.C. Labotka  

U$^+$ minerals and inorganic phases: a comparison and hierarchy of crystal structures  
P.C. Burns**, M.L. Miller** and *R.C. Ewing*  

A conceptual evaluation of regional ground-water flow, southern Nevada-California, USA  
*M.E. Campana* and R.M. Byer, Jr.  

Phase and super conductivity of (T1, M)-Sr-Cu-O system (M=Cr or V): experimental evidence for possible existence of Sr-based T1-2212 phase  
Effects of V-doping or Cr-doping on phase-formation, electric properties and superconductivity of the 3212-type phase PbSr (Ca_{0.5}Y_{0.5})CuO_{2}.

Regional aridity in North America during the middle Holocene
W.E. Dean, T.S. Ahlbrandt, R.Y. Anderson and J.P. Bradbury

Models of isotopic exchange in reactive fluid-rock systems: implications for geochronology in metamorphic rocks
D.J. DePaolo and S.R. Getty**

Clays at the natural nuclear reactor at Bangombé, Gabon: migration of actinides
P.O. Eberly, R.C. Ewing, J. Janeczek and A. Furlano

Sequence stratigraphy and platform evolution of Lower-Middle Devonian carbonates, eastern Great Basin
M. Elrick

Millennial-scale climate origin for stratification in Cambrian and Devonian deep-water rhythmites, western USA
M. Elrick and L.A. Hinnov

In Darwin’s Footsteps
R.C. Ewing and L.J. Cressey

The crystal structure of schoepite, \((\text{UO}_{2})\beta\cdot(\text{OH})_{12}\cdot(\text{H}_{2}\text{O})_{12}\)
R.J. Finch, M.A. Cooper, F.C. Hawthorne and R.C. Ewing
The Canadian Mineralogist, v. 34, p. 1071-1088 (1996)

Electron-irradiation- and ion-beam-induced amorphization of coesite
W.L. Gong**, L.M. Wang** and R.C. Ewing

Surface and grain boundary amorphization: thermodynamic melting of coesite below the glass transition temperature

Syn-contractional crustal anatexis and deformation during emplacement of the 1435 Ma Electra Lake gabbro, Needle Mountains, Colorado
D.A. Gonzales, K.E. Karlstrom and G. Sick

Low-frequency ocean-atmospheric variability across the tropical Western Pacific
D.S. Gutzler
Thermal histories of IVA stony-iron and iron meteorites: evidence for asteroid fragmentation and reaccretion

A paleomagnetic and ⁴⁰Ar/³⁹Ar geochronologic study of Late Cretaceous remagnetization of Proterozoic mafic
dikes, southern Highland Range, Southwestern Montana
S.S. Harlan, J.W. Geissman, L.W. Snee and R.L. Reynolds

⁴⁰Ar/³⁹Ar geochronology and paleomagnetism of Independence volcano, Absaroka Volcanic Supergroup,
Beartooth Mountains, Montana
S.S. Harlan, L.W. Snee and J.W. Geissman

U-Pb geochronologic constraints on Proterozoic crustal evolution of the upper Granite Gorge, Grand Canyon,
Arizona
D.P. Hawkins, S.A. Bowring, B.R. Ilg*, K.E. Karlstrom and M.L. Williams

Redescription of Redondasuchus reseri, a Late Triassic aetosaur (Reptilia: Archosauria) from New Mexico
(USA), and the biochronology and phylogeny of aetosaurs
A.B. Heckert*, A.P. Hunt and S.G. Lucas

Stratigraphic description of the Tr-4 unconformity in west-central New Mexico and eastern Arizona
A.B. Heckert* and S.G. Lucas
New Mexico Geology, v. 18, p. 61-70 (1996)

The use of linear programming in the construction of extremal solution to linear inverse problems
S.P. Huestis

Tectonic evolution of Paleoproterozoic rocks in Grand Canyon, insights into middle crustal processes
B. Ilg*, K.E. Karlstrom, D. Hawkins and M.L. Williams

Florencite-(La) with fissionogenic REEs from a natural fission reactor at Bangombe, Gabon
J. Janeczek and R.C. Ewing

Phosphatian coffinite with rare earth elements and Ce-rich françoisite (Nd) from sandstone beneath a natural
fission reactor at Bangombe, Gabon
J. Janeczek and R.C. Ewing

Uraninite and UO₂ in spent nuclear fuel: A comparison
J. Janeczke, R.C. Ewing, V.M. Oversby and L.O. Werme
Devonian transgressive-regressive cycles and biostratigraphy, Northern Antelope Range, Nevada: establishment of reference horizons for global cycles
J.G. Johnson, G. Klapper and M. Elrick
Palaios, v. 11, p. 3-14 (1996)

FeO-rich, porphyritic pyroxene chondrules in unequilibrated ordinary chondrites
R.H. Jones**

Comparison and contrast of processes of soil formation in the San Timoteo Badlands with chronosequences in California
K.J. Kendrick and L.D. McFadden
Quaternary Research, v. 46, p. 146-160 (1996)

Depositional environments and paleolimnology of an ancient caldera: the Oligocene Creede Formation, Colorado, USA
D. Larsen and L.J. Crossev

Late Triassic aetosaur biochronology
S.G. Lucas and A.B. Heckert*
Albertiana, v. 17, p. 57-64 (1996)

Geochemical alteration of pyrochlore group minerals: Betafite subgroup
G.R. Lumpkin and R.C. Ewing

Glass and ceramic waste forms - applications and materials properties
W. Lutze and R.C. Ewing

High-resolution transmission electron microscopy of ion irradiated UO₂
Hj. Matzke and L.M. Wang**

Application of a soil-water balance model to evaluate the influence of Holocene climate change on calcic soils, Mojave Desert, California, USA
E.V. McDonald, F.B. Pierson, G.N. Flerchinger and L.D. McFadden

Modulation of equatorial subseasonal convective episodes by tropical-extratropical interaction in the Indian and Pacific Ocean regions

Ion beam induced amorphization of monazite
A. Meldrum*, L.M. Wang**, and R.C. Ewing

Description and classification of uranium oxide hydrate sheet anion topologies
M.L. Miller**, R.J. Finch, P.C. Burns and R.C. Ewing
Timing of deformation and accretion of the Antimonio terrane, Sonora, from paleomagnetic data
R.S. Molina-Garza** and J.W. Geissman

Paleomagnetism and magnetostratigraphy of Triassic strata in the Sangre de Cristo Mountains and Tucumcari Basin, New Mexico, USA

Paleomagnetism of Paleozoic strata, Brabant and Ardennes Massifs (Belgium): implications of pre-folding and post-folding Late Carboniferous secondary magnetizations for European apparent polar wander
R.S. Molina-Garza** and J.D.A. Zijderwald

Temperature dependent microstructural modification in ion-irradiated Tl-type high temperature superconductors

Martians in a deep freeze
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Stabilization and disposal of surplus weapons plutonium in zircon
W. Lutze, R.C. Ewing and A. Prinja
Emerging Technologies in Hazardous Waste Management VIII, Birmingham, AL, Abstracts (1996)

Middle Eocene (Irdinmanhan) mammals and the paleobiogeography of Asia
A. Ma* and S.G. Lucas

Decoupling of $^{193}$Re fluid-mobile elements (B,Pb), and refractory lithophile elements (La,Nb) in arc lavas across the Quesada Sharp Contortion, Central America

Impact of climatic warming on soils of arid regions
L.D. McFadden
American Quaternary Association 14th Biennial Meeting - Global Warming: Interglacials, interstadials, climatic optima, and other events; Programs and Abstracts, p. 25-27 (1996)

The Desert Project: formulation of the "Dust-Landscape - Soil" paradigm and influence on soil-geomorphic research
L.D. McFadden

Electron-beam-induced crystallization of amorphous LaPO$_4$ and ScPO$_4$
A. Meldrum*, R.C. Ewing and L.A. Boatner

Ion beam induced amorphization of LaPO$_4$ and ScPO$_4$
A. Meldrum*, L.M. Wang** and R.C. Ewing

The P-R Arrowhead expansion series: classification of uranyl sheet anion topologies based on the stacking of structural chains
M.L. Miller**, P.C. Burns and R.C. Ewing

Transuranium element incorporation into the $\beta$-UO$_4$ uranyl sheet
M.L. Miller**, P.C. Burns, R.J. Finch and R.C. Ewing
Abstracts, Fall Meeting of the Materials Research Society, p. 756 (1996)

Transuranium element incorporation into the beta-triuranium octaoxide uranyl sheet
M.L. Miller**, P.C. Burns, R.J. Finch and R.C. Ewing

Lithospheric structure in continental rifts from Nd-Sr isotope geochemistry: the Rio Grande rift
S.L. Minchak*, Y. Asmerom, A.M. Kudo and W.S. Baldrige
EOS, v. 77, p. 792 (1996)
Evidence of shield volcano morphology, Lobato basalt, Jemez volcanic field, NM
S.L. Minchak*, A.M. Kudo and W.S. Balridge

Preliminary paleomagnetic data for Permian and Triassic strata in central Sonora, Mexico
R.S. Molina-Garza** and J.W. Geissman

Late Triassic paleomagnetic data from southwestern North America: further evidence of "small" Colorado Plateau rotation

Three dimensional biogeochemical structure of the groundwater-stream water ecotone in a montane stream
J.A. Morrice, H.M. Valett, P. Unnikrishna** and C.N. Dahm

Paleomagnetic data from Lower Permian strata in San Diego Canyon, Jemez Mountains, New Mexico and Valles Caldera VC-2B scientific drilling experiment
H.J. Mullally* and J.W. Geissman

Metamorphic and geochronologic evidence for ca. 500 m.y. of midcrustal residence of Proterozoic rocks, Hualapai Mountains, NW Arizona
M.W. Nyman, K.E. Karlstrom, M.L. Williams and M.T. Heizler

Advanced material science techniques for analysis of prehistoric ceramics
N.H. Olsen, N.A. Creager and M.N. Spilde**

Diogenites; cumulates from asteroid 4 vesta: insights from orthopyroxene and spinel chemistry

Evolution of the lunar crust: SIMS study of plagioclase from ferroan anorthosites and Mg-suite norites
J.J. Papike, G.W. Fowler** and C.K. Shearer**

Late Cenozoic evolution of middle Atlantic margin rivers: the fluvial response to J.P. Owens "rolling basins"
P.J. Pazzaglia

Polyphase Proterozoic middle-crustal tectonism in northern New Mexico
J.N. Pedrick* and K.E. Karlstrom

Modulation of southwest North American summer precipitation by snowpack in the American Rockies
J. Preston* and D. Gutzler
New Mexico Geology, v. 18, p. 45-46 (1996)
Sub-horizontal flow and folding facilitated by plutonism within the middle-crust: Rincon Range, Mora County, New Mexico
A.S. Read*
New Mexico Geology, v. 18, p. 52 (1996)

A transition from steep to sub-horizontal tectonic fabrics, granite sheets as mid-crustal detachments, Rincon Range, Mora County, New Mexico
A. Read*, K. Karlstrom and J. Selverstone

A test of isochemical behavior of principal components in chondritic porous IDPS
F.J.M. Rietmeijer**

Lower stratospheric abundances of aluminum oxide and Al-spheres > 9 micrometers from May 22, 1981 to July 1991
F.J.M. Rietmeijer** and G.J. Flynn

Geochemistry, paleomagnetism, and stratigraphic relationships of the Grants, El Calderon, and Hoya de Cibola Quaternary basalt flows, central Zuni-Bandera volcanic field, NM
J.H. Ring*, T.E. Cascadden* and A.M. Kudo

Inversion of the cosmic ray solar diurnal variation
I. Sabbah and S.P. Huestis

Mylonization, cataclasis, and frictional melting on "minidetachments" in the Whipple Mountains core: evolution and seismicity of low-angle normal faults in the midcrust
J. Selverstone, G. Hazelton and G.J. Axen

P-T histories of metasedimentary xenoliths from the Navajo volcanic field: implications for Proterozoic crustal structure beneath the Colorado Plateau
J. Selverstone, K. Karlstrom and A. Pun*
New Mexico Geology, v. 18, p. 53-54 (1996)

Petrogenetic models for the origin of diogenites and their relationship to basaltic magmatism on the HED parent body
C.K. Shearer**, G.W. Fowler** and J.J. Papik
LPI Technical Report no. 96-02, part 1, p. 28-29 (1996)

Element partitioning between immiscible high-Fe basaltic melt and high-Si rhyolite melt

Eo-Oligocene stratigraphy and structure, Gray Butte area, central Oregon: faulting and volcanism along the Blue Mountain lineament
G.A. Smith, R.M. Conroy and W.C. McIntosh
Geological Society of America, Abstracts with Programs, v. 28, no. 5, p. 112-113 (1996)
Inter-relationships of late Cenozoic tectonism, sedimentation, and volcanism, northern Santo Domingo basin, Rio Grande rift, New Mexico
G.A. Smith and A.J. Kuhle*

Biogeochemistry of a layered alluvial aquifer: Rio Calaveras, New Mexico
J. Sterling*, L.J. Crossey, A. Groffman*, M. Baker* and M. Valett

Evidence for 1.4 Ga metamorphism and deformation in the aureole of the Sandia pluton, Monte Largo Hills area, New Mexico
J.M. Timmons*
New Mexico Geology, v. 18, p. 51 (1996)

Hydrologic controls on stream-groundwater ecotone response to spring snowmelt
P.V. Unnikrishna**, M.E. Campana, H.M. Valett, C.N. Dahm, K.E. Baker, J.A. Morrice and M.A. Baker

Biogeochemical responses to snowmelt in a stream/groundwater ecotone
H.M. Valett, C.N. Dahm, M.E. Campana, P.V. Unnikrishna**, M.A. Baker and J.A. Morrice

Temperature dependence of irradiation induced amorphization of complex ceramics
Abstracts, Annual Meeting of the American Ceramic Society, p. 16 (1996)

TEM study of microstructure evolution of "complex" ceramic materials during irradiation

Electron microscopy study of surface layers of borosilicate nuclear waste glasses found during vapor phase alteration
L.M. Wang**, W.L. Gong** and R.C. Ewing

Amorphization of alumino-silicates under ion beam irradiation
S.X. Wang*, L.M. Wang** and R.C. Ewing

The parallel between ion-beam induced amorphization and glass formation, a case study of the Al-Mg-Si oxide system

Tectonic development of "Echo park" type basins – eastern margin of the Colorado Plateau, Colorado
T.F. Wawrzyniec*
Looping P-T paths, HTLP metamorphism, and long-term residence in the middle crust: the Proterozoic of southwestern North America
M.L. Williams and K.E. Karlstrom

Tectonic ancestry of central Montana and its influence on inversion tectonics
L.A. Woodward

Constraints on Laramide right slip on east side of Colorado Plateau in north-central New Mexico
L.A. Woodward, O.J. Anderson and S.G. Lucas

Department of E&PS Faculty authors are underlined; ** = research scientist; * = student.
High resolution stratigraphy: application to hydroclimatic reconstruction in southwestern United States
R.Y. Anderson
NSF (3-13033)
$71,366; 7/02/96 to 12/31/97

Hydrologically coupled estimates of decadal to millennial climate variability during the Holocene and late Pleistocene
R.Y. Anderson, B.D. Allen and S. Hostetler
NSF (3-47281)
$69,791; 1/1/97 to 12/31/97

Geochemistry and hydrology of the Red River stream system before and after open pit mining, Questa area, Taos County, NM
R.Y. Anderson, L.J. Crosse and M.E. Campana
New Mexico Energy, Minerals and Natural Resources Department (3-48431)
$78,800; 3/1/97 to 9/30/98

Upgrading to a low abundance sensitivity multicollector TIMS
Y. Asmerom
NSF (3-43591)
$180,000; 3/15/95 to 2/28/97

U-series isotope systematics of continental rift basalts
Y. Asmerom
NSF (3-43631)
$33,646; 2/1/95 to 2/28/97

U-series isotope systematics of continental rift basalts: The Rio Grande rift, USA
Y. Asmerom
NSF (3-48611)
$62,007; 6/1/97 to 5/31/98

Phase transformations involving olivine, \(\beta\)-phase and spinel in the mantle transition zone: experimental studies of transformation mechanisms in \(\text{Mg}_2\text{SiO}_4\) and \((\text{MgFe})_2\text{SiO}_4\)
A.J. Brearley**
NSF
$102,175; 8/1/95 to 7/31/97

Mechanisms and kinetics of aqueous alteration reactions in chondritic meteorites
A.J. Brearley**
NASA
$80,000; 1/1/97 to 12/31/98

Acquisition of an analytical scanning electron microscope
NSF
$90,000; 1/1/97 to 12/31/97
Subsurface flow and transport - Research Assistant support
M.E. Campana
Sandia National Laboratories
$12,000; 10/1/96 to 9/30/97

Subsurface flow and transport - Research Assistant support
M.E. Campana
Sandia National Laboratories (3-45281)
$27,350; 10/1/95 to 9/30/97

Measurements of Evapotranspiration in Mixed Cottonwood Bosque del Apache National Wildlife Refuge
C.S. Crawford, H.M. Valett, P.V. Unnikrishna** and M. Molles
U.S. Fish and Wildlife Service
$26,000; 1996-1997

Mineralogical and geochemical controls on subsurface microbial activity, Cerro Negro, NM
L.J. Cressey
U.S. Dept. of Energy - Battelle (3-45191)
$25,000; 10/3/95 to 6/30/97

Biogeochemical cycling of redox-sensitive metals during surface-subsurface water exchange in a shallow alluvial aquifer
L.J. Cressey
NSF (3-46561)
$290,000; 5/15/96 to 7/31/99

REU supplement: Biogeochemical cycling of redox-sensitive metals during surface-subsurface water exchange in a shallow alluvial aquifer
L.J. Cressey and M. Valett
NSF (3-46569)
$2,000; 4/24/97 to 7/31/99

Short-term paleoclimate fluctuations expressed in Paleozoic deep-water rhythmites
M. Elrick
NSF (3-42021)
$93,529; 8/15/94 to 7/31/98

Mineralogy and Petrology of the Oklo Natural Reactors
R.C. Ewing
Aarhus University, Denmark Republic of Gabon European Commission, Directorate-General of Science, Research and Development, Oklo Phase II Project
$90,000 6/1/96 to 12/31/98

Support for Dr. Boris Burakov to visit the University of New Mexico as part of a program to develop ceramic waste forms for activities
R.C. Ewing
National Research Council, Office of International Affairs (3-56010)
$12,000; 7/24/96 to 7/1/97

Particle-induced amorphization of complex ceramics
R.C. Ewing and L.M. Wang**
Department of Energy/Basic Energy Sciences
$268,519; 8/1/96 to 7/31/99
Zircon as a host-phase for the immobilization of weapons plutonium
R.C. Ewing
NATO
$10,300; 8/1/95 to 7/30/97

Ceramics for the stabilization of plutonium
R.C. Ewing and W. Lutze
Los Alamos National Laboratory (3-45281)
$291,919; 10/31/95 to 9/30/98

Nested GCM/mesoscale model studies of large rapid Holocene and late glacial climate changes: synthesis with the Greenland ice core records
P.J. Fawcett
NSF (3-48771)
$84,514; 6/1/97 to 5/31/99

Studies of large-magnitude intracontinental extensional tectonism in the Basin and Range, California and Nevada
J.W. Geissman (with B.P. Wernicke and R.K. Dokka)
NSF (3-40481)
$35,898 (UNM component); 2/15/94 to 7/31/97

Hydrothermal processes in pyroclastic rocks: implications for cooling ignimbrites, shallow intrusions and rate of change of geomagnetic field
J.W. Geissman
Los Alamos National Laboratory (3-47451)
$8,697; 10/30/97 to 9/30/97

U-Pb geochronology in marine carbonates: a new approach for age dating in paleoclimate reconstruction
S. Getty** and Y. Asmerom
NSF (3-48381)
$52,983; 2/15/97 to 1/31/98

An assessment of atmospheric variability during TOGA COARE
D. Gutzler
NOAA Office of Global Programs
$56,471; 5/1/96 to 10/31/97

Nature of middle crust during orogenesis: thermal, mechanical, and geodynamic properties inferred from Proterozoic rocks of the Southwest
K.E. Karlstrom
NSF (3-44071)
$96,437; 5/17/95 to 6/30/98

Middle Proterozoic tectonic regimes in the Southwest: anorogeny or an orogeny(?)
K.E. Karlstrom
NSF (3-29191)
$109,456; 7/15/93 to 12/31/96

Undergraduate Earth Sciences Research at the University of New Mexico
K.E. Karlstrom and J.W. Geissman
NSF (3-40451)
$97,016; 2/22/94 to 12/31/96
UNM Albuquerque Basin Edmap proposal
K.E. Karlstrom
U.S. Geological Survey (3-46652)
$15,000; 5/15/96 to 5/31/97

Geochemistry, petrology and geologic setting of the Precambrian Carajas and Urucum ironformations, Brazil
C. Klein
NSF (3-27372)
$89,900; 6/1/94 to 5/31/98

Footwall deformation and regional crustal structure of "deep"-type metamorphic core complexes, western Arizona and southeastern California: evolution with paleomagnetism
R. Livaccari** and J.W. Geissman
NSF (3-41431)
$110,000; 7/1/94 to 3/31/97

Correlation of the marine and nonmarine Permian-Triassic boundaries: magnetostratigraphy of the Dalongkou section, Junggur Basin, Xinjiang, northwest China
S.G. Lucas and R. Molina-Garza**
National Geographic Society (3-44351)
$16,500; 6/1/95 to 5/31/97

Development of sinter glass formations for radioactive waste streams and sample characterization
W. Lutze and R.C. Ewing
British Nuclear Fuels, Ltd.
$81,100; 8/1/96 to 7/31/97

The crystal chemistry and structural analysis of uranium oxide hydrates
M.L. Miller** and R.C. Ewing
DOE/Basic Energy Sciences (3-43801)
$200,000; 5/15/96 to 12/31/97

New Mexico state systematic initiative for Math and Science education (SIMSE); one week teacher training institute: the solar system for elementary and middle school students
H.E. Newsom**
NSF
$35,000; 1/1/96 to 12/31/96

Faculty and student teams: a collaborative research program
H.E. Newsom**
Los Alamos National Lab
$15,000; 1/1/96 to 12/31/96

Advanced methods for the determination of moderately siderophile elements by mass spectrometry
H.E. Newsom** and M.T. Murrell
Los Alamos National Lab (Institute of Geophysics and Planetary Physics)
$21,000; 10/1/95 to 9/30/96

Siderophile elements and the origin of the continental crust
H.E. Newsom**
NSF
$110,000; 1995-1997

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Support for a new scanning electron microscope
J.J. Papike, A.J. Brearley**, M.N. Spilde, R. Jones** and C.K. Shearer
NASA
$90,000; 1/1/97 to 12/31/97

Support of UNM/SNL IOM Microprobe facility
J.J. Papike
NSF
$80,000; 8/1/95 to 8/1/96

Support of UNM/SNL Ion Microprobe facility
J.J. Papike
NSF
$81,000; 8/1/96 to 8/1/97

Microbeam studies of planetary materials
J.J. Papike
NASA
$216,895; 12/15/95 to 12/15/96

Microbeam studies of planetary materials
J.J. Papike
NASA
$217,000; 12/15/96 to 12/15/97

Implementation of a computational facility for quantitative geomorphic acquisition, processing, analysis, and display of large data sets
F.J. Pazzaglia
NSF (3-44481)
$22,846; 6/20/95 to 7/31/97

UNM Albuquerque Basin Edmap Proposal
F.J. Pazzaglia
U.S. Geological Survey (3-46651)
$15,000; 5/15/96 to 5/31/97

Albuquerque Basin and Grand Canyon EDMAP Proposal
F.J. Pazzaglia
U.S. Geological Survey (3-48719)
$22,029; 6/1/97 to 5/31/98

Fluvial terraces as a record of long-term deformation for the Cascadia forearc high, Olympic Mountains, Washington State
F.J. Pazzaglia
NSF (3-48741)
$97,958; 6/15/97 to 5/31/99

Rates of geomorphic processes using cosmogenic He and Ne
J. Potts and L.D. McFadden
DOE/OBES
$175,000; 9/95 to 9/98
Mineralogy of fine-grained primitive extraterrestrial materials
F.J.M. Rietmeijer**
NASA (3-16173; 3-16174)
$110,000; 4/1/96 to 3/31/97
$110,000; 4/1/97 to 3/31/98

Petrological analysis of astrophysical dust analog evolution
F.J.M. Rietmeijer**
NASA (3-26711)
$25,000; 2/28/96 to 3/1/97

P-T-t and kinematic constraints on Proterozoic tectonism in the northern Colorado Front Range
J. Selverstone
NSF (3-44871)
$109,306; 8/1/95 to 5/31/98

Collaborative research: Mechanics of footwall uplift during detachment faulting: a field test of kinematic and dynamic models (renewal)
J. Selverstone, G. Axen and J. Bartley
NSF (3-45891)
$91,593; 1/1/96 to 12/31/98

Collaborative research: evolution of early Proterozoic continental crust: constraints from xenoliths from the Navajo volcanic field
J. Selverstone, K. Condie and R. van Schmus
NSF (3-44981)
$40,800; 8/1/95 to 1/31/97

Outcrop and subsurface study of rift-basin facies geometry and reservoir heterogeneity
G.A. Smith
American Chemical Society, Petroleum Research Fund (3-43251)
$50,000; 3/1/95 to 8/31/98

The relationship of textures and depositional structures in pyroclastic-flow deposits to paleomagnetically determined emplacement temperatures
G.A. Smith and J.W. Geissman
NSF (3-40471)
$94,400; 1/1/94 to 12/31/97

Paleofloral and stratigraphic analysis and Eocene-Oligocene climate change in Oregon
G.A. Smith and S.R. Manchester
NSF (3-43551)
$30,288; 4/1/95 to 9/30/97

Albuquerque Basin and Grand Canyon EDMAP proposal
G.A. Smith
U.S. Geological Survey (3-48711)
$15,471; 6/1/97 to 5/31/98

Electron microprobe analysis of environmental samples
M.N. Spilde**
N.M. Environment Department, DOE Oversight Bureau
$5,000; 12/95 to 12/97
Stream/groundwater ecotones: hydrology, biogeochemistry and ecology
H.M. Valett (Biology) and M.E. Campana
NSF
$610,000; 2/1/95 to 1/31/98

REU/RAMHSS Supplement to stream/groundwater ecotones: hydrology, biogeochemistry and ecology
H.M. Valett (Biology) and M.E. Campana
NSF
$32,000; 3/22/96 to 7/31/97

REU Supplement to NSF Grant DEB-9414767: Riparian ecosystem restoration at Bosque del Apache National Wildlife Refuge
H.M. Valett, C. Crawford, M. Molles and M.E. Campana
NSF
$10,000; 3/18/96 to 12/31/96

Ion irradiation effects in Ca₃La₈(SiO₄)₆O₂: extension
L.M. Wang**
Battelle Pacific Northwest Laboratories (3-24611)
$40,000; 2/1/96 to 9/30/97

TEM analysis of ion beam modification of high-Tc superconductors
L.M. Wang**
Sandia National Laboratories (3-44211)
$49,758; 4/1/95 to 10/31/97

Radiation effects on materials in the near-field of a nuclear waste repository
L.M. Wang** and R.C. Ewing
Department of Energy, Environmental Science Program (3-47351)
$408,000; 9/1/96 to 8/31/99
4. RESEARCH PROJECTS IN PROGRESS

Yemane Asmerom

U-series Isotope Systematics of Continental Rift Basalts (2 yrs)
Y. Asmerom PI
National Science Foundation
$138,360 (Pending)

Collaborative Research: An Integrated Study of Late Proterozoic (ca. 1.2 - 0.7 Ga) Extensional Tectonism.
K. Karlstrom, J.W. Geissman, M. Elrick and Y. Asmerom, UNM
$160,809 (UNM portion) (Pending)

Other ongoing research activity (unfunded)
Timing of human habitat in Europe
Sr, Nd and Pb isotope evolution of continental rift lavas
Tropical paleoclimate reconstruction from speleothem isotopic data, Barbados.
Sr isotope systematics of lake waters and implication for continental climate.

Susan Barger

Manuscripts in press
Barger, M. Susan and Weiliang Gong**

United States Patents Related to the Practice of Daguerreotype
Barger, M. Susan

Biographical entries for the new edition of the American National Biography
Barger, M. Susan
(Cary, NC: Oxford University Press, 1997): Paul Beck Goddard (Photographic Pioneer and Physician);
Isaac Lea (Macologist and Publisher); Selig Hecht (Physiologist); and Thomas Charles Barger (Geologist and Oil Company Executive).

Adrian Brearley

Manuscripts in press
Phyllosilicates in the matrix of the unique carbonaceous chondrite, LEW 85332 and possible implications for the aqueous alteration of CI chondrites.
A.J. Brearley**
Manuscripts submitted

Disordered biopyriboles, amphibole and talc in the Allende meteorite: products of nebular or parent body aqueous alteration.
A.J. Brearley**

Manuscripts in preparation

The effect of cooling rate on the protoenstatite to orthoenstatite inversion: an experimental and transmission electron microscope study (with Rhian Jones).
Mineralogy of chondritic meteorites (with Rhian Jones)

Michael Campana

Proposals Submitted

Outcrop characterization of heterogeneity: explicit linkage of hydrologic and sedimentological properties and testing of stochastic model performance.
G.A. Smith and M.E. Campana
National Science Foundation - Hydrologic Sciences Program
7/1/96 - 6/30/99
$136,462
Submitted 12/1/96

Manuscripts in Press

Hydrologic influences on groundwater-surface water ecotones: heterogeneity in nutrient composition and retention.
H.M. Valett**, C.N. Dahm, M.E. Campana, J.A. Morrice*, M.A. Baker* and C.S. Fellows*

Alluvial characteristics, groundwater-surface water exchange and hydrologic retention in headwater streams
J.A. Morrice*, H.M. Valett**, C.N. Dahm, M.E. Campana
Hydrological Processes

Delineation of a carbonate-alluvial ground water flow system using a mixing-cell model and the spatial distribution of deuterium
M.E. Campana and J.G. Roth
Proceedings, Karst Waters and Environmental Impacts Conference, Antalya, Turkey, A.A. Balkema (in press)

Wolfgang Elston

Grants and contracts

Proposal submitted, in review

The Proterozoic Bushveld catastrophe, South Africa
W.E. Elston
NSF Proposal EAR 9706661
$186,258, June 1, 1997 to May 31, 1999.
Grants Submitted But Unfunded

Mostafa Fayek and R.C. Ewing "Experimental Oxygen Isotope Fractional Factors and Geochemical Consequences for UO2-Water Interactions" NSF

Peter C. Burns and R.C. Ewing "Experimental Investigations of Phase Transitions in the Series Boracite-Trembathite-Congolite," NSF


R.C. Ewing and P.C. Burns "Radionuclide Immobilization in the Alteration products of Spent Nuclear Fuel" Environmental Management Science Program, DOE


R.C. Ewing was a co-investigator (subcontract) on 5 proposals submitted to the Environmental Management Science Program, DOE

Participation in International Working Groups in 1996

European Union Program (Aarhus University, Denmark):
Oklo Natural Reactors, Phase II

Unsponsored Research

Pegmatite mineralogy and genesis; preparation of catalogue for the Harding Pegmatite of specimens and archival materials.

Corrosion and hydration of natural and synthetic glasses.

The use of natural systems in the performance assessment of nuclear waste repositories.

Manuscripts in Press

Donathite discredited: a mixture of two spinels
P.C. Burns, F.C. Hawthorne, E. Libowitzky, N. Bordes and R.C. Ewing
Neues Jahrbuch für Mineralogie Monatshefte (in press).

Calculated X-ray powder-diffraction data for schoepite, [(UO₂)₆(OH)₉(H₂O)₁₉] and comparison with reported powder patterns
R.J. Finch, F.C. Hawthorne and R.C. Ewing

Phase transformations and crystallographic relations among schoepite, metaschoepite and dehydrated schoepite
R.J. Finch, F.C. Hawthorne and R.C. Ewing
Canadian Mineralogist (submitted).
Clarkeite: new chemical and structural data
R.J. Finch* and R.C. Ewing
American Mineralogist (in press).

Incorporation mechanisms of actinide elements into the structures of U⁶⁺ phases formed during the oxidation of spent nuclear fuel
P.C. Burns, R.C. Ewing, and M.L. Miller

Amorphization of Al₂SiO₅ polymorphs under ion beam irradiation
Nuclear Instruments and Methods in Physics Research (B) (in press).

Ion irradiation-induced phase transformation in Al-Cu-Co-Ge decagonal quasicrystal
L.F. Chen, L.M. Wang, Y.X. Guo and R.C. Ewing
Nuclear Instruments and Methods in Physics Research (B) (in press).

Ion-beam-induced amorphization of LaPO₄ and ScPO₄
Nuclear Instruments and Methods in Physics Research (B) (in press).

Ion beam-irradiation induced structure transformation in α-AlMnSi
Y.X. Guo*, L.M. Wang, L.F. Chen and R.C. Ewing
Nuclear Instruments and Methods in Physics Research (B) (in press).

Electron irradiation-induced nucleartion and growth in amorphous LaPO₄, ScPO₄ and zircon
A. Meldrum*, L.A. Boatner and R.C. Ewing

Radiation effects in glasses used for immobilization of high-level waste and plutonium disposition

Electron irradiation-induced phase segregation in crystalline and amorphous fluorapatite
A. Meldrum*, L.M. Wang, Y.X. Guo and R.C. Ewing
American Mineralogist (submitted).

Ion irradiation-induced amorphization in the Al₂O₃-SiO₂ system: A comparison with glass formation

Interface-mediated amorphization of coesite by 200 keV electron irradiation
W.L. Gong, L.M. Wang, R.C. Ewing and H.S. Xie

Radiation effects in glass waste forms for high-level waste and plutonium disposal
W.J. Weber and R.C. Ewing

Ion Beam-Induced Amorphization and Glass formation in the MgO-Al₂O₃-SiO₂ System: part I - Experimental
S.X. Wang, L.M. Wang, R.C. Ewing and R.H. Doremus
Ion Beam-Induced Amorphization and Glass formation in the MgO-Al\textsubscript{2}Si\textsubscript{2}O\textsubscript{5} System: part I I - Theoretical Considerations
S.X. Wang, L.M. Wang, R.C. Ewing and R.I. Doremus

Mineral chemistry and oxygen isotopic analyses of uraninite, pitchblende and uranium alteration minerals from the Cigar Lake Deposit, Saskatchewan, Canada
Mostafa Fayek, Janusz Janeczek and R.C. Ewing
Applied Geochemistry (submitted).

Radiation damage and alteration associated with radioactive minerals
Mostafa Fayek, P.C. Burns, Y.-X. Guo, and R.C. Ewing
Geology (submitted).

The crystal structure of ianthinite: A possible phase for Pu(4+) incorporation during the oxidation of spent nuclear fuel
P.C. Burns, R.J. Finch, F.C. Hawthorne, M.L. Miller and R.C. Ewing

Manafts Fayek

Manuscripts in press:

Mineral chemistry and oxygen isotopic analyses of uraninite, pitchblende, and uranium alteration minerals from the Cigar Lake deposit, Saskatchewan, Canada
J. Fayek, J. Janeczek and R.C. Ewing

Geochemical consequences of uraninite-water interaction in an oxidizing environment
M. Fayek, T.K. Kyser, R.C. Ewing and M.L. Miller

Characteristics of multiple fluid events and rare earth element mobility associated with the formation of unconformity-type uranium deposits in the Athabasca Basin, Canada
M. Fayek and T.K. Kyser

Manuscripts in review:

Radiation damage and alteration associated with radioactive minerals
M. Fayek, P. Burns, Y. Guo and R.C. Ewing
Geology (submitted)

Manuscripts in preparation:

Petrography and geochemistry of the Blue Bell turquoise mine, Cerrillos, New Mexico
M. Fayek, T.K. Kyser, J. Mathien, and S. Young
Geology (in prep).

Does UO\textsubscript{2} exist in moderately oxidizing environments?
M. Fayek, T.K. Kyser and R.C. Ewing
Mat. Res. Soc. Symp. (in prep)
Recrystallization of uraninite and the formation of uranyl oxide hydrates
M. Fayek, Y. Guo and R.C. Ewing
J. Nucl. Mater. (in prep)

Secondary phase formation during uraninite-water interaction at 100°C and 150°C
M. Fayek, T.K. Kyser, R.C. Ewing and M.L. Miller
J. Nucl. Mater. (in prep)

Unsuccessful proposal grants
Experimental Oxygen Isotope Fractionation Factors and Geochemical Consequences of UO₂ - Water Interactions
M. Fayek and R.C. Ewing
$90,287.40

John Geissman

Proposals in review
Research Experiences for Undergraduates, Individual Award
J.W. Geissman and R.F. Livaccari
National Science Foundation, Tectonics
One year, $5,000

Dating contractual deformation in the Montana thrust belt and adjacent Rocky Mountain foreland with paleomagnetism and Ar/Ar geochronology
J.W. Geissman, C.J. Schmidt (Western Michigan University), and S.S. Harlan (U.S. Geological Survey, Denver)
National Science Foundation, Tectonics
Two years, $144,494

Collaborative Research: Assessing the style, evolution of large-magnitude intracontinental deformation, and the role of extrusion tectonics, eastern Himalayan Syntaxis, Yunnan, China
J.W. Geissman, Clark Burchfiel (MIT)
National Science Foundation, Tectonics
Three years, $181,103 (UNM component)

Collaborative Research: An integrated study of Late Proterozoic (ca. 1.2-0.7 GA) extensional tectonism, basin evolution, and biological evolution in the Grand Canyon Supergroup and Apache Group during incipient breakup of Rodinia
K.E. Karlstrom, J.W. Geissman, M. Elrick, and Y. Asmerom
National Science Foundation, Tectonics
two years, $160,809

Manuscripts in Review
Regional correlations of Mesozoic thrusts in central Nevada and ramifications for the Sevier Orogeny

Paleomagnetic data for Triassic strata, Zuni uplift, New Mexico: Implications for Colorado Plateau rotation
Paleomagnetism and rock magnetism of large sandstone pipes in the Middle Jurassic Summerville Formation near Mesita, west-central New Mexico.
Geissman, J.W., and S.S. Harlan,

Manuscripts in Preparation

Age and paleomagnetism of contractile structures in the Cottonwood Mountains, Death Valley area, southeast California.
Snow, J.K., J.W. Geissman, and B.P. Wernicke
intended for Tectonics

Paleomagnetism of the Mesoproterozoic Pikes Peak batholith, southern Front Range, Colorado, Feig, A.D., Geissman, J.W., Harlan, S.S.
intended for Precambrian Research.

Precambrian paleointensity of the geomagnetic field: Examples from the late Archean Stillwater Complex and Mesoproterozoic Laramie Anorthosite Complex.
C.J. Hale, J.W. Geissman, and S.S. Harlan

On the paleomagnetic signature of crystalline crust in extensional terranes.
J.W. Geissman
intended for Tectonics

Paleomagnetic data from the Hoover Dam area document approximately 45 degrees of counterclockwise rotation related to slip along the Lake Mead Fault System.
J.W. Geissman
intended for Tectonics

Applications of Paleomagnetism in the Basin and Range province, western U.S.A., and relevance to models for crustal extension.
J.W. Geissman
intended for Reviews of Geophysics (invited).

Paleomagnetism of the Hamblin-Cleopatra Volcano and related rocks, Lake Mead area, southern Nevada, Revisited.
intended for Tectonics.

An example of interacting magnetite grains carrying a Mesoproterozoic magnetization, Laramie Anorthosite Complex, Wyoming.
J.W. Geissman and S.S. Harlan
intended for Geophysical Research Letters

Paleomagnetism of the Latest Archean Stillwater Complex, Beartooth Mountains, southern Montana.
J.W. Geissman
intended for Journal of Geophysical Research

Paleomagnetism and geochronology of Proterozoic mafic dikes, southern Tobacco Root Mountains, southwestern Montana.
S.S. Harlan, J.W. Geissman, L.W. Snee
intended for Journal of Geophysical Research
Tectonic significance of widespread late Paleozoic remagnetization of the western North America miogeocline and platform.
J.W. Geissman, J.K. Snow, and S.L. Gillett
intended for Geology

Paleomagnetism and rock magnetism of late Miocene intrusions, Paiute Ridge, Nevada.
C.D. Ratcliff, J.W. Geissman, F.V. Perry, B.M. Crowe, and P. Zeitler

Partial late Paleozoic remagnetization of the Combra-Ordovician Ignacio Formation, southwest San Juan Mountains, Colorado.
J.W. Geissman

Paleomagnetism of mafic dikes in the Roberts Mountains and Cortez Range, Nevada: Implications for structural history of the northern Nevada rift.
J.W. Geissman, G.A. Acton, and M. Schneider*
intended for Tectonics.

Late Paleozoic magnetizations from Archean and Proterozoic crystalline rocks, Rocky Mountains, and implications for Late Paleozoic remagnetization processes.
J.W. Geissman and S.H. Harlan

The rock magnetic record of silicic magma emplacement, Obidian Domes, California.
J.W. Geissman, J.C., Eichelberger, S.S. Harlan, and C. McCabe
intended for Journal of Geophysical Research

Paleomagnetic and thermochronologic evidence for footwall tilt during extensional core complex development, Mineral Mountains, central Utah.
D.S. Coleman, J.W. Geissman, J. D.Walker, J.M. Bartley, and K.V. Hodges
intended for Geological Society of America Special Paper, invited.

Laramide (?) age of remagnetization of Permian and Triassic strata, central and north-central New Mexico.

Paleomagnetic results from Cenozoic volcanic rocks in the Walker Lane area, west-central Nevada, and their bearing on mechanics of Basin and Range extension.

Further paleomagnetic results from Mesozoic plutons of the Walker Lane area, west-central Nevada, and tectonic implications.
J.W. Geissman, J.T. Callian* and J.S. Oldow
Tectonophysics.

Paleomagnetism of the Jurassic Humboldt Lopolith, west-central Nevada: Results from extrusive equivalent metavolcanic rocks.
M.R. Hudson and J.W. Geissman

Paleomagnetic and rock magnetic data from plagioclase—olivine cumulate rocks of the Banded Series, Stillwater Complex, Montana, and their bearing on the age of regional serpentinization and nature of platinum-group element mineralization.
J. Saxton and J.W. Geissman
Econ. Geol.
Unsuccessful proposals for grants:

Stratigraphically confined secondary chemical remanent magnetization in hematite-bearing strata, implications for diagenesis in red beds and interpretation of paleomagnetic data
J.W. Geissman and R.S. Molina-Garza
American Chemical Society, Petroleum Research Fund
Two years, $50,000

Non-sponsored Research:

"Generic" paleomagnetic and rock magnetic investigations of: Cenozoic volcanic rocks (Arizona, Nevada, California, New Mexico)
Lower Paleozoic plutons (New Mexico, Colorado)
Mesozoic sedimentary rocks (New Mexico, Colorado, West Texas, Nevada)
Paleozoic sedimentary rocks (Nevada, New Mexico, Colorado, Utah)
Meteorite ejecta blankets (West Germany)
Cenozoic intrusions (Utah, Nevada, New Mexico)
Mesozoic intrusions (Nevada, Colorado, California)

Steve Getty

Manuscripts in press

U-Pb and Th-Pb Geochronology in Quaternary rocks.
'Getty, S.R.**, and DePaolo, D.J.,

Sm-Nd isotopes of zircon and garnet from a quartz diorite gneiss, North Cascades Orogen; Implications for tectonic evolution of the deep crust.
Wernicke, B.P., and Getty, S.R.**

Dave Gutzler

Manuscripts in press:

Estimating the effect of stochastic wind stress forcing on ENSO irregularity
B. Blanke, J.D. Neelin, and D.S. Gutzler

What controls summer rainfall in the desert southwest?
D.S. Gutzler

Unsuccessful proposals for grants:

"Interannual variability of summertime precipitation"
New Mexico Water Resources Research Institute
Grant proposals under review:

"Climatic variability of summer rainfall across Southwest North America"
National Science Foundation

"Modulation of summer season rainfall by anomalous snow cover"
NOAA Office of Global Programs

Stephen Huestis

Manuscript in press:

On the construction of geomagnetic timescales from non-prejudicial treatment of magnetic anomaly data from multiple ridges
S.P. Huestis and G.D. Acton
Geophysical J. International, in press

Manuscript in review:

The continuation inverse problem revisited
S.P. Huestis
Submitted to Geophysical J. International

Manuscript in preparation:

Geomagnetic polarity time scales and seafloor spreading rates from genetic algorithm optimizations
G.D. Acton and S.P. Huestis

Rhian Jones

Manuscripts in press

Trace element partitioning between pyroxene and melt in rapidly cooled chondrules.
R.H. Jones** and G.D. Layne

Manuscripts in preparation

A chondrule origin for dusty relict olivine in unequilibrated chondrites.
R.H. Jones** and L.R. Danielson
To be submitted to Meteoritics and Planetary Science.

Unsuccessful proposals submitted

Diffusion in olivine: Experimental measurement, and modelling of solar nebula processes.
R.H. Jones
NASA - Origins of Solar Systems
$97884; Jan. 1 1997 - Dec. 31, 1998
Karl Karlstrom

Grant pending

Collaborative Research: An integrated study of Late Proterozoic (ca. 1.2-0.7 Ga) extensional tectonism, basin evolution, and biological evolution in the Grand Canyon Supergroup and Apache Group during incipient breakup of Rodinia
K.E. Karlstrom
National Science Foundation
$160,809 requested for UNM.

Map and Manuscript in press

Geologic Map of the Sandia Park Quadrangle
C. Furgusen, P. Bauer, K.E. Karlstrom, and F. Pazzaglia

Manuscripts submitted

Rotated and nonrotated porphyroblasts: Keys to reconstructing P-T-t-D paths: Journal of Structural Geology
B.R. Ilg* and K.E. Karlstrom submitted 12-96.

Reconciliation of conflicting tectonic models for Proterozoic rocks of northern New Mexico
J.N. Pedrick and K.E. Karlstrom

Manuscript in prep.

Punctuated mid-crustal tectonism around the 1.42 Ga Sandia pluton, central New Mexico, U.S.A., Regional Aureole Metamorphism, foliation reactivation, and mid-crust flow
C.L. Andronicos,** K.E. Karolstrom, M.W. Nyman, and Eric Kirby*
in prep. for Journal of Metamorphic Geology.

Cornelis Klein

Manuscripts in preparation

Petrology and geochemistry of selected Proterozoic banded iron-formations of the Quadrilátero Ferrifero, Minas Gerais, Brazil
C. Klein and E.A. Ladeira
In prep.

Geology and geochemistry of banded iron-formations (BIF) and metacherts at the Morro Velho and Raaposos Gold Deposits, Minas Gerais, Quadrilátero Ferrifero, Brazil
C. Klein and E.A. Ladeira
In prep.

Petrology and geochemistry of high-grade metamorphic archean banded iron-formations of the Guanhães region, Minas Gerais, Brazil
C. Klein, E.A. Ladeira, and J.H. Grossi Sad
In prep.
Albert Kudo

Unsponsored research:

Petrogenesis of El Pico de Orizaba, Mexico

Barry Kues

Manuscripts in Press:

New bivalve taxa from the basal Tucumcari Formation (Cretaceous, Albian) of New Mexico, and the biostratigraphic significance of the basal Tucumcari fauna
B.S. Kues

Manuscripts in Preparation:

Late Cretaceous decapod crustaceans from central New Mexico
E.K. Toolson and B.S. Kues
for Journal of Paleontology

New species of Early Permian (Wolfcampian) gastropods from central New Mexico
B.S. Kues
for Journal of Paleontology

Micromolluscs from the Madera Formation (Late Pennsylvanian), Jemez Springs area, New Mexico
B.S. Kues and T. Yancey
for Journal of Paleontology

Catalogue and bibliography of New Mexico invertebrate and plant fossils
B.S. Kues
New Mexico Museum of Natural History Bulletin

Gastropods from the Middle Pennsylvanian Flechado Formation near Taos, New Mexico
B.S. Kues and R.L. Batten
for New Mexico Museum of Natural History Bulletin

Permian marine strata, basal Antimonio Formation, Sonora, Mexico
S.G. Lucas and B.S. Kues

Les McFadden

Pending Proposals

Distribution of Quaternary Alluvial Geomorphic Surfaces in the eastern Mojave Desert, southern California (Beratan, Kathi, PI; McFadden L.D., co-collaborator).

Manuscripts in press or accepted for publication

Geomorphic responses to climatic changes of different scales in the Holocene, southwestern Colorado Plateau, Arizona: A soil-geomorphic and ecologic perspective
L.D. McFadden and J.R. McAuliffe
Application of a soil-water balance model to evaluate the influence of Holocene climate change on calcic soils, Mojave Desert, California, U.S.A.
E.V. McDonald, F.B. Pierson, G.N. Flerchinger, and L.D. McFadden
Geoderma (in press).

The vesicular layer and carbonate collars of desert soils and pavements: formation and relation to climatic change
in Geomorphology Special Issue.

Manuscripts Submitted or in Review

The influence of dust and lithology on the origin and evolution of desert pavements on alluvial fans
E.V. McDonald, L.D. McFadden and S.G. Wells S.G.

The impact of Pleistocene-Holocene climatic transition and lithologic control on alluvial-fan deposition along a desert piedmont, Mojave Desert, California
E.V. McDonald, L.D. McFadden, and S.G. Wells
for Quaternary Research

Late Quaternary history of pluvial Lake Mojave, Silver Lake, and Soda Lake basins, southern California
W.J. Brown, S.G. Wells, Y. Enzel, R.Y. Anderson, and L.D. McFadden
Quaternary Research (accepted for publication, in revision).

Manuscripts in Preparation

Late Quaternary archeology and evolution of soils and landscapes in the area of the Bolack Land Exchange, northern San Juan Basin, New Mexico
L.D. McFadden, and P. Hogan

Impacts of parent material lithology and grain size on pedogenic processes influencing carbonate accumulation in gravelly soils on a desert piedmont of the Los Pinos Mountains, New Mexico
C. Treadwell and L. McFadden

Soil genesis on the geomorphic surfaces of the Pajarito Plateau, northern New Mexico
P. Watt and L. McFadden

Mark Miller

Manuscripts in press

Incorporation mechanisms of actinide elements into the structures of $\text{U}^{6+}$ phases formed during the oxidation of spent nuclear fuel
Peter C. Burns**, Rodney C. Ewing, and Mark L. Miller**
Journal of Nuclear Materials (1997)

Powder Diffraction
Robert J. Finch
Transuranium element incorporation into the α-UO₄ uranyl sheet
Mark L. Miller**, Peter C. Burns**, Robert J. Finch, and Rodney C. Ewing

The crystal structure of ianthinite, a mixed-valence uranium oxide hydrate
Peter C. Burns**, Robert J. Finch, Frank C. Hawthorne, Mark L. Miller**, and Rodney C.

Manuscripts in preparation

The classification of U⁴⁺ sheet structures based on structural unit chains
Mark L. Miller** and Rodney C. Ewing
American Mineralogist

Roberto Molina-Garza

Manuscripts in review:

Paleomagnetic data for Triassic strata, Zuni uplift, New Mexico: Implications for Colorado Plateau rotation.
Molina Garza, R.S., J.W. Geissman, G.D. Acton A. Gomez, and B. Horton

Manuscripts in preparation:

Paleomagnetic data for the Caborca terrane, Mexico: Implications for the tectonic evolution of the southern Cordillera.
Molina Garza, R.S., and J.W. Geissman

Unsupported research:

Stratigraphically confined secondary chemical remanent magnetization in hematite bearing strata, implications for diagenesis in red beds and interpretation of paleomagnetic data.

James Papike

Manuscripts in press

Evolution of the lunar crust: SIMS study of plagioclase from ferroan anorthosites.
J.J. Papike, G.W. Fowler, and C.K. Shearer

Manuscripts submitted or in review

Subsolidus REE partitioning between pyroxene and plagioclase in cumulate eucrites: An ion-microprobe investigation.
A. Pun, J.J. Papike, and G.D. Layne

Eruption evolution of the ~760 Ka Bishop Tuff: Insights from electron and ion microprobe analysis of melt inclusions from the Long Valley Exploratory Well (LVF 51-20).
M.S. Servilla, G.D. Layne, and J.J. Papike
Diogenite modal petrography by EMP imaging techniques.
L. Bowman,* M.N. Spilde, and J.J. Papike

C.K. Shearer, G.W. Fowler, and J.J. Papike

Trace element fractionation by impact-induced volatilization: SIMS study of Lunar HASP glasses.
J.J. Papike, M.N. Spilde, C. Adcock, G.W. Fowler, and C.K. Shearer
American Mineralogist, in review. (1997)

Manuscripts in preparation

Magmatic Evolution of the Moon.
C.K. Shearer, and J.J. Papike

Diogenites as asteroidal cumulates: Insights from spinel chemistry.
L. Bowman,* J.J. Papike, and M.N. Spilde

The lunar samples.
J.J. Papike, G. Ryder, and C.K. Shearer

Frank Pazzaelia

Proposals Pending

University of New Mexico Albuquerque Basin and Grand Canyon EDMAP proposal (with K.Karlstrom and G. Smith).
U.S. Geological Survey
$30,000 of $60,000 for 1 year.

Active tectonics and constraint of Quaternary deformation captured in fluvial systems, Olympic Mountains, Washington State (with Eric McDonald)
National Science Foundation
$100,000 for two years.

Unsuccessful proposals

Geology, hydrology, and detailed (1:24,000 scale) mapping of the middle Rio grande watershed (with Karl Karlstrom and Laurie Crossey)
State of New Mexico
$190,000 for one year.

McCune Foundation, Youth summer programs
Geology, geomorphology, and hydrology of the southern Sierra Nacimiento, New Mexico
$13,925
Manuscripts in press

An analytical electron microscope study of airborne industrial particles in Sosnowiec, Poland.
F.J.M. Rietmeijer and J. Janecek
Atmospheric Environment.

Bismuth oxide nanoparticles in the stratosphere.
F.J.M. Rietmeijer and I.D.R. Mackinnon
J. Geophys. Res. - Planets.

Principal components: Petrology and chemistry of polyphase units in chondritic porous interplanetary dust particles.
F.J.M. Rietmeijer

F.J.M. Rietmeijer

First-order properties of chondritic cluster IDPs based on data from the NASA/JSC Cosmic Dust Catalogs.
F.J.M. Rietmeijer

Not all cluster particles in the NASA/JSC Cosmic Dust Collection are extraterrestrial.
F.J.M. Rietmeijer

Buckycarbons and fullerenes in interplanetary dust particles based on evidence from a transmission electron microscope (TEM) study of vapor condensed carbons with variable C/H ratio.

Book Chapter

Interplanetary Dust
F.J.M. Rietmeijer
Advances in Mineralogy, vol. 3, A.S. Marfunin (ed.). Springer Verlag

Manuscripts submitted

A first triggered lightning experiment of solar nebula alteration.
J.M. Karner*, F.J.M. Rietmeijer, J.A. Nuth and P.J. Wasilewski
Science

Manuscripts in preparation

Thermal metamorphism during atmospheric entry heating of Fe,Ni-sulfides in interplanetary dust.
F.J.M. Rietmeijer
European J. Mineral
Nonstoichiometric Ca-rich clinopyroxenes: The case of flash-heated interplanetary dust.
F.J.M. Rietmeijer
American Mineralogist

Evidence of inherent forms of carbon in soot material of astrophysical interest.
Astronomy Astrophysics

Unsupported Research

Transmission electron microscope characterization of condensed carbon, in cooperation with Dr. Alessandra Rotundi (Osservatorio Astronomico di Capodimonte, Naples, Italy.
Scanning and transmission electron microscopy of airborne industrial dusts, in cooperation with Prof. J. Janeczek and M. Jablonska, The Silesian Univerity, Poland.

Transmission electron microscopy of chrysoprase, in cooperation with Prof. M. Sachanbinski, the Wroclaw University, Wroclaw, Poland.

Jane Selverstone

Manuscripts in press

Composition of the lower continental crust in the Colorado Plateau: Geochemical evidence from mafic xenoliths from the Navajo Volcanic Field, SW United States
P.D. Mattie, K.C. Condie, J. Selverstone, and P.R. Kyle
Geochimica Cosmochimica Acta

Manuscripts submitted

Genesis of the hydrothermal uranium deposits in the central mining area, Marysvale Volcanic Field, west-central Utah
Economic Geology

Manuscripts in preparation

Deep burial depths for metapelites from the lower plate of the northern Snake Range décollement, Nevada
C. Lewis, B. Wernicke, J. Selverstone and J. Bartley
To be submitted to Geological Society of America Bulletin in March, 1997

Proterozoic tectonics of the northern Colorado Front Range
J. Selverstone, M. Hodgins*, and J. Alesnikoff
To be submitted to Rocky Mountain Association of Geologists Guidebook (invited)

"Ar/Ar" thermochronology of Mesoproterozoic metamorphism in the northern Colorado Front Range
C. Shaw*, L. Snce, J. Selverstone, and J.C. Reed
To be submitted to Journal of Geology

1.4 Ga contractional deformation and strain partitioning in the northern Colorado Front Range
M. Hodgins* and J. Selverstone
To be submitted to Tectonics
Tectonic implications of 1.7 vs. 1.4 Ga polymetamorphism in the northern Colorado Front Range
M. Hodgins* and J. Selverstone
To be submitted to Journal of Metamorphic Geology

P-T paths of middle and lower crustal xenoliths from the Colorado Plateau: Implications for Proterozoic crustal assembly
J. Selverstone, A. Pun**, and K.C. Condie
To be submitted to Geological Society of America Bulletin

Do metamorphic PTt paths place significant constraints on models of crustal exhumation?
J. Selverstone
To be submitted to Geology

Charles Shearer

Other Research Projects:

Trace and minor element variation in fracture calcite from Yucca Mountain, Nevada: reconstructing calcite growth histories

Werdingite, a borosilicate new to pegmatites

Werdingite from the Urungwe District, Zimbabwe
Grew, E.S., Yates, M.G., Shearer, C.K.** and Wiedenbeck, M.**
Mineralogical Magazine, in review (1997)

Boralsilite: A new borosilicate mineral intermediate between sillimanite and the alumino-borate Al₂B₂O₇ and its paragenesis in pegmatites
American Mineralogist, in review (1997)

Petrogenetic models for the origin of diogenites and their relationship to basaltic magmatism on the HED parent body
Shearer, C.K.**, Fowler, G. W.**, and Papike, J.J.
Meteoritics, in review (1997)

Gary Smith

Manuscripts in press

Geologic map of the Squawback Ridge quadrangle, Deschutes and Jefferson Counties, Oregon
M.L. Ferns, D.E. Stensland, G.A. Smith
Oregon Department of Geology and Mineral Industries Geologic Map Series, scale 1:24,000

Geologic map of the Bend 30- by 60-minute quadrangle, Deschutes, Jefferson, Lane, Linn, and Crook Counties, central Oregon,
U.S. Geological Survey Open-File Report 97-?, scale 1:100,000

89
Review of "The Geology of Fluvial Deposits", by Andrew Miall
G.A. Smith
American Journal of Science

Manuscripts submitted or in review

- Geologic map of the Opal City quadrangle, Deschutes and Jefferson Counties, Oregon, G.A. Smith, D.R. Sherrod, M.L. Ferns, Oregon Department of Geology and Mineral Industries Geologic Map Series, scale 1:24,000

Manuscripts in Preparation

- Late Eocene-early Oligocene tectonism, volcanism, and floristic change near Gray Butte, central Oregon
  G.A. Smith, S.R. Manchester, M. Ashwill, W. McIntosh, R.M. Conrey
  To be submitted to Geological Society of America Bulletin

- New 40Ar/39Ar dates for volcanic rocks of the John Day Formation in central Oregon
  W. McIntosh and G.A. Smith
  To be submitted to Oregon Geology

- Field classification and paleomagnetic characterization of lithic and scoriaceous breccias, Pleistocene Broken Top volcano, High Cascade Range, Oregon
  M.J. Grubensky*, G.A. Smith, and J.W. Geissman
  To be submitted to Journal of Volcanology and Geothermal Research

- Physical volcanology and sedimentology of a composite pyroclastic-flow apron/alluvial fan, Jemez Mountains, New Mexico
  G.A. Smith
  To be submitted to Bulletin of Volcanology

Unsuccessful Proposals for Grants and Contracts Submitted

- An outcrop analog study of alluvial-aquifer heterogeneity
  G.A. Smith and M.E. Campana
  National Science Foundation
  $120,168; July 1996-June 1999

Proposals Submitted

- Outcrop characterization of heterogeneity: explicit linkage of hydrological and sedimentological properties and testing of stochastic-model performance
  G.A. Smith, M.E. Campana
  National Science Foundation
  $136,462; July 1997-June 2000

- Variable hillslope processes and sediment delivery to tectonically quiescent basins: a late Miocene to Quaternary record of buried, relict, and modern hillslopes and their deposits
  G.A. Smith, F.J. Pazzaglia
  National Science Foundation
  $110,260; July 1997-June 1999

- Geologic mapping of the Sky Village NE, Ojito Springs, and Tesuque Quadrangles, New Mexico, and the Grand Canyon Supergroup, Arizona
  K.E. Karlstrom, F.J. Pazzaglia, G.A. Smith
  U.S. Geological Survey, EDMAP Program
  $39,338; June 1997-May 1998
Manuscripts in press and submitted:

Ion irradiation-induced amorphization in the $\text{Al}_2\text{O}_3\text{SiO}_2$ system: A comparison with glass formation
S.X. Wang, L.M. Wang, R.C. Ewing and R.H. Doremus
Journal of Applied Physics, in press.

Interface-mediated amorphization of coesite by 200 keV electrons
W.L. Gong, L.M. Wang and R.C. Ewing
Journal of Applied Physics, in press

Ion-beam-induced-amorphization of $\text{LaPO}_4$ and $\text{ScPO}_4$
A. Meldrum, L.M. Wang and R.C. Ewing
Nuclear Instruments and Methods in Physics Research B, in press

Amorphization of $\text{Al}_2\text{SiO}_3$ polymorphs under ion beam irradiation
S.X. Wang, L.M. Wang, R.C. Ewing
Nuclear Instruments and Methods in Physics Research B, in press

Ion-beam-irradiation induced structure transformation in $\alpha$-AlMnSi
Y.X. Guo, L.M. Wang, R.C. Ewing
Nuclear Instruments and Methods in Physics Research B, in press

Ion irradiation of Al-Cu-Co-Ge alloy: a decagonal quasicrystal
L.F. Chen and L.M. Wang, R.C. Ewing
Nuclear Instruments and Methods in Physics Research B, in press

Electron irradiation-induced phase segregation in crystalline and amorphous fluorapatite
A. Meldrum, L.M. Wang, Y.X. Guo and R.C. Ewing
American Mineralogist, submitted

Ion-beam-induced amorphization and glass formation, a case study of Al-Mg-Si oxide system—Part I: Experimental
S.X. Wang, L.M. Wang, R.C. Ewing and R.H. Doremus
Journal of Noncrystalline Solid, submitted

Ion-beam-induced amorphization and glass formation, a case study of Al-Mg-Si oxide system—Part II: Theoretical approach
S.X. Wang, L.M. Wang, R.C. Ewing and R.H. Doremus
Journal of Noncrystalline Solid, submitted

Temperature and dose dependence of ion-beam-induced amorphization in $\alpha$-$\text{SiC}$
Journal of Nuclear Materials, in press

Transmission electron microscopy study of ion-beam-induced amorphization of $\text{Ca}_2\text{La}_2(\text{SiO}_4)_2\text{O}_2$
L.M. Wang and W.J. Weber
Philosophical Magazine A, submitted

Formation of a stable decagonal quasicrystal in cobalt ion implanted aluminum
L.F. Chen and L.M. Wang
Applied Physics Letters, in press

91
Amorphization of ceramic materials by ion-beam-irradiation: parallels to glass formation
L.M. Wang, S.X. Wang, W.L. Gong and R.C. Ewing

Ion irradiation-induced amorphization in the MgO-Al₂O₃-SiO₂ system: a cascade quenching
S.X. Wang, L.M. Wang and R.C. Ewing

Behaviour of zirconia based fuel material under Xe irradiation
C. Degueldre, P. Heimgartner, G. Ledergerber, N. Sasajima, K. Hojou, T. Muromura, L. Wang,
W. Gong and R.C. Ewing

Transmission electron microscopy study of α-decay damage in aeschynite and britholite
W.L. Gong, L.M. Wang, R.C. Ewing, L.F. Chen and W. Lutze

Michael Wiedenbek

Manuscripts submitted
Werdingite from the Urungwe District, Zimbabwe
E.S. Grew, M.G. Yates, C.K. Shearer and M. Wiedenbeck
Mineralogical Mag., submitted.

Werdingite, a borosilicate new to pegmatites.
Canadian Mineralogist, submitted.

Boralsilite: a new borosilicate mineral intermediate between sillimanite and the alumino-borate
Al₄B₂O₉ and its paragenesis in pegmatites.
M. Wiedenbeck, D.E. Thost and S. Su
Am. Mineralogist, submitted.

Lee Woodward

Application for research grant entitled:
Gold resource and groundwater contamination of the Judith Mountains: an evaluation plan
Prof., Ian Lange, University of Montana, co-principal investigator, and Lee Woodward
Submitted to Montana Department of Natural Resources and Conservation for $64,985.
5. ACTIVITIES IN PROFESSIONAL SOCIETIES

Roger Anderson

Geological Society of America
American Geophysical Union

Yemane Asmerom

Fall AGU Meeting

Susan Barger

Talks presented:


Presented symposium: "Collections Care" for New Mexico Association of Museums Annual Meeting, Taos, NM, 18 September 1996.


Professional meetings attended:

Annual meeting of the American Institute for Conservation of Artistic and Historic Works, Norfolk, VA, 10-16 June 1996.


New Mexico Association of Museums Annual Meeting, Taos, NM, 18-20 September 1996.

Annual Meeting of the Materials Research Society, Boston, MA December 1-5, 1996.

Committee memberships:

Nominating Committee: Research and Technical Studies Special Interest Group, American Institute of Conservation.

Official liaison from the Photo Materials Group to Research and Technical Studies Special Interest Group, American Institute of Conservation.

Associate Editor, Journal of Imaging Science and Technology
Adrian Brearley

Professional meetings attended

59th Meteoritical Society, Berlin, Germany, 22-26 July, 1996
Fall American Geophysical Union Meeting, San Francisco, December 15-19, 1996

Talks presented


Presented talk "Mechanisms of the olivine to modified spinel and spinel transformations under subduction zone conditions". Fall American Geophysical Union Meeting, San Francisco, 15-19 December, 1996

Michael Campana

Director, Association of Ground-Water Scientists and Engineers

Laura Crossey

Meetings Attended/Talks Presented

Geological Society of America Annual Meeting; Denver, CO, 1996.

Society Committees

American Association of Petroleum Geologists, Membership Committee (since 1989)
Association for Women Geoscientists (lecturer (since 1989))
Society for Sedimentary Geology, Academic Liaison (since 1991)
Society for Sedimentary Geology, Membership Committee (since 1990)
Meetings attended

Presented paper and went on field trip, SEPM Meeting, Wildhaus, Switzerland, June, 1996.

Wolfgang Elston

Attended 59th Annual Meeting of the Meteoritical Society, Berlin, Germany, July 22-26, 1996. Read Paper on "Proposed Bushveld-Vredefort multiple megaimpact: Possible correlation with global 2.1 - 2.0 G.y. events and the Proterophytic - Paleophytic boundary"

Member, Working Group on Explosive Volcanism, International Association for Volcanology and Chemistry of the Earth's Interior (IAVCEI)

Member, Working Group on Volcanic Data Files, IAVCEI
Member, Commission 17 (Moon and Planets, International Astronomical Union)

Rodney Ewing

Mineralogical Society of America
Benefactors Committee (member, 1996)

Materials Research Society
External Affairs Committee (member, 1993-1996)
Public Affairs Committee (member, 1993-1997)
MRS Bulletin Subcommittee (member, 1996)

International Union of Materials Research Societies
President (1997-1998)

Journal of Nuclear Materials
Advisory Editorial Board, 1994-1996

Meetings Organized:

International Workshop for the National Research Council on "Glass as a Waste Form and Vitrification Technologies", Washington, D.C., May, 1996: (chair, Steering Committee)
Scientific Basis for Nuclear Waste Management XX held in Boston, December, 1996: (member, Program Committee)
Scientific Basis for Nuclear Waste Management XXI to be held in Davos, Switzerland, October, 1997: (member, Program Committee)
Ion Beam Modification of Materials meeting held in Albuquerque, September, 1996: (member, Program Committee)

Plutonium Futures - The Science to be held in Santa Fe in August, 1997: (member, Program Committee)

Fourth International IUMRS-ICA Conference to be held in Chiba, Japan in September, 1997: (member, International Advisory Committee)

Radiation Effects in Insulators - 9 to be held in Knoxville, Tennessee in September, 1997: (member, Program Committee)

Ninth Cimtec World Ceramic Congress to be held in Florence, Italy in June, 1998: (co-chair)

International Congress on Glass XVIII to be held in San Francisco, CA, in July, 1998: (invited speaker and session chair)

International Mineralogical Association Meeting to be held in Toronto in August, 1998: (member, Program Committee)

Invited Presentations


"Where is the Materials Science in Radioactive Waste Disposal?": CEA Saclay, Service de Chimie Moléculaire, France, November 19, 1996.

"TEM Study of 1.5 MeV Xe Irradiation of ZrO2": Workshop on Inert Matrix for Plutonium and Actinide Incineration, Paul Scherrer Institut, Villigen, Switzerland, November 21, 1996.

"Where is the Materials Science in Radioactive Waste Disposal?": Paul Scherrer Institut, Villigen, Switzerland, November 22, 1996.

"Where is the Materials Science in Radioactive Waste Disposal?": Office of Basic Energy Sciences, Department of Energy, Germantown, Maryland, December 6, 1996.
Mostafa Fayak


John Geissman

Talks Given:

Paleomagnetic data from NW Mexico: Evaluation of the Mojave-Sonora megashear (co-author R.S. Molina-Garza)
Geological Society of America Annual Meeting, Denver, October

Paleomagnetism of the Proterozoic LaBonte Gabbro and associated rocks, northern Laramie Range, Wyoming (co-author S.S. Harlan)
American Geophysical Union Meeting, San Francisco, CA, December

Paleomagnetic data from Lower Permian strata in San Diego Canyon, Jemez Mountains, New Mexico, and Valles Caldera VC-2B Scientific Drilling Experiment, (co-author H.J. Mullally)
American Geophysical Union Meeting, San Francisco, December

Editor, Bulletin, Geological Society of America
Member, Publications Committee, Geological Society of America

Convenor, Special Session on Tectonic Applications in Paleomagnetism, Fall American Geophysical Union Meeting, December, San Francisco
Member, American Geophysical Union "Committee of 50"

Steve Getty

U-Pb Dating of Corals Beyond 750 kyr, presented at Annual Meeting of the American Geophysical Union, San Francisco, California, December 14, 1996.

Dave Gutzler

Talks given

Presentation to American Meteorological Society Annual Meeting, Atlanta: "Estimates of large-scale divergent flow from TOGA COARE data".

Session chair, American Meteorological Society Annual Meeting, Atlanta GA.

Committees:

American Meteorological Society, Standing Committee on Interaction of the Ocean and Atmosphere
American Meteorological Society, Program Committee, Symposium on Air-Sea Interaction at AMS Annual Meeting, Atlanta, January 1996

International TOGA COARE Science Steering Group, Large-scale atmospheric waves and circulation working group representative

John Husler

Member of Geostandards International Working Group.
Participant in Round Robins Analysis of New Shale and Sediment Standards.
Member of American Chemical Society.

Rhian Jones

Meetings attended


Associate Editor of the international journal "Meteoritics and Planetary Science".
Fellow of Mineralogical Society of America and Meteoritical Society.
Member of Mineralogical Society of Great Britain and American Geophysical Union.

Karl Karlstrom

Talks given

Nature of Middle Crustal Tectonism during continental assembly and long term residence at 8-20 KM: Composite crustal profile exposed by Proterozoic rocks of the Southwest
K.E. Karlstrom and M.C. Williams

Persistence of Proterozoic accretionary boundaries in the tectonic development of the southern Rocky Mountains
K.E. Karlstrom

Symposia session chaired

Theme session chair - "Middle Crustal Processes" - GSA, Denver meeting
Fieldtrips

Attended NMGS 1996 fieldtrip
Led Caswell-Silver anniversary fieldtrip

Professional meeting attended

Annual Geological Society of America (Denver) meeting

Officerships

Chairman of "Best Paper" committee of Division of Structure and Tectonics - Geological Society of America

Cornelis Klein


Member of the Commission on History and Teaching, International Mineralogical Association, 1985 - present.

Albert Kudo

Presentation with J.H. Ring and others at Annual Meeting of the Geological Society of America, October, Denver, CO.

Presentation with T.E. Cascadden and others at Annual Meeting of the Geological Society of America, October, Denver, CO.

Presentation with S.L. Minchak and others at Annual Meeting of the Geological Society of America, October, Denver, CO.

Presentation with S.A. Maehr and others at Annual Meeting of the Geological Society of America, October, Denver, CO.

Presentation with S.L. Minchak and others at Annual Fall Meeting of the American Geophysical Union, December, San Francisco, CA.

Barry Kues

New Mexico Geological Society:

Co-organized and attended N.M.G.S. annual fall field conference, Sept. 26-28, to Jemez Mountains/Los Alamos area; Managing editor, N.M.G.S. Guidebook; attended N.M.G.S. annual Spring meeting, April 12.
Mark Miller

Meetings attended:


Attended the annual meeting of the Denver X-ray Conference, Denver, CO, August 3-8, 1996.


Roberto Molina-Garza

Meeting Attended:

Presented talk: Late Triassic Paleomagnetic Data from Southwestern North America: Further Evidence of "Small" Colorado Plateau Rotation, American Geophysical Union, Fall Meeting, San Francisco.

Horton Newsom

Meetings attended:


Core formation in the howardite-eucrite-diogenite parent body (Vesta). Submitted to the conference "Workshop on the evolution of igneous asteroids: focus on Vesta and the HED meteorites", Oct. 16-18, 1996.

Decoupling of 10Be, fluid-mobile elements (B, Pb), and refractory lithophile elements (La, Nb) in arc lavas across the Quesada Sharp Contortion, Central America. Accepted for presentation at the Geological Society of America Annual Meeting, Oct. 28-31, 1996. S.A. Maehr, A.M. Kudo, M.J. Carr, M.J. Leeman, and P.D. Noll, Jr.

Professional Offices held

Meetings Attended


Attended Group Chiefs' Meeting of the Lunar and Planetary Geoscience, Review Panel in Houston, TX, May 13-14, 1996. (J.J. Papike Panel Chief)


Attended Lunar and Planetary Geoscience Review Panel Meeting, Houston, TX, July 9-17. (J.J. Papike Panel Chief)

Attended and Organized Workshop on Asteroid 4 Vesta, Houston, TX, October 16-18, 1996.

Attended Mineralogical Society of America Council Meeting, Denver, CO, October 26-27.


National Committees and Offices in Societies

Member, Advisory Committee for the Institute of Geophysics and Planetary Physics, LANL and University of California.

Council Member, Mineralogical Society of America.

Chair, Planetary Materials Interest Group of Mineralogical Society of America.


Frank Pazzaglia

Active member of the American Geophysical Union, Geological Society of America, National Association of Geology Teachers, and New Mexico Geological Society

GSA National Meeting 1996:

Presented an abstract.

Co-Chair of Theme Session 1.

Co-instructor for a short course on active tectonics, which included a field trip highlighting the active tectonics of New Mexico (with Nick Pinter).

NMGS Annual Meeting and field trip:

Lead a portion of Day 1 fieldtrip, organized and spoke at stop 1.
Fran Rietmeijer

Professional Papers Read


A test of isochemical behaviour of principal components in chondritic porous IDPs, 59th Annual Meteoritical Society Meeting, Berlin (Germany)

Physical properties of interplanetary dust, Meteoroid Impact Workshop, Sandia National Laboratories, Albuquerque, New Mexico.

Professional Meetings Attended


Meteoroid Impact Workshop, Sandia National Laboratories, Albuquerque, New Mexico, June 4-7.

Jane Selverstone

Member of the Mineralogical Society of America Committee on Lecturers

Presented talk, "P-T histories of metasedimentary xenoliths from the Navajo volcanic field: Implications for Proterozoic crustal structure beneath the Colorado Plateau", New Mexico Geological Society annual meeting, 4/96

Invited participant at Penrose conference on Exhumation Mechanisms held on the island of Crete, October, 1996, and attended field trip associated with the meeting.

Presented invited talk, "Do metamorphic PTt paths place significant constraints on models of crustal exhumation?" Penrose conference on Exhumation Mechanisms, Crete, 10/96

Presented poster, "Mechanisms of footwall unroofing during extension in the eastern Alps", Penrose conference on Exhumation Mechanisms, Crete, 10/96

Charles Shearer

Presentations at Professional Meetings:

27th Lunar and Planetary Science Conference, Houston, TX.

"Petrogenetic models for the origin of diogenites and their relationship to basaltic magmatism on the HED parent body", Shearer, C.K., Papike, J.J., and Fowler, G.W.

"Major and trace element modeling of a polybaric melting origin for lunar very low-Ti picritic magmas," Shearer, C.K., and Papike, J.J.

G.S.A. Fall Meeting, Denver, Colorado

Element partitioning between immiscible high-Fe basaltic melt and high-Si rhyolite melt
Shearer, C.K., Wiedenbeck, M., Spilde, M.N., and Papike, J.J.

Other

Mineralogical Society of America representative to the American Geological Institute.
AGI Ian Campbell Medal Committee

Gary Smith

Secretary, New Mexico Geological Society

Co-led Day Three of the 47th New Mexico Geological Society Fall Field Conference

Associate Editor, Geological Society of America Bulletin
Associate Editor, Sedimentology (International Association of Sedimentologists)
Associate Editor, Journal of Sedimentary Research (SEPM, Society for Sedimentary Geology)

Michael Spilde

Meetings attended

Presented a poster: "Automated SEM modal analysis applied to the diogenites." Workshop on Evolution of Igneous Asteroids: Focus on Vesta and the HED Meteorites, Lunar and Planetary Institute, Houston, TX, October 16, 1996

Padinare Unnikrishna

Member of the American Geophysical Union (AGU)
Member of the American Water Resources Association (AWRA)
Member of the American Society of Civil Engineers (ASCE)

Attended the North American Benthological Society (NABS) meeting at Kalispell, Montana in June, 1996.

Lu-Min Wang

Meetings Attended:


Presented two posters, "Electron microscopy study of surface layers of borosilicate nuclear waste glasses formed during vapor phase alteration" and "A TEM study on alpha-recoil damage in aescynite", at the 30th International Geological Congress, Beijing, China (August, 1996).

Lee Woodward

Meetings Attended


6. OTHER PROFESSIONAL ACTIVITIES

Roger Anderson


Yemane Asmerom

Proposals reviews: NSF
Participated in National Science Foundation workshop on continental climate.

Susan Barger

Proposals reviewed:
Institute of Museum Services, Conservation Grants, Spring 1996

Consultancies:
Preservation planning for Batopilas, Chihuahua, Mexico; Copper Canyon Lodges, MI.
Sponsor of nomination of and liaison for Batopilas, Chihuahua to the World Monuments, 100 Most Endangered Monuments listing for 1996.
Analysis of statue for Fred R. Kline and Associates, Santa Fe, NM.
Transfer of papers of Homer Levi Dodge to American Institute of Physics, College Park, PA.
President and member of the Board of Directors, Graduate and Research Alumni Society, The Pennsylvania State University (Elected president March 1996). Attended board meeting, March 9-10, 1996, University Park, PA.

Adrian Brearley


Reviewed 3 proposals submitted to the National Science Foundation Petrology and Geochemistry Program.

Reviewed 4 proposal submitted to NASA Planetary Materials and Geochemistry Program.

Associate Editor, American Mineralogist (1994-1997).

Abstractor for Mineralogical Abstracts, abstracted papers from Analytical Chemistry.
Michael Campana

Reviewed manuscripts for Journal of the North American Benthological Society (2); Water Resources Bulletin (1); Hydrogeology Journal (1); Hydrological Processes (1); Water Resources Research (2)


Reviewed proposals for: National Science Foundation (2); New Mexico Water Resources Research Institute (1)

Selected to participate in an International Atomic Energy Agency Coordinated Research Programme on Use of isotopes for analyses of flow and transport dynamics in groundwater systems

Developing 5-hour short course on "Hydrology" for the U.S. Department of Energy's National Environmental Education and Training (NEET) Program

Associate Editor, Environmental and Engineering Geoscience
Editorial Committee, Journal of Belizean Affairs
Guest Co-Editor, Hydrogeology Journal - E.S. Simpson Memorial Issue

James Connolly

UNM Elderhostel Classes (12 hours with field trip):


UNM Continuing Education Classes (12 hours, taught at various times January - December, 1996):

5400: Cruising the Internet and the Worldwide Web
5402: Researching on the Internet
5006: Technical Microsoft Windows 3.1

Laura Crossey

Editorial Boards


Maya Elrick

Invited talks

Invited lecture New Mexicans for Science and Reason, April, 1996
Geological Society of America, Sed-strat. abstract committee for 1996 Annual meeting
Chair of Rocky Mountain section of SEPM Scholarship Committee
Chair SEPM Carbonate Research Group

Journal reviews

Journal of Sedimentary Research (3)
Geological Society of America Bulletin (1)
Sedimentary Geology (1)
Proposal reviews

Wolfgang Elston

Reviews

Reviewed two proposals for the National Science Foundation
Reviewed manuscript for Earth and Planetary Science Letters

Off-campus talks

May 8, 1996, Michigan Technological University, Houghton, MI: The 2.05 Ga. Bushveld catastrophe, South Africa: Evidence and possible world-wide implications

June 2, 1996. Invited speaker, Space '96, Hilton Hotel, Albuquerque, NM “The 2-Billion Year Old Bushveld-Vredefort event, South Africa: Was it a multiple mega-impact?”

October 11, 1996, University of Massachusetts, Amherst, MA
1. The Bushveld-Vredefort Complexes, South Africa: A history of investigations of geologic enigmas.
2. The 2.05 G.a. Bushveld catastrophe, South Africa: Evidence and possible world-wide implications.

Rodney Ewing

Reviewed manuscripts for the following journals (# in parenthesis)

Annales de Chimie: Science des Matériaux (1)
Journal of Nuclear Materials (1)
American Mineralogist (1)
Mineralogical Magazine (1)
Physics and Chemistry of Minerals (1)
Geology (1)
Scientific Basis for Nuclear Waste Management XX (11)

Reviewed proposals for the following agencies (# in parenthesis)

Natural Sciences and Engineering Research Council of Canada (1)
Australian Research Council Research Grants Committee (1)
Department of Energy (5)
National Science Foundation (4)
Stanford Synchrotron Radiation Laboratory (3)

Served as a reviewer for promotion evaluations at:

University of Manitoba
Pacific Northwest National Laboratory
Argonne National Laboratory
Served as a committee member or chair for:

National Academy of Sciences and National Research Council Committee on the Waste Isolation Pilot Plant (member)

National Academy of Sciences and National Research Council Committee for "Glass as a Waste Form and Vitrification Technology" (chair)

National Advisory Council on Environmental Policy and Technology for the Environmental Protection Agency (member)

Board of Materials Sciences, Basic Energy Sciences, Panel on "Radiation Effects in Glasses Used for Immobilization of High-Level Waste and Plutonium Disposition" (W.J. Weber and R.C. Ewing, co-chairs)

Board of Materials Sciences, Basic Energy Sciences, Panel on "Radiation Effects in Ceramics Used for Immobilization of High-Level Waste and Pu Disposition" (W.J. Weber and R.C. Ewing, co-chairs)

Invited presentations:

"The Role of Mineralogy in Designing Nuclear Waste Forms" (4 lectures): Institute of Geology, Aarhus University, Denmark, March 11-15, 1996.

"Immobilization of Excess Weapons Plutonium in Ceramics": Department of Nuclear Engineering and Radiological Protection, University of Michigan, Ann Arbor, MI, March 29, 1996.

Mostafa Fayek

Media interviews:

Campus News - UNM Scientists Help Unlock the Secrets of Radioactive Materials
Daily Lobo - UNM Scientists study waste storage site
The New Mexican-Half Lives, Whole Truths
Channel 7 News KOAT-TV

John Geissman

Professional talks:

Nature and regional importance of late Paleozoic remagnetization of crystalline and sedimentary rocks, western Cordillera
Department of Geosciences, University of Houston, January

Reviews of manuscripts and proposals

Reviewed proposals for National Science Foundation (12), American Chemical Society (3), Department of Energy (1), U.S. Geological Survey (1), The Third World Academy of Sciences (2), Lithoprobe, Canada (2).
Letters (2), Geophysical Research Letters (3), Tectonics (2), Canadian Journal of Earth Science (1), Precambrian Research (2), Geophysical International (1), Annales Tectonicae (1), Geology (2), Tectonophysics (2), Ocean Drilling Program (2). [note, these do not include manuscripts associated with Associate Editor duties].

Consultancies

Earth Sciences Research Institute, Univ. of Utah, Azerbaijan Magnetostratigraphy project, September, 1995-
Consultant, American Geological Institute, Glossary of Geology, 1996 Edition

Associate Editor, Journal of Geophysical Research
Associate Editor, Geology
University of New Mexico representative, DOSECC, Inc.

Member, Panel, Instrumentation and Facilities Program, Division of Earth Sciences, National Science Foundation
Geoscience "consultant", Albuquerque Petroglyphs, U.S. Park Service
Science Advisor, New Mexicans for Science and Reason

Steve Getty

Professional Published Report

Garden of the Gods Trails Management Project; Evaluating the Condition of Trails in the Garden of the Gods City Park
Getty, S.R.**
Environmental study commissioned by the Colorado Springs Department of Parks and Recreation, October, 1996.

Manuscripts Reviewed

Science: 1 manuscript
Geochimica et Cosmochimica Acta: 1 manuscript

David Gutzler

Invited presentations:

Los Alamos National Laboratory, 2/27.
NMSU Drought Management Seminar, Grants NM, 5/22.
New Mexicans for Science and Reason, Albuquerque, 6/3.
U.S. Congress, briefing on Southwest drought, Washington DC, 7/19.
Albuquerque Geological Society, 10/2.

Numerous interviews for newspaper and television regarding drought in New Mexico during the first six months of 1996; other interviews pertaining to climate research in New Mexico.

Reviews:

Journal of Climate: 3 manuscripts.
International Journal of Climatology: 1 manuscript.
Nature: 1 manuscript.
Bulletin of the American Meteorological Society: 1 manuscript.
Stephen Huestis

Paper reviewed for Journal of Geophysical Research

John Husler

American Chemical Society, volunteer in Outreach, March, 1996

Invited Talks:

GSA Symposium: Tectonic development of the southern Rocky Mountains
Panel member: NSF Continental Dynamics Panel

Other review activities

GSA Bulletin papers - 1
NSF proposals (beyond CD panel) - 3
Lithoprobe proposal -1
Precambrian Research papers - 2
Tectonics -1
NASA - 1 proposal

Promotion and tenure review

Jim Wright - Rice University
Steve Reynolds - ASU
Kevin Chamberlain - Univ. Wyoming
Tim Bell - James Cook Univ., Australia
Dan Holm - Kent State

Rhian Jones


Reviewed 1 book proposal for Cambridge University Press.

Karl Karlstrom

Invited Talks:

GSA Symposium: Tectonic development of the southern Rocky Mountains
Panel member: NSF Continental Dynamics Panel
Other review activities

- GSA Bulletin papers - 1
- NSF proposals (beyond CD panel) - 3
- Lithoprobe proposal - 1
- Precambrian Research papers - 2
- Tectonics - 1
- NASA - 1 proposal

Promotion and tenure review

- Jim Wright - Rice University
- Steve Reynolds - ASU
- Kevin Chamberlain - Univ. Wyoming
- Tim Bell - James Cook Univ., Australia
- Dan Holm - Kent State

Cornells Klein

- Adjunct Curator, New Mexico Museum of Natural History, Albuquerque, NM
- Reviewed several manuscripts of geology textbooks for various publishers.
- Associate Editor, Precambrian Research, a journal of Elsevier Science Publication, Amsterdam.
- Reviewed research proposals for the National Science Foundation and the Foundation for Research Development, Johannesburg, South Africa.
- Reviewed journal articles for: Economic Geology, Precambrian Research and Mineralium Deposita.

Albert Kudo

- Served as Master Chairman of Physical Sciences for the Northwest Regional Science and Engineering Fair.
- Served on Advisory Board, Northwest Regional Science and Engineering Fair.
- Involved in many meetings with Advisory Board and University Lawyer regarding problem with proposed science fair award from the Creation Science Fellowship.
- Submitted proposal and received funding from Council on Higher Education and Eisenhower Foundation to support Natural Sciences program for teaching pre-service K-8 teachers.
- Submitted proposal to NSF (Collaborative for Excellence in Teacher Preparation).

Barry Kues

- Reviewed 1 paper for 1996 N.M.G.S. Guidebook; reviewed a paper for symposium volume on the paleobiology and evolution of the Bivalvia; reviewed part of text for National Geographic article on the Four Corners are (Sept. 1996 issue)
- Adjunct Curator, New Mexico Museum of Natural History and Science
Roberto Molina-Garza

Presented talk:

"Paleomagnetic data from northwest Sonora: implications for the Mesozoic evolution of northern Mexico", International workshop on the geology of Sonora, Hermosillo, Sonora, Mexico.

Reviewed:

2 proposal for the National Science Foundation (Tectonics and Geophysics); 2 manuscripts for Journal of Geophysical Research; 1 manuscript for Earth and Planetary Science Letters.

Horton Newsom

Reviewed scientific papers submitted for publication in Geochimica et Cosmochimica Acta (4 papers), Meteoritics (1), Journal of Geophysical Research Planets (1),

Reviewed grant proposals submitted to NASA (3) and the National Science Foundation (2).

NASA committee meeting: Curation and Analysis Planning Team for Extraterrestrial Materials (CAPTEM), Houston, TX, March 16-17, 1996, Houston Texas.

Visited Southwest Research Institute, Boulder CO, May 16-17, 1996.

Visited the University of Colorado, Boulder CO, May 28, 1996.

NASA committee meeting: Curation and Analysis Planning Team for Extraterrestrial Materials (CAPTEM), Houston, TX, October 19-20, 1996, Houston Texas.

James Papike

Reviewed 30 Proposals and 15 Manuscripts

Frank Pazzaglia

Professional (reviews):

One NSF proposal
Four papers for Geology.
I am an editor of New Mexico Geology, a publication of the New Mexico Bureau of Mines and Mineral Resources.

Frans Rietmeijer

Peer review Scientific Papers

Geochimica et Cosmochimica Acta
Geophysical Research Letters
Meteoritics and Planetary Science
Environmental Science & Technology
Proposal Reviews

National Aeronautics and Space Administration, Lunar and Planetary Geosciences Program (12).
National Aeronautics and Space Administration, Planetary Instrument Definition and Development Program (1).

Panel memberships

The NASA Johnson Space Center Cosmic Dust Allocation Committee.
Hosted Dr. A. Rotundi, Osservatorio Astronomico di Capodimonte, Naples (Italy) for joint electron microbeam studies of condensed carbons, October 3-23.
Volunteer Editor for the American Geophysical Union.

Jane Selverstone

Editor, Journal of Metamorphic Geology
Member of the Tectonics review panel for the National Science Foundation

Presented seminar

"Fluid inclusions constraints on footwall uplift during crustal extension in the Alps", University of Texas at Austin, 2/96
"Tectonic implications of Proterozoic polymetamorphism in the northern Colorado Front Range", University of Texas at Austin, 2/96
"Fluid inclusions constraints on footwall uplift during crustal extension in the Alps", Arizona State University, 2/96

Manuscripts reviewed (not counting those handled as editor):

Geology (4)
Journal of Structural Geology (1)
Journal of Petrology (1)
Tectonophysics (1)
Tectonics (1)

Proposals reviewed:

NSF Tectonics panel (2) + 73 proposals as a panel member
NSF Petrology panel (2)

Reviewed tenure file for Lehigh University
Reviewed tenure file for Kent State University
Charles Shearer

Mars and ALH84001 one day seminar at Madison Middle School (7 periods, 3 classes each period).

Day visit to the Institute of Meteoritic by gifted class from Adobe Acres Elementary School (Mrs. Padilla) to observe how scientists study ALH84001 and other martian meteorites.

Presentations for the following organizations: New Mexicans For Science and Reason, Albuquerque Gem and Mineral Society, Kiwanis Club, UNM Geology Club, Department of Physics and Astronomy, and Albuquerque Geological Society.


Gary Smith


Reviewed proposals for the National Science Foundation (4), Petroleum Research Fund (1)

Adjunct Curator, New Mexico Museum of Natural History and Science

Field Geologist, New Mexico Bureau of Mines and Mineral Resources

Presented lecture at University of Texas at El Paso, November 19, 1996:
Late Cenozoic tectonics, sedimentation and volcanism in the northern Santo Domingo basin, Rio Grande rift, New Mexico

Padmapare Unnikrishna


Was short-listed for the Assistant Professor position in the Conservation and Survey Division (CSD) of the Institute of Agriculture and Natural Resources (IANR), University of Nebraska, Lincoln, Nebraska. Delivered the following talk there on October 7, 1996: Stable Isotope Tracer Study of Flow Generation Mechanisms in a Small Semiarid Mountain Watershed

Served as anonymous reviewer for 2 NSF proposals
Served as anonymous reviewer for 1 Water Resources Research paper
Lu-Min Wang

Presented two invited talks, "TEM study of irradiation damage in minerals" and "TEM study of surface layers formed on borosilicate nuclear waste glasses during vapor phase alteration", at the Department of Earth Sciences, Nanjing University, Nanjing, China (July, 1996).

Presented an invited talk at the Institute of Physics, "Radiation effects in solids", Chinese Academy of Sciences, Beijing, China (August, 1996).

Presented an invited talk, "TEM study of ion irradiation effects in solids", at the Department of Nuclear Engineering, University of Michigan, Ann Arbor, MI (October, 1996).

Reviewed manuscripts and proposal for the following:

- Applied Physics Letters (1)
- Microstructure of Irradiated Materials, MRS proceedings (1)
- Nuclear Instruments and Methods for Physical Research B (3)
7. NON-TEACHING UNIVERSITY SERVICE

Yemane Asmerom

Faculty Advisor:

MEMS Student Organization, Peacecraft Student Organization.

Committees:

Facilities committee
MEMS
MEMS summer science coordinator
Stable isotope geochemistry search committee
UNM Director of Outreach Services Search Committee.

Adrian Brearley

Hosting visitors

Dr Sasha Krot, University of Hawaii, 16-30 September, 1996

Departmental service

Curator of the Meteorite Museum and Collection, Institute of Meteoritics engaged in cataloging, acquiring and loaning of meteorites. Developed Institute Home Pages and Catalog for the World Wide Web.

Member, Dept. of Earth and Planetary Sciences and Institute of Meteoritics Facilities Committee

Michael Campana

University

Steering Committee, Master of Water Resources Administration Program
Laura Crossey

Department

Associate Chairman
Undergraduate Advisor
Alumni Relations Committee
Scholarship Committee
-Sigma Gamma Epsilon (National Honorary Geological Society) - Faculty Advisor
Undergraduate Committee
Undergraduate Geology Club - Faculty Advisor
Department Representative to the Minority Engineering, Math, and Science Program

Special Duties

Editor, Departmental Newsletter
Search Committee: Stable Isotope Geochemistry

College

Minority Engineering, Math, and Science Coordinating Committee
Senator of the Faculty Senate
Undergraduate Committee
Undergraduate Curriculum Committee

Maya Elrick

Departmental committees

Graduate, Scholarship, Undergraduate, Microscope, Vehicle maintenance Faculty search committee (paleoclimate & Caswell Silver)
University committees

Research Allocations Committee, KUNM Radio Board (faculty represent.)

Wolfgang Elston

Coordinator, UNM-Los Alamos National Laboratory Volcanology Program

Chair meetings of the Volcanology faculty

Conducted negotiations with Earth & Planetary Sciences Department, UNM Administrations and LANL Administration toward permanent staffing and funding of the Volcanology Program

December 20, 1996, Meeting of UNM members of Volcanology Program with LANL administrators (Al Sattelberger, University Programs; Kenneth Eggert, Deputy Division Leader).

Rodney Ewing

Department

Undergraduate Honors Advisor
Collections Committee (member)
Facilities Committee (member)
Graduate Committee (member)
Radiation Safety Permit Holder: XRD, AEM, XRF, Mineral Collections
Supervisor, Harding Pegmatite Property
Supervisor (with M. Miller), X-Ray Diffraction Laboratory
Supervisor (with L.M. Wang), Electron Microscopy Facility

University

Regents' Professors, selection Committee (member)
College of Arts and Sciences, Senior Promotion Committee (member)

Host to guests and lecturers

Dr. John Hanchar, Argonne National Laboratory
Professor Shanggeng Luo, China Institute of Atomic Energy, Beijing
Dr. Boris Burakov, Khlopin Radium Institute, St. Petersburg, Russia
Professor Robert Doremus, Rensselaer Polytechnic Institute, NY
John Geissman

University service and activities

Member, Faculty Senate, 1995-1997
Member (replacement), Faculty Senate, 1994-1995
Academic Freedom and Tenure Committee, 1994-1996
College of Arts and Sciences Sabbatical Evaluation Committee, 1994-1996
College of Arts and Sciences Graduate Committee

Departmental service

Graduate Committee, to July, 1996
Geology Department Assistant Chair; Fall, 1992
Geology Department Facilities Committee, Chair, Fall, 1996

Special Projects

Administrative Positions
Co-Chair, Graduate Committee, to July, 1996
Chair, Facilities Committee

Other Service

UNM One-On-One Program

David Gutzler

Member of the teaching faculty in both Earth & Planetary Sciences and Geography Departments.

Departmental committees:

Earth & Planetary Sciences Computer Committee, Spring-Fall 1996 (Chair, Fall).
Earth & Planetary Sciences Paleoclimatologist faculty search committee, Spring 1996.
Geography, Physical Geographer faculty search committee, Spring 1996.
Geography, Graduate Advisor, Fall 1996.
Stephen Huestis

University service and activities:

UNM Scientific and Engineering Computation Program associated faculty
SEC Program Admissions and Financial Aid Committee

Virginia Creepers String Band university performances:

E&PS Dept. Graduation, May 11.
UNM Arts and Crafts Fair, Nov. 23.

Department service:

Committees:

Scholarships
Undergraduate (beginning Fall 96)
Computer (Chair) (through Spring 96)
Library Liaison
Caswell Silver Research Professorship Search Committee

John Husler

UNM Student Services, volunteer in Outreach Services, 12/96.

Rhian Jones

University service

Mentor for Women in Science and Engineering Program.

Departmental service

Manager of Experimental Petrology Laboratory.
Assistant Curator of Meteorite Collection.
Member of Chemical Hygiene Committee, Department of Earth and Planetary Sciences.
Member of Search Committee for SIMS Laboratory Manager.
Karl Karlstrom

UNM Research Policy Committee
UNM RPC subcommittee on "policy for centers"
Chair, E&PS graduate committee
Rock Room coordinator
Host for Win Means (401)
Host for Gene Humphreys (401)
Co-coordinator of Young-Ranch welcome party for new graduate students

Cornelis Klein

Chair, search committee for Isotope Geochemistry position, 1995-1997.
Member of the Undergraduate Committee.
Member of Collections Committee.

Albert Kudo

University

Research Allocations Committee

Departmental

Chair of Scholarship Committee
Member of Caswell-Silver Research Chair selection committee
Member of microscope committee

Barry Kues

Department:

Chair of Department of Earth and Planetary Sciences

University:

Member, ad-hoc committee for planning of proposed new Science-Technology Building
Member, Faculty Senate task force to recommend a core curriculum program
Member, Faculty Senate Library Committee
Leslie McFadden

Associate Chairman, Department of Geology
Chair, Undergraduate Committee of EPS Dept.
Selected for the Junior Promotion and Tenure Committee, College of Arts and Sciences, UNM
Member, Search Committee, Paleoclimate Position
Hosted Visits to Department by: Dr. David Rogers, Richard H. Jahns G.S.A. Distinguished Lecturer in Engineering Geology (Nov. 25, 1996); Sean Connell, New Mexico Bureau of Mines and Mineral Technology, Geology 401 Seminar Speaker; Candidate for the Paleoclimate Position (Dr. Lara Stevens, U. of Minnesota).

Mark Miller

Department service:
Served on the departmental computer committee.

Horton Newsom

Member, New Mexico Space Grant Faculty Advisory Board (Facilitated successful application of student Jim Karner).
Educational Outreach Coordinator, Institute of Meteoritics.

Hosted department guest:
Dr. Michael Carr, Rutgers Univ., April 11, 1996.

James Papike

University Service and Activities:
Director, Institute of Meteoritics
Member, Faculty Senate Research Allocations Committee

Departmental Service:
Chair, Facilities Committee
Member of Graduate Committee
Frank Pazzaglia

I serve on the Department Graduate committee and Computer Committee

Jane Selverstone

Departmental committees

Graduate committee
Stable isotope search committee
Ion Probe Facility Manager search committee

Other service

Hosted visit by 401 speaker Mark Rowan (Univ. of Colorado), 4/96
Hosted visit by Caswell Silver distinguished lecturer B. Clark Burchfiel (MIT), 5/96
Hosted visit by 401 speaker Gary Axen (UCLA), 11/96

Charles Shearer

University service and activities:

Manager ICP-MS laboratory
Department Facilities Committee
University-New Mexico State Legislature Committee

Gary Smith

Departmental Service:
Chair, Collections Committee
Chair, Paleoclimatology Faculty Search Committee
Graduate Committee

Hosted the following visiting speakers to the department:
John Anderson, Rice University
James Cole, University of Canterbury
Lynn Soreghan, University of Oklahoma
Suzanne Baldwin, University of Arizona
Danny Katzman, Environmental Resource Management
Chris Paola, University of Minnesota
Michael Spilde

University service and activities

- Manager of the Electron Microprobe and Scanning Electron Microscope Labs.
- Performed microprobe analyses for 5 Department and 4 out-of-department faculty, staff, and students.
- Performed microprobe analyses for 6 NM Tech faculty and graduate students.
- Performed microprobe analyses for NM Bureau of Mines.
- Performed microprobe analyses for UNM Office of Contract Archeology.
- Performed microprobe analyses for 4 local businesses and NM State Environment Department.
- Performed SEM analyses for 4 Department and 2 out-of-department faculty, staff, and students.
- Performed SEM analyses for 4 local businesses.

Padinar Unnikrishna

- Participation in Ecosystems reading group
- Advising undergraduate and graduate students

Lu-Min Wang

- Responsible for the operation of the Analytical Transmission Electron Microscopy Facility in the department which is open to the entire campus, supervised and collaborated with laboratory staff and many users from several UNM departments as well as from other institutes. Developed a collaborative relationship with Motorala, New Mexico Ceramic Technology Center.

Lee Woodward

- Department undergraduate committee
8. SCHOLASTIC HONORS AND FELLOWSHIPS

Susan Barger


Michael Campana

Fulbright Scholarship to Belize (Lecturing in hydrology and earth science at University College of Belize, Belize City).

James Connolly


Wolfgang Elston

Reappointed Senior Research Professor, July 1, 1996.
Relisted in American Men and Women in Science
Who's Who in Science and Technology
Who's Who in the West

Rodney Ewing

Pacific Northwest National Laboratory Affiliate Staff Scientist (PASS)
Adjunct Professor, Institute of Earth Sciences, Aarhus University, Denmark
Adjunct Professor, Dept. of Chemical and Nuclear Engineering, UNM

John Husler

Ion Chromatography Workshop, DIONEX Corp., 11/6/96.
Rhian Jones

Elected Fellow of the Meteoritical Society

Cornells Klein


Presented with the Carnegie Mineralogical Award by the Carnegie Museums and Library of Pittsburgh, at the Tucson Gem and Mineral Show, February 15, 1996. The award consists of a bronze medallion, a certificate of recognition and a $2,500- cash prize. It was given "in recognition of internationally recognized scholastic and scholarly achievements in mineralogy and mineralogical education."

Leslie McFadden

Elected to the Council of the American Quaternary Association.
Elected First Vice Chairman of the Quaternary Geology and Geomorphology Division, Geological Society of America.

James Paplke


Charles Shearer

AWU Faculty Fellow at the Advanced Materials Laboratory-Sandia National Laboratory
9. SABBATICALS AND TRAVEL

Yemane Asmerom

University of Minnesota [to do collaborative research at Larry Edward's lab].
Outside Activity: Amnesty International; The Sierra Club

Adrian Brearley

June, 23 - July 6, 1996 - Bayerisches Geoinstitut, Bayreuth, Germany. Visit to carry out high pressure experiments on multianvil press.
59th Meteoritical Society, Berlin, Germany, July 22-26, 1996
Geological Society of America Annual meeting, Denver, Colorado, October 28-31, 1996
Fall American Geophysical Union Meeting, San Francisco, December 15-19, 1996

Michael Campana

Sabbatical Leave, Spring 1996, University College of Belize, Belize City, Belize
Perth, Australia, September 1996, INTECOL V International Wetlands Conference

Wolfgang Elston

Travel

May 4-14: Wisconsin, Michigan (including visit and talk, Michigan Tech. University)
June 20-23: Ohio
June 24-July 12: Norway
July 13-21: Sweden
July 21-August 5: Germany (including attendance at meeting of The Meteoritical Society, Berlin)
September 17-October 15, New England (including visit and two talks, University of Massachusetts)
Rodney Ewing

Fall semester, Geologisk Institut, Aarhus University, Denmark

Travel

January 3-12, Kauai, Hawaii, vacation
January 18-20, Irvine, CA, NAS/WIPP
January 25-26, Washington, D.C., ACNW
February 7-10, Paris, France, Oklo meeting
February 25-29, Santa Fe, NM, BES workshop
March 8-17, Aarhus Un., Denmark, guest lecturer
March 22, Denver, CO, NAS/WIPP
March 27, Washington, D.C., ACNW
March 28-30, Ann Arbor, MI, guest lecture
May 11-18, Washington, D.C., NAS workshop
May 27-30, Winnipeg, Canada, GAC/MAC
June 1-9, Warsaw, Poland, ICAM
June 10-11, Copenhagen, Denmark
June 12-16, Aarhus, Denmark, guest scientist
June 17-18, Stockholm, Sweden, SKB
July 3-5, Alpine, TX, vacation
July 10-11, Salt Lake City, UT, MRS program com.
August 1-10, Beijing, China, IGC
August 11-16, Hong Kong, Science & Technology Un.
Sept. 24-October 13, Aarhus, Denmark, guest faculty
October 14-21, Moscow, Russia, NAS delegation
October 23, Carlsbad, NM, NAS
November 5-15, Aarhus, Denmark, guest faculty
November 15-19, Saclay, France, guest lecturer
November 20-23, Villigen, Switzerland, PSI guest lecturer
November 24-26, Aarhus, Denmark, guest faculty
December 1-5, Boston, MA, MRS
December 6, Washington, D.C., BES, guest lecturer

John Geissman

Summer teaching:

University of Michigan Camp Davis, Geological Sciences 440, Advanced Field Geology, June 26-July 7
Travel:

January 8-14, southeast California
January 25-26, University of Houston
February 29-March 3, Boulder, Colorado, GSA Hq. for Publication Committee meeting and Bulletin planning
April 28-May 1, NSF Panel Meeting, Wood's Hole, Mass
May 13-June 2, New Mexico, southern Colorado, UNM Introductory Field Geology course
June 11-18, western Nevada, field sampling
June 25-July 8, Wyoming, University of Michigan, Field Camp
July 20-24, field sampling, east-central Wyoming
July 30-August 3, field sampling, Death Valley area (really; coolest part of the year)
August 19- September 12, Xinjiang Province, China, field sampling
September 26-30, Boulder, Colorado, GSA Hq, for Bulletin planning
October 17, Los Alamos National Laboratory, proposal planning
October 21-22, Salt Lake City, ESRI Azerbaijan progress meeting
October 26-31, Geological Society of America, Annual Meeting, Denver
December 14-18 San Francisco, AGU Meeting

Steve Getty

Chihuahua, Mexico, to Silver City, New Mexico, August, 1996: To collect epiphytic lichen for analysis of heavy metals.
Sandia Crest, New Mexico, November, 1996: To collect epiphytic lichen for analysis of heavy metals.
Coast Range Mountains, California, December, 1996: To collect epiphytic lichen for analysis of heavy metals.
Berkeley Geochronology Center, Berkeley, California, December, 1996: To discuss Pliocene paleontology in the North and South America with Dr. Carl Swisher.

David Gutzler

Attendance at AMS Annual Meeting, Atlanta, 1/28-1/31.
Presentation at Los Alamos National Lab, 2/27.
Presentation to drought management seminar, Grants NM, 5/22.
Visit to Boulder, CO, for scientific collaboration, 6/24-29.
Washington DC, congressional briefing, 7/18-19.
Northern Sierra Madre mountains, Mexico, 8/13-18 for LRAC grant-supported fieldwork.
Rhian Jones


Karl Karlstrom

- Jan. 11 - Fieldwork in Manzanos with students
- Mar. 23 - Structure fieldtrip (E&PS 307L)
- Apr. 6 - Structure fieldtrip (E&PS 307L)
- Apr. 14-29 - Research in Grand Canyon
- June 4-27 - Advanced field geology (E&PS 420)
- Aug. 13-15 - Fieldwork with graduate students
- Aug. 20 - Fieldwork with undergraduates
- Aug. 24 - Young Ranch welcome party for new graduate students
- Sept. 14 - Structure Fieldtrip (E&PS 417)
- Sept. 25-27 - NMGS Fieldtrip
- Oct. 3 - Fieldwork with graduate students
- Oct. 12 - Structure Fieldtrip (E&PS 417)
- Oct. 22-25 - Continental Dynamics Panel advisory of National Science Foundation
- Oct. 26-31 - Geological Society of America National meeting (Denver, Colorado)
- Nov. 9 - Structure fieldtrip (E&PS 417)

Cornellis Klein

Attended the Council Meetings of the International Mineralogical Association, as well as the 3rd International Symposium on Mineralogy and Museums, Budapest, Hungary, June 3-9, 1996.


Barry Kues

Professional travel:

- Jan. 31, Los Alamos, NMGS field conference planning
- Feb. 4, Carthage, NM, field research with student
- Feb. 23-24, El. Paso, TX area, field research
- Mar. 16, Derry, NM, field research
Albert Kudo

Sabbatical leave, Semester 1
Travel to Mexico (Volcan Pico de Orizaba) to obtain more samples for isotopic analysis.
Travel to Denver, CO, to attend annual meeting of the Geol. Soc. America.
Travel to San Francisco, CA to attend annual meeting of the American Geophys. Union.
Many trips to El Malpais National Monument to do research.

Leslie McFadden

Travel

Feb. 24 - Fieldtrip, northern New Mexico
April 6 - Fieldtrip, northern New Mexico
May 14 - Fieldwork, southern New Mexico, Potrillo Volcanic field
May 19-25 - Fieldwork, Sandia National Lab area
May 12-24 - Presentation of paper and participation in AMQUA Biennial Meeting, Flagstaff, AZ.
July 29 - Presentation of Lecture to Archaeology Program participants at Ghost Ranch, NM
Sept. 14-15 - Participation in Field Conference, Pajarito Plateau, NM
Sept. 26-27 - Participation, NM Geological Field Conference, Jemez Mts. (Co-Editor Field volume)
Oct. 27-31 - Participation in Geological Society of America Annual Meetings, Denver, CO
Nov. 4,5 - Presentation of Invited talk, ASA Meetings, Indianapolis

Horton Newsom

NASA committee meeting: Curation and Analysis Planning Team for Extraterrestrial Materials (CAPTEM), Houston, TX, March 16-17, 1996, Houston Texas.
Lunar and Planetary Science Conference, Houston, TX, March 18-22, 1996. Presented one talk
Visited the University of Colorado, Boulder, Laboratory for Atmospheric and Space Physics, and Department of Geological Sciences, May 28, 1986. Met with Dr. Bruce Jakosky.
Travel to Los Alamos National Laboratory for the "Faculty And Student Teams Program" (FAST), June 3, 4, 18, 21, 25, 1996.

Asteroid Vesta Meeting Houston, TX, October 16-18, 1996. Presented one talk
NASA committee meeting: Curation and Analysis Planning Team for Extraterrestrial Materials (CAPTEM), Houston, TX, October 19-20, 1996, Houston Texas.

Frans Rietmeijer

The Faculty of Earth Sciences, Silesian University, Sosnoviec, Poland, July 27-31.
The Geological Institute, Wroclaw University, Wroclaw, Poland, August 1-3.

Jane Selverstone

Travel to UT Austin to present 2 talks, 2/14-2/16/96
Travel to Tempe to present talk at ASU, 2/28/96
Fieldwork in the Whipple Mountains, SE California, March, 1996 (10 days, with 1 UNM PhD student)
Travel to Socorro to attend NMGS meeting, 4/12/96
Fieldwork in the northern Colorado Front Range, May, 1996 (10 days, with 1 MS student and 1 BS student)
Fieldwork in Switzerland and northern Italy, July-August, 1996 (18 days, with 1 PhD student)
Travel to Washington D.C. to attend NSF panel meeting, 9/17-9/20/96
Travel to Greece (Crete) to attend Penrose conference, 10/6-10/15/96

Charles Shearer

Summer 1996:

AWU Faculty Fellow at Sandia National Laboratory

Michael Spilde

Traveled to Houston, TX for the Workshop on Evolution of Igneous Asteroids: Focus on Vesta and the HED Meteorites, Lunar and Planetary Institute, October 16-18, 1996
Gary Smith

Attended Tucson Gem and Mineral Show, Tucson, Arizona, February 8-12, 1996.
Attended Albuquerque Gem and Mineral Show, March 7-8, 1996.
Attended New Mexico Geological Society Annual Meeting, Socorro, NM, April 11, 1996
Attended and presented paper at the Cordilleran Meeting, Geological Society of America, Portland, OR, April 20-24, 1996
Field work at Cochiti Pueblo, June-July 1996
Attended New Mexico Geological Society Fall Field Conference, Los Alamos, NM, September 26-29, 1996
Attended and presented paper at the Annual Meeting, Geological Society of America, Denver, CO, October 26-31, 1996
Led field trip in Española basin for Chris Paola, seminar speaker, December 13, 1996.

Lu-Min Wang

Travel:

Feb. 25-March 1 conduct experiments at Argonne National Laboratory, Chicago, IL.
April 14-17 attend and present a talk at the 98th Annual Meeting of the American Ceramic Society, Indianapolis, Indiana.
May 19-21 visit Pacific Northwest National Laboratory in Richland, Washington to conduct a three year program review of the contract work.
June 17-22 conduct experiments at Argonne National Laboratory, Chicago, IL.
July 7-8 visit the Department of Nuclear Engineering and Radiological Sciences at the University of Michigan, Ann Arbor, MI.
July 11-August 19 visit and give invited talks at several Chinese research institutions (Beijing, Shanghai and Nanjing), attend the 30th International Geological Congress in Beijing (August 4-14) and vacation in China.
Sept. 1-6 attend the 10th International Conference on Ion Beam Modification of Materials in Albuquerque, NM (served as a member of the local committee).
Sept. 25-Oct. 7 conduct experiments at Argonne National Laboratory, Chicago, IL.
Oct. 11-13 visit and present a talk at the Department of Nuclear Engineering and Radiological Sciences at the University of Michigan, Ann Arbor, MI.
Nov. 30-Dec. 6 attend and give an invited talk at the Materials Research Society 1995 Fall Meeting Boston, MA.
10. PUBLIC SERVICE

Adrian Brearley


Helped devise, organized and set up meteorite display for Albuquerque Gem and Mineral Club Show, March 3-5, 1996.

Devised and participated in meteorite display for Astronomy Day at Winrock Mall, Albuquerque, April, 1996

Identified numerous suspect meteorites and provided information on meteorites for members of the public from both within and outside New Mexico.

Michael Campana

Occasionally provided water resources and related information to the general public.

Member, VOCA (Volunteers in Overseas Cooperative Assistance).

Member, VITA (Volunteers In Technical Assistance).

Laura Crossey

Albuquerque North Science Center, Parent Co-ordinator representing Montezuma Elementary

James Connolly

Introduction to Geology for Students at YWCA Science and Environment Camp, Pinon Canyon Center, Tijeras, NM. Numerous ½ day sessions in Spring and Fall Semesters, 1996.

Field trip through the Inner Valley of the Rio Grande, for Garfield Middle School students, November 13, 1996.

Wolfgang Elston

Responded to requests for information from the public on rocks, minerals, fossils, earthquakes, volcanoes, etc.

Rodney Ewing

Amnesty International
John Geissman

Geoscience Advisor, Albuquerque Petroglyphs National Monument committee.
Geologic field excursion leader, miscellaneous Girl Scout and Elementary school groups
Member, SIMSI panel, Jefferson Middle School
Participant, Jefferson Middle School, Special Educational Events Day
Speaker, National Association of Geology Teachers meeting, NMMNH

Steve Getty

K-12 Science Education Activities:

Lectured for SIMSI program, UNM, June, 1996.

Worked with Berkeley Geochronology Center in K-12 Science Education program.

Participant with New Mexico State Department of Education to write Science Content Standards for K-12 Science Education.

Community Service:


David Gutzler

Presentations to local elementary schools on weather and climate.

Stephen Huestis

Virginia Creepers String Band volunteer performances:

Neighborhood Night Out Block Party, Aug. 7.
Albuquerque Mennonite Church Retreat, Sept. 13.

John Husler

Judged three science fairs, including NW Regional Fair.
Performed four chemical demonstrations for elementary students.
Participated in two benefit performances with Die Polka Schlingels polka band for mission projects in Mexico to provide housing and water to villages, also 1st Unitarian Chocolate Fest and Montebello Retirement Home.
Played for Special Olympics and eight volunteer concerts at Albuquerque Sunport, UNM Continuing Education, and various city parks with the Albuquerque concert Band.
Analyzed materials and ores and identified rocks and minerals for 20 people.
Member Rotary Club, played in Rotary Brass Band for four luncheon engagements.
Participated in Mid-High "Shadow Day" 3/20/96.
Rhian Jones

- Coordinated and gave tours of Meteorite Museum for visiting school students, UNM classes, and community groups.
- Identified numerous suspect meteorites for members of the public.
- Acted as judge at Northwestern New Mexico Regional Science and Engineering Fair, March 15, 1996.
- Presented talk, "The Meteorite Museum at the University of New Mexico" for National Association of Geology Teachers Workshop, April 19, 1996.
- Prepared and organized IOM exhibit for Astronomy Day, Coronado Mall, April 27, 1996.

Karl Karlstrom

- Math Superstars Program - Bandelier Elementary School
- Work with Grand Canyon National Park ("Trail of Time" exhibit)

Cornellis Klein

- Gave interviews to reporters for Campus News, the Albuquerque Journal, and the NM Daily Lobo on CD-ROM technology as well as E&PS 204, "Gem Minerals and Gems". The articles that resulted from these are as follows:
- Member of the Albuquerque Rotary Club.
- Member of the Program/Speakers Committee of the Albuquerque Rotary Club.

Albert Kudo

- Identification of rock samples, answering questions from public regarding geology and volcanoes, assisted Hawaiian TV science personality with program to be aired on PBS.

Barry Kues

- Identified rocks and fossils, and answered geological questions for the public.
Leslie McFadden

Participated in revisions of proposed Science Curriculum Standards for public schools in the State of New Mexico.

Represented the Dept. of Earth and Planetary Sciences at the meeting of the State of New Mexico Board of Education Meeting to discuss Science Curriculum Standards for Public Schools.

Played key role in founding of the Coalition for Excellence in Science Education (CESE)

Presentation of talk concerning the creationism/evolution controversy to the New Mexicans for Science and Reason, March 13, 1996.

Contributed materials to article published in the Albuquerque Journal (July 20, 1996) concerning corrosion of plumbing in Albuquerque.

Provided expert input to journalist from the Albuquerque Tribune concerning eolian dunes and other environmental issues in the Albuquerque area.

Provided expert input to journalist from the Salt Lake Tribune for article published Oct. 31, 1996 concerning paleoclimatic research.

Provided soil samples and helpful input for high school student in Chicago conducting research in soils.

Presented sermon to the First Unitarian Church of Albuquerque on the subject of "Evolution and Creationism", Nov. 10, 1996.

Responded to numerous requests for advice and assistance from the public concerning issues related to soils and geology.

Horton Newsom

Developed educational initiatives for the Institute of Meteoritics; We have received funding from the Space Telescope Science Institute, the National Science Foundation through the NM State Systemic Initiative for Math and Science, and Los Alamos National Laboratory.

Space Science Presentations to Students in Grades K-12
MesA students from Wilson MS, Albuquerque
MesA students from Santo Domingo MS
MesA students from Bernalillo MS, Bernalillo
MesA students from Truman MS, Albuquerque
Incoming freshmen to UNM, MEMS summer program for minority students
Sixth grade science summer school class at Grants MS, Albuquerque
Eighth grade science summer school class at Grants MS, Albuquerque
H. Pappas' 5th grade class, Bandelier ES, Albuquerque
5th-grade class, Merman School for the Gifted, Los Angeles, CA
San Felipe Pueblo Middle School (40 kids), San Felipe
Southwest Regional Junior Science and Humanities Symposium.

Presented impact cratering demonstration as part of the IOM presentation for Astronomy Day at Coronado Mall, April 27, 1996.
Presented one week teacher training institute "The solar system for middle school students", funded by SIMSE (Systemic Initiative for Math and Science Education), June 10-14, 1996.


Quoted in Albuquerque Journal article Sept. 26, 1996 "Eclipse to make Moon's face red".

Newspaper article by John Fleck, Albuquerque Journal, Oct. 27, 1996 "Finding water is key to finding life".

James Papike

Numerous discussions with radio, TV, press concerning the possibility of life on Mars.

Frank Pazzaglia

Community:

Established working relationship with Native American community through the All Indian Pueblo Council for access to Pueblo Lands.
Mentorship of Chris Toya.
Once-a-month geological presentations at APS elementary schools.

Jane Selverstone

Assisted with Manzano Day School kindergarten geology fieldtrip to the west mesa of Albuquerque, March 1996.
Assisted with Manzano Day School kindergarten fieldtrip to the Jemez Mountains, April, 1996.
Presented class on rocks and minerals to 3rd grade, Manzano Day School, December, 1996.

Gary Smith

Identification of mineral and fossil specimens for department visitors.
Provision of rock and mineral specimens to Albuquerque Public Schools teachers.

Michael Spilde


Conducted Microprobe & SEM lab tours and demonstrations for several elementary and high school groups.

Lee Woodward

IV. GRADUATE PROGRAMS AND STUDENT SCHOLARSHIPS
SUMMARY OF GRADUATE PROGRAM

Introduction

The Department of Earth and Planetary Sciences regards the education and training of graduate students, as modern geoscientists, as important and integral teaching and research functions. Through classroom, laboratory, and field experiences, graduate students acquire the mentoring, expertise, and skills required to become successful professional geoscientists in a spectrum of employment opportunities, including industry, environmental and geological consulting companies, governmental organizations, and academia. Individualized teaching opportunities in a broad range of undergraduate courses (from introductory physical geology laboratory sections to advanced field geology), participation in graduate level seminars, and the opportunity to present the results of their graduate research at professional geoscience meetings and in numerous publications all further enhance interpersonal skills and abilities of graduate students to discuss their knowledge of and research in geoscience in a range of settings and situations.

During the Fall 1996 term, a total of 47 students (31 M.S., 16 Ph.D.) were working towards graduate degrees in the Department, including 12 new students (Table 1). Of the M.S. students in Fall, 58% were women, and of Ph.D. students, 31% were women. During Spring 1996, the graduate population numbered 32 M.S. and 14 Ph.D. students.

The total number of graduate students, 45-50 in 1996-97, is lower than has been typical during the past decade; in Fall, 1993, for example, 70 students were pursuing graduate degrees in the Department. Mainly, this is due to an unusually high rate of students completing graduate degrees recently; (15 this year and 21 the year before); and a lower number of new students beginning in the program the past two years. Changes in the admissions procedures, so that we generally admit only those students to whom we can offer 2 years (M.S.) or 3 years (Ph.D.) of financial support, also has played a role in the decline. The present number of graduate students is probably optimal, both from the perspective of quality of attention from advisors and committees, and because there is little additional good office to accommodate many more than the present number.

Two graduate Teaching Assistants in the Department were honored this year with UNM Outstanding Teaching Assistant Awards. Adam Read and Mary Simmons received plaques and a monetary award from Provost Bill Gordon at a ceremony on May 15, 1997.

Graduate Admissions

Thirty applicants to the graduate program for Fall 1996 and Spring 1997 were offered admission out of 95 total applicants; of these, 14 new students actually enrolled - 11 in the M.S. program and 3 in the Ph.D. program. The stated disciplinary interests of these new students were: Structure/Tectonics = 3; Geochemistry = 3; Geomorphology = 2; Stratigraphy/Sedimentology = 2; Mineralogy/Materials Science = 1; Paleoclimatology = 1; Hydrogeology = 1; Structure/Paleomagnetism = 1. In addition, 14 new students will be entering our graduate program in Fall, 1997.

Information on graduate admissions for the past 3 semesters is given in Table 2. For several years, the Department has maintained an aggressive recruitment effort involving funding visits to UNM by top applicants, offers of one-time $1,000 scholarships in addition to TA- or RA-ships, and offers of multi-year assistantships to top potential students. Competition for excellent prospective students in the geosciences remains keen across the country. The national visibility and excellence of the faculty and their programs, high admissions standards, and recruitment efforts have successfully attracted many excellent students to the Department this year as in the past, but the relatively low assistantship salaries at UNM have somewhat hindered this effort, although the salary situation has been improving.
TABLE 1. Master’s and Doctoral Students, Fall, 1995, - Spring, 1996.

<table>
<thead>
<tr>
<th>M.S. students</th>
<th>Doctoral Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aby, Scott</td>
<td>Bergfeld, Deb</td>
</tr>
<tr>
<td>Bird, Jerry</td>
<td>Campbell, Bel</td>
</tr>
<tr>
<td>Borchert, Claudia</td>
<td>Cascadden, Tracey</td>
</tr>
<tr>
<td>Bowman, Laurie</td>
<td>Groffman, Armand</td>
</tr>
<tr>
<td>Breuninger, Anna</td>
<td>Hanowski, Nicolaus</td>
</tr>
<tr>
<td>Brainard, James</td>
<td>Keating, Gordon</td>
</tr>
<tr>
<td>Brown, Cynthia</td>
<td>Ma, Ancheng</td>
</tr>
<tr>
<td>Carpenter, Sharman</td>
<td>McLain, Angela</td>
</tr>
<tr>
<td>Dunaway, Carter</td>
<td>Meldrum, Al</td>
</tr>
<tr>
<td>Ellwein, Amy</td>
<td>Pederson, Joel</td>
</tr>
<tr>
<td>Garcia, Antonio</td>
<td>Shaw, Colin</td>
</tr>
<tr>
<td>Gardner, Rebecca</td>
<td>Thompson, Amy</td>
</tr>
<tr>
<td>Gray, Robert</td>
<td>Thorsos, Ivan</td>
</tr>
<tr>
<td>Helean, Kate</td>
<td>Tremblay, Matt</td>
</tr>
<tr>
<td>Heckert, Andrew</td>
<td>Wang, Shixin</td>
</tr>
<tr>
<td>Hodgens, Meghan</td>
<td>Wawrzyniec, Tim</td>
</tr>
<tr>
<td>Karner, James</td>
<td></td>
</tr>
<tr>
<td>Koning, Dan</td>
<td></td>
</tr>
<tr>
<td>Kuhle, Andrika</td>
<td></td>
</tr>
<tr>
<td>Loveland, Tom</td>
<td></td>
</tr>
<tr>
<td>Maelhr, Stephanie</td>
<td></td>
</tr>
<tr>
<td>Minchak, Sharon</td>
<td></td>
</tr>
<tr>
<td>Petronis, Michael</td>
<td></td>
</tr>
<tr>
<td>Read, Adam</td>
<td></td>
</tr>
<tr>
<td>Riley, Brook</td>
<td></td>
</tr>
<tr>
<td>Roche, Ren</td>
<td></td>
</tr>
<tr>
<td>Romano, Eileen</td>
<td></td>
</tr>
<tr>
<td>Simmons, Mary</td>
<td></td>
</tr>
<tr>
<td>Snider, Anna</td>
<td></td>
</tr>
<tr>
<td>Timmons, Mike</td>
<td></td>
</tr>
<tr>
<td>Trigilio-Formento, Merri-Lisa</td>
<td></td>
</tr>
<tr>
<td>Tso, Dezbah</td>
<td></td>
</tr>
<tr>
<td>Wegmann, Karl</td>
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</tbody>
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<table>
<thead>
<tr>
<th></th>
<th>Fall 1996</th>
<th>Spring 1997</th>
<th>Fall 1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Applicants</td>
<td>92</td>
<td>3</td>
<td>70</td>
</tr>
<tr>
<td>Number Admitted</td>
<td>28</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>% of Total Applicants Admitted</td>
<td>30%</td>
<td>67%</td>
<td>34%</td>
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<tr>
<td>Number Actually Enrolled</td>
<td>12</td>
<td>2</td>
<td>14</td>
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<tr>
<td>Average Grade-point Average</td>
<td>3.46 (UG)</td>
<td>3.03 (UG)</td>
<td>3.48 (UG)</td>
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<tr>
<td>GRE score - Verbal (percentile)</td>
<td>71</td>
<td>87</td>
<td>82</td>
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<tr>
<td>GRE score - Quantitative (percentile)</td>
<td>65</td>
<td>78</td>
<td>81</td>
</tr>
<tr>
<td>GRE score - Analytical (percentile)</td>
<td>79</td>
<td>63</td>
<td>81</td>
</tr>
<tr>
<td>GRE score - Geology (percentile)</td>
<td>78</td>
<td>82</td>
<td>79</td>
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</table>
### TABLE 3. Graduate Students Supported by Teaching Assistantships (TA), Research Assistantships (RA), and Fellowships (F) during the 1996-1997 Academic Year. (1/2 TA or RA refers to half-time support). OGS = Office of Graduate Studies; K/S = Kelley/Silver; NSF = National Science Foundation.

#### M.S. Students

<table>
<thead>
<tr>
<th>Name</th>
<th>Fall, 1996</th>
<th>Spring, 1997</th>
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<tbody>
<tr>
<td>Borchert, Claudia</td>
<td>-</td>
<td>RA</td>
</tr>
<tr>
<td>Brainard, Jim</td>
<td>-</td>
<td>RA</td>
</tr>
<tr>
<td>Breuninger, Anna</td>
<td>TA</td>
<td>TA</td>
</tr>
<tr>
<td>Brown, Cynthia</td>
<td>-</td>
<td>1/2 TA</td>
</tr>
<tr>
<td>Carpenter, Sharman</td>
<td>RA (Civil Engineering)</td>
<td>RA (Civil Engineering)</td>
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<tr>
<td>Ellis, Amy</td>
<td>TA</td>
<td>TA</td>
</tr>
<tr>
<td>Garcia, Antonio</td>
<td>1/2 TA</td>
<td>-</td>
</tr>
<tr>
<td>Gardner, Rebecca</td>
<td>NSF-F</td>
<td>NSF-F</td>
</tr>
<tr>
<td>Helean, Kate</td>
<td>TA</td>
<td>TA</td>
</tr>
<tr>
<td>Hodgins, Meghan</td>
<td>RA</td>
<td>RA</td>
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<tr>
<td>Kerner, James</td>
<td>RA</td>
<td>1/2 TA</td>
</tr>
<tr>
<td>Koning, Dan</td>
<td>TA</td>
<td>TA</td>
</tr>
<tr>
<td>Kuile, Andrika</td>
<td>RA</td>
<td>-</td>
</tr>
<tr>
<td>Loveland, Thomas</td>
<td>-</td>
<td>RA</td>
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<tr>
<td>Maehr, Stephanie</td>
<td>RA</td>
<td>-</td>
</tr>
<tr>
<td>Petrinos, Michael</td>
<td>1/2 TA + 1/2 RA</td>
<td>TA</td>
</tr>
<tr>
<td>Read, Adam</td>
<td>1/2 TA + 1/2 RA</td>
<td>RA</td>
</tr>
<tr>
<td>Riley, Brook</td>
<td>1/2 TA + 1/2 RA</td>
<td>1/2 TA + 1/2 RA</td>
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<td>Roche, Ren</td>
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<td>RA</td>
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<tr>
<td>Simmons, Mary</td>
<td>TA</td>
<td>TA</td>
</tr>
<tr>
<td>Snider, Anna</td>
<td>RA</td>
<td>RA</td>
</tr>
<tr>
<td>Timmons, Mike</td>
<td>RA</td>
<td>1/2 TA + 1/2 RA</td>
</tr>
<tr>
<td>Trigilio-Formento, Merri Lisa</td>
<td>TA</td>
<td>RA</td>
</tr>
<tr>
<td>Tso, Dezbah</td>
<td>OGS + MEMS + F</td>
<td>OGS + MEMS-F</td>
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#### Ph.D. Students

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<thead>
<tr>
<th>Name</th>
<th>Fall, 1996</th>
<th>Spring, 1997</th>
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</thead>
<tbody>
<tr>
<td>Bergfeld, Deb</td>
<td>RA</td>
<td>RA</td>
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<tr>
<td>Cascadden, Tracey</td>
<td>-</td>
<td>1/2 TA</td>
</tr>
<tr>
<td>Groffman, Armand</td>
<td>RA</td>
<td>RA</td>
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<tr>
<td>Hanowski, Nicolaus</td>
<td>RA</td>
<td>RA</td>
</tr>
<tr>
<td>Keating, Gordon</td>
<td>RA</td>
<td>RA</td>
</tr>
<tr>
<td>Ma, Ancheng</td>
<td>TA</td>
<td>TA</td>
</tr>
<tr>
<td>McLain, Angela</td>
<td>1/2 TA + 1/2 RA</td>
<td>1/2 TA + 1/2 RA</td>
</tr>
<tr>
<td>Meldrum, Al</td>
<td>OGS-F</td>
<td>OGS-F</td>
</tr>
<tr>
<td>Pederson, Joel</td>
<td>TA</td>
<td>TA</td>
</tr>
<tr>
<td>Shaw, Colin</td>
<td>K/S-F</td>
<td>K/S-F</td>
</tr>
<tr>
<td>Tramblay, Matt</td>
<td>1/2 TA + 1/2 RA</td>
<td>RA</td>
</tr>
<tr>
<td>Wang, Shixin</td>
<td>RA</td>
<td>RA</td>
</tr>
<tr>
<td>Wawrzyniec, Tim</td>
<td>RA</td>
<td>RA</td>
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<table>
<thead>
<tr>
<th>Type of Support</th>
<th>Amount of Support ($ x 1000)</th>
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<td>1. University</td>
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<tr>
<td>Departmental Teaching Assistantships (salary*)</td>
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</tr>
<tr>
<td>MEMS Research Support</td>
<td>5</td>
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<tr>
<td>OGS Fellowships and awards</td>
<td>23</td>
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<tr>
<td>TOTAL</td>
<td>150</td>
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<tr>
<td>2. Department</td>
<td></td>
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<tr>
<td>Research Assistantships (Salary **)</td>
<td>172</td>
</tr>
<tr>
<td>External TA-ship</td>
<td>2</td>
</tr>
<tr>
<td>Silver/Kelley Fellowships and Research Support</td>
<td>19</td>
</tr>
<tr>
<td>Alumni Fund and other Fellowships</td>
<td>16</td>
</tr>
<tr>
<td>TOTAL</td>
<td>209</td>
</tr>
<tr>
<td>3. External Professional awards, Fellowships, etc.</td>
<td>24</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$383</td>
</tr>
</tbody>
</table>

* University also provided an unknown amount of tuition-waiver support for TAs

** Faculty grants also paid an unknown amount of tuition for RAs
Support for Graduate Students

Over the past decade, the Department has considerably increased its ability to provide support for students enrolled in its graduate program. In 1996-97 nearly all active graduate students in residence were supported to some extent, mainly through teaching and research assistantships and by fellowships from various sources (Table 3). Salaries for full-time TAs were $4,815 for Fall, 1996 and Spring, 1997. The College has made a significant and appropriate effort to increase graduate assistant salaries over the past few years. Total University support for E&PS graduate students amounted to an equivalent of about 16 students fully supported each semester, and Departmental support (primarily RA-ships) was provided to an equivalent of an additional 21 students per semester. Table 4 indicates the sources and approximate amounts of support that were provided to graduate students during the past year; such support totalled more than $380,000. Of this, about 55% was derived from the Department (chiefly from faculty grants and contracts and departmental fellowships), 39% from University sources (mainly TA-ships and several graduate fellowships), and 6% from external sources (e.g., awards from professional organizations). Of the 14 entering new students in 1996-97, 5 were supported by RA-ships, 7 by TA-ships, 1 by the Kelley/Silver Fellowship, and 1 by a combination of MEMS and Office of Graduate Studies Support. Strong support is not only essential in providing graduate students the means to pursue their studies, but also is instrumental in attracting excellent students into our program.

Outcomes

Study in the Department's graduate programs prepares students for a wide variety of careers in the geosciences and related fields. Below are listed the positions obtained by Ph.D. and M.S. students who graduated in 1996-1997:

**Ph.D.**

- Tracey Cascadden: Instructor, Natural Sciences Program, UNM
- Al Meldrum: Research Scientist, Solid-state physics division, Oak Ridge National Laboratories
- Shi-xin Wang: Post-doctoral Scientist, University of Michigan

**M.S.**

- Scott Aby: Geologist, U.S. Geological Survey, Albuquerque
- James Brainard: Hydrogeologist, Sandia National Laboratories
- Amy Ellwein: Ph.D. Program, UNM
- Merri Lisa Formento-Trigilio: Ph.D. Program, Penn State University
- Antonio F. Garcia: Ph.D. Program, Univ. of California-Santa Barbara
- Robert Gray: Research Hydrogeologist, Los Alamos National Lab
- Andrew Heckert: Ph.D. Program, UNM
- Meghan Hodgins: Is waiting to hear about applications for positions at Los Alamos National Lab
- James Karner: Unemployed (is helping family to recover from flooding in Grand Forks, North Dakota)
- Stephanie Macbr-Leicester: Unemployed (transferring with husband to a job back east)
- Sharon Minchak: Hydrogeologist/soil scientist, CH2M-Hill, an environmental consulting firm
- Adam Read: Geologist, N.M. Bureau of Mines and Mineral Resources

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Graduate Degrees Awarded

The following students received M.S. and Ph.D. degrees in Earth and Planetary Sciences, between Fall 1996 and Summer 1997. Thesis/dissertation titles and faculty advisors are also indicated.

Master of Science

Scott B. Aby, Fall, 1996 - The Terraces of Cochiti Canyon: Soil Development and Relation to Activity in the Pajarito Fault Zone. (Dr. Leslie D. McFadden, Advisor)

James R. Brainard, Spring, 1996 - Vadose Zone Flow Processes in Heterogeneous Alluvial Fan Deposits: Experimental Design, Data Evaluation, Error Analysis. (Dr. Michael E. Campana, Advisor)

Amy L. Ellwein, Spring, 1997 - Quaternary Eolian Soil-Landscape Evolution of the Petrified Forest National Park, Arizona. (Dr. Leslie D. McFadden, Advisor)

Merri Lisa Formento-Trigillo, Fall, 1996 - Tectonic Geomorphology and Long-Term Landscape Evolution of the Southern Sierra Nacimiento. (Dr. Frank J. Pazzaglia, Advisor)

Antonio F. Garcia, Fall, 1996 - Active Tectonic Deformation and Late Pleistocene and Holocene Geomorphic Evolution in the Dosewallips River Drainage Basin, Olympic Mountains, Western Washington State. (Dr. Frank J. Pazzaglia, Advisor)

Robert N. Gray, Spring, 1997 - Hydrologic Budget Analysis and Numerical Simulations of Groundwater Flow in Los Alamos Canyon Near Los Alamos, New Mexico. (Dr. Michael E. Campana, Advisor)

Andrew B. Heckert, Spring, 1997 - Litho- and Biostratigraphy of the Lower Chinle Group in Eastern Arizona and West-Central New Mexico, with a Description of a New Theropod (Dinosauria: Theropoda) From the Bluewater Creek Formation. (Dr. Spencer Lucas and Barry Kues, Advisor)

Meghan L. Hodgins, Summer, 1997 - Proterozoic Metamorphic and Tectonic Evolution of the Northern Colorado Front Range. (Dr. Jane Selverstone, Advisor)

James Kamer, Summer, 1997 - Mineralogy, Morphology and Chemistry of Silicate Dust Analogs. (Dr. Frans Rietmeijer, Advisor)

Stephanie A. Maehr-Leicester, Spring, 1997 - Trace Element Geochemistry of Arc Lavas From Volcanoes Northwest and Southeast of the Quesada Sharp Contortion, Central American Volcanic Arc. (Dr. Albert M. Kudo, Advisor)

Sharon L. Minchak, Spring, 1997 - The Morphologic, Geochemical, and Isotopic Characteristics of the Lobato Formation Basalts in the Clara Peak Area: Jemez Volcanic Field: Implications Regarding Mantle Structure in the Rio Grande Rift Region at 10-12 Ma. (Dr. Albert M. Kudo, Advisor)

Adam S. Read, Summer, 1997 - A Mid-Crustal Cross Section From the Rincon Range, Northern New Mexico: Evidence for 1.68 Ga Pluton-Influenced Tectonism and 1.42 Ga Regional Metamorphism. (Dr. Karl E. Karlstrom, Advisor)

Doctor of Philosophy

Tracey E. Cascadden, Spring, 1997 - Quaternary Volcanism in the Colorado Plateau-Basin and Range Transition Zone: Zuni-Bandera and Nearby Volcanic Fields. (Dr. Albert M. Kudo, Advisor)

Alkiviadhes Meldrum, Spring 1997 - Radiation Effects in the Orthophosphates. (Dr. Rodney C. Ewing, Advisor)

Shixin Wang, Spring, 1997 - Ion Beam Irradiation-Induced Amorphization: Nano-Scale Glass Formation by Cascade Quenching. (Dr. Rodney C. Ewing, Advisor)
STUDENT SCHOLARSHIPS AND OTHER AWARDS

Many Graduate and Undergraduate students were supported by scholarships, fellowships, and other awards during the 1995-96 year. Many scholarships are derived from various funds that have been established for this purpose by alumni and other friends of the Department. The Department augments these awards with travel scholarships that partially offset the expenses of travelling to professional meetings (and often provides free use of vehicles to these meetings), and other scholarships supporting use of the analytical instruments and other research expenses. Recipients of such awards are listed below.

Undergraduate Scholarships and Awards

Harry and Mabel Leonard Scholarships
- Jake Armour $ 1,550
- Kim Begay 1,550
- Eric Bridgford 1,500
- Kerim Martinez 1,500
- Nate Brunsell 1,300
- Todd Caldwell 1,300
- Leigh Fall 1,300
- Justin Hagerty 1,300
- Sheila Hutcherson 1,300
- Dave Johnson 1,300
- Shane Palmer 1,300
- Jessica Preston 1,300

General Thomas Campbell Scholarships
- Zack Bryan $ 650
- Alex Castrounis 650
- Aaron Cavosie 650
- Matthew Jurik 650
- Laura Pletsch-Rivera 650
- Emiliana Chavez 500
- Meaghan O'Rourke 500

James Drew Pfeiffer Scholarship
- Kerim Martinez $ 309

Outstanding Student of Year Awards
- S.A. Northrop Outstanding Senior: Joe Sterling
- S.A. Wengerd Outstanding Junior: Kerim Martinez
- J.P. Fitzsimmons Outstanding Sophomore: Justin Hagerty
- V.C. Kelley Best Field Geology Undergraduate (Estwing Award): Jake Armour
Department Travel and Equipment use Awards

Jake Armour $60
John Lewis $60

Other Undergraduate Student Awards

Albuquerque Gem and Mineral Club: Kristine Baker-Smith and Joseph Sterling ($500)
NMGS Lucille Pipkin Scholarship: Joe Sterling ($500)
Association of Women Geoscientists Award: Deidra Kim Begay and Laura Pletsch-Rivera
Los Alamos Geological Society-NMGS Field Conference Award: Jake Armour and John Lewis ($150 each)

Graduate Student Scholarships and Awards - Departmental

Caswell Silver Foundation, V.C. Kelley/L.T. Silver Fellowship and Research Support

Tracey Cascadden $582
Colin Shaw $18,126

Geology Alumni Fund Scholarship:

Anna Breuninger $1,000
Claudia Borchert $600
Nicolaus Hanowski $1,200
Kate Helean $1,200
Dan Koning $1,900
Ancheng Ma $200
Angela McLain $900
Mike Petronis $600
Ren Roche $1,000
Mary Simmons $900
Tim Wawrzyniec $200
Karl Wegmann $900

Jean-Luc Miossec Memorial Scholarship:

Joel Pederson $800

Rodney Rhodes Memorial Award:

Mike Petronis $300

Richard P. Vann Memorial Scholarship:

Andy Heckert $700
Alexander and Geraldine Wanek Scholarship

Ren Roche $1,100

Sherman and Florence Wengerd Travelling Fellowship

Tim Wawrzyniec $1,000

Energy, Exploration Education Fellowship

Anna Snider $900

Departmental Travel and Equipment use Scholarships

Amy Ellwein $90
Joel Pederson $140
Tim Wawrzyniec $600

Graduate Student Scholarships and Awards - UNM

Amy Ellwein - OGS RPT grant ($730)
Rebecca Gardner - OGS RPT grant ($925)
Kate Helean - OGS RPT grant ($1,000)
Meghan Hodgins - OGS RPT grant ($640)
Daniel Koning - OGS RPT grant ($989)
Joel Pederson - OGS RPT grant ($890)
Michael Petronis - OGS RPT grant ($1,000)
Sharon Minchak - OGS RPT grant ($996)
Colin Shaw - OGS RPT grant ($1,000)
Mary Simmons - OGS RPT grant ($1,000)
Deb Bergfeld - Geological Society of America Research Grant ($2,077)
Tracey Cascadden - National Parks Service Research Grant ($500)
Tracey Cascadden - Association of Women Geoscientists Award
Carol Dehler - Geological Society of America Research Grant ($2,000)
Amy Ellwein, Ren Roche, Adam Read, Andy Heckert, Anna Snider, Dezbah Tso - New Mexico Geological Society Fall Field Conference Awards ($210.00 each)
Tony Garcia - American Geological Institute Minorities Fellowship ($500)
James Karner - Institute for Space and Nuclear Power Studies, Space Grant Consortium Fellowship ($2000)
Dan Koning - Geological Society of America Research Grant - Arthur D. Howard Award for best Master's Thesis proposal in Quaternary Geology and Geomorphology ($1,200)
Ancheng Ma - New Mexico Geological Society, Kottlowski Fellowship ($1,000)
Al Meldrum - Mineralogical Society of America Research Grant ($3,500)
Sharon Minchak - New Mexico Geological Society, Beverly Wellnitz Memorial Scholarship ($500)
Anna Snider - Geological Society of America Research Grant ($1,600)
Mary Simmons - Geological Society of America Research Grant ($1,620)
Joel Pederson - Geological Society of America, J. Hoover Mackin Award for best Doctoral Dissertation proposal in Quaternary Geology and Geomorphology ($1,500)
Joel Pederson - Geological Society of America Research Grant ($2,215)
Tim Wawrzyniec - Geological Society of America Research Grant ($1,881)
## DONATIONS TO DEPARTMENT, 1996-97 FISCAL YEAR

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<thead>
<tr>
<th>Date</th>
<th>Donor's Name</th>
<th>Amount</th>
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<tr>
<td>7/28</td>
<td>Los Alamos Geological Society</td>
<td>$300</td>
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<tr>
<td>9/12</td>
<td>Mark Cameron</td>
<td>500</td>
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<td>11/25</td>
<td>Dr. James Lee Martin</td>
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<td>12/2</td>
<td>Dr. and Mrs. Paul Catacosinos</td>
<td>100</td>
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<td>12/16</td>
<td>Arthur H. Stukey</td>
<td>100</td>
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**Wengerd Traveling Fellowship**

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<td>Harry Pomeroy</td>
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<td>Mr. &amp; Mrs. Eugene Caprio</td>
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<td>Exxon Education Foundation</td>
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**Alumni Fellowship**

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APPENDIX I

Museum Log
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**DATE** | **ORGANIZATION** | **GRADE** | **# OF STUDENTS** | **# OF NON STUDENTS**
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| 3/6/97 | San Antonio      | 4th       | 40                | 5                 |
| 3/12/97| Sandia Prep. Academy | 5th    | 40                | 5                 |
| 3/14/97| Marie Hughes     | 1st       | 25                | 5                 |
| 3/14/97| Longfellow       | 1st       | 70                | 5                 |
| 3/21/97| Alvarado          | 2nd       | 20                | 5                 |
| 3/25/97| Chamisa           | 1st-5th   | 15                | 5                 |

**MARCH, 1997 TOTAL**

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<td>4/16/97</td>
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**GRAND TOTAL**

2,561 534
The Annual Report Of
THE INSTITUTE OF METEORITICS
July 1, 1996 through June 30, 1997

James J. Papike, Director
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INTRODUCTION

The Institute of Meteoritics (IOM) was founded in 1944, and is one of the oldest institutions of its kind in the world. The Institute continues its role as a leading center in research relating to planetary materials and processes. Charter goals of the IOM are:

1. To carry out research in the detailed laboratory analysis of meteoritic and other planetary materials and in other fields of planetary and geologic sciences.

2. To provide materials, facilities, and supervision for research by candidates for advanced degrees in geology and in other fields. To offer instruction in these areas as may be approved through the appropriate academic procedures and channels.

3. To promote the identification and acquisition of meteorites. To participate in exchange programs as may enhance the representative scope and scientific value of the Institute's collections of meteorites. To preserve and place on public exhibition both meteorites and related meteoritic materials and to make these materials available to scientists working in fields closely allied to meteoritics.

Research at the Institute of Meteoritics covers a wide range of problems, including studies of geological processes on meteorite parent bodies (asteroids), the Moon, Mars, and Earth. Our research is aided by collaborations with investigators at other universities and at national laboratories. Microbeam analytical techniques, including electron microprobe (EMP), scanning electron microscope (SEM), transmission electron microscope (TEM), and ion microprobe (SIMS) constitute the most important tools for this research and state of the art facilities are available at UNM. Another technique for bulk trace element geochemical analyses, supported by IOM, is inductively coupled plasma-mass spectrometry (ICP-MS). During the 96-97 fiscal year, we purchased a new scanning electron microscope to replace our old Hitachi SEM, which was acquired in 1979. The new SEM is a JEOL 5800LV, capable of both low and high vacuum operation. To extend the capabilities of the SEM, we also purchased a modern X-ray analytical system with a light element X-ray detector. The new microscope and analyzer will provide state-of-the-art capabilities for high resolution imaging and X-ray microanalysis for research and teaching. The purchase was funded by grants from the National Science Foundation and by NASA, along with matching funds from the University of New Mexico.
Teaching activities of the staff of IOM consist of both formal courses and informal meetings with graduate and undergraduate students. We emphasize the direction and supervision of both graduate and undergraduate student research and encourage presentation and publication of the results of this research at national and international levels. The Meteorite Museum continues to play an important role in our educational efforts, including organized programs for school groups with tours of the Museum and research laboratories.
Director, Institute of Meteoritics
Dr. James J. Papike, Regents' Professor of Earth & Planetary Sciences

Research Professors
Dr. Adrian Brearley
Dr. Horton Newsom
Dr. Frans Rietmeijer
Dr. Charles Shearer

Senior Research Associates
Dr. Rhian Jones
Dr. Michael Wiedenbeck

Research Associates
Grant Fowler
Michael Spilde

Support Personnel
Christopher Adcock, Laboratory Technician
Sarah Lentz, Administrative Assistant
Tanya Zar, Staff Assistant

Graduate Students
Laurie Bowman
Catherine Duke
Christopher Herd
Nicolaus Hanowski
Ivan Thorsos

Undergraduate Students
Justin Hagerty

Additions to Staff
Frans Rietmeijer, July 1, 1997
Tanya Zar, April 7, 1997

Separations from Staff
Jim Connolly, July 1, 1997
# Organizational Chart

## Institute of Meteoritics
### Department of Earth and Planetary Sciences
#### University of New Mexico
##### FY 1997/98

### Research Staff
- Director: J. Papike
- Admin. Assistant: S. Lentz
- Staff Assistant: T. Zar

#### Research
- **Research Professors**
  - A. Brearley
  - H. Newsom
  - F. Rietmeijer
  - C. Shearer
- **Senior Research Associates**
  - R. Jones
  - M. Wiedenbeck
- **Research Associates**
  - G. Fowler
  - M. Spilde
- **Lab Tech**
  - C. ADCock
- **Graduate Students**
  - PHD
    - N. Hanowski
    - J. Thorsos
  - M.S.
    - L. Bowman
    - K. Duke
    - C. Herd

### Facilities/Curation
- **Curator**
  - A. Brearley
  - Assistant: R. Jones
- **Experimental Petrology Lab.**
  - Manager: R. Jones
- **ICP/MS Lab.**
  - Manager: C. Shearer
- **Ion Microprobe Facility**
  - Manager: M. Wiedenbeck
  - Assistant: G. Fowler
- **Microprobe/SEM Labs.**
  - Manager: M. Spilde
  - Assistant: C. ADCock
- **Education Outreach Coordinator**
  - H. Newsom
SECTION I
RESEARCH
I. RESEARCH

Research activities of staff and students of the Institute of Meteoritics cover a wide range of topics, mostly aimed at understanding the origin and early history of our solar system and the evolution of the planets. More specifically, we have major research initiatives to investigate the igneous evolution of achondrite meteorites, martian meteorites, and the Moon, and research into an understanding of early solar system processes through the study of interplanetary dust particles (IDPs) and chondritic meteorites. The geophysical properties of the Earth’s upper mantle is the subject of an experimental study, and we are studying the formation of the Earth’s continental crust.

The mechanisms and kinetics of aqueous alteration in carbonaceous chondrites are being investigated by experimental methods in an effort to constrain the duration and locations of hydrous alteration reactions in these meteorites. Two projects are currently in progress to address the question of whether carbonates and associated minerals in Martian meteorite, ALH 84001 were formed at low temperatures and hence could be biogenic in origin. Research into the effects of melting rates and transport paths on the geochemistry of granitic crustal melts is being carried out using experimental methods coupled with secondary ion mass spectrometry studies of trace elements.

Our research during the report period has resulted in the publication of 31 scientific articles in major national and international journals (p. 17), as well as in the publication of 30 abstracts of papers presented at national and international conferences (p. 20). The extensive involvement of students in original research projects in the Institute of Meteoritics is particularly important for their education and advanced training.

We continue to be very successful in attracting research grants and contracts to the Institute of Meteoritics in support of the research activities of staff and students. Details are provided in Tables I-III (pp. 14-16). Funding was provided by the National Aeronautics and Space Administration (NASA), the National Science Foundation (NSF), Department of Energy (DOE), Sandia National Laboratories (SNL), and the Institute for Geophysics and Planetary Physics, Los Alamos National Laboratory (IGPP).
1. **Specific Projects**

   a. **Microbeam Studies of Lunar Samples, Achondrite Meteorites and Martian Meteorites (Funded by NASA)**

   **Microbeam Studies of Lunar Samples.** Recent studies in trace element geochemistry have resulted in a much better understanding of petrogenetic processes on the planetary scale. Our ongoing microbeam study of lunar materials combines ion and electron microprobe techniques focusing upon three major areas: (1) studies of trace and volatile element behavior in lunar picritic volcanic glasses, (2) trace and volatile element studies of melt inclusions (including immiscible melts) in minerals in mare basalts, and (3) trace element studies of olivine in lunar mare basalts with emphasis on Co, Ni systematics and the effects of metal fractionation.

   Interpretation of these trace element data has produced new insights into the fundamental processes involved in the origin and evolution of the Moon. New data for the lunar picritic magmas provide a much better understanding of the evolution of lunar basalts, the composition, evolution, and dynamics of the lunar mantle, and the origin and composition of the Moon. Studies of minerals from the lunar highlands have provided additional insights on the nature and evolution of the lunar crust and the evolution of the early lunar mantle.

   **Microbeam Studies of the Origin and Evolution of Achondrite Meteorites and Martian Meteorites.** Our microbeam studies of achondrite meteorites are designed to unravel the nature and history of their parent asteroid or planet. These meteorites provide us with clues to decipher early planetary conditions under which they evolved, to understand the development of early planetary crusts, and to elucidate early planetary magmatism. Using ion and electron microprobe techniques, we have focused our studies upon 3 major topics: (1) Origin of diogenites (orthopyroxenites) using trace element characteristics of orthopyroxenes and spinels, (2) Origin and evolution of eucrites using trace element characteristics of pyroxene and plagioclase, and (3) Nature of the hydrothermal events that are represented in SNC (Martian) meteorites. Minor and trace element studies of diogenites have given us a clearer understanding of their role in asteroid 4 Vesta. Comparative studies of diogenites (orthopyroxene cumulates) with their terrestrial analogs in layered intrusions have demonstrated the potential complexity of magmatic processes on "simple" asteroids.
b. Origin of Chondrites (Funded by NASA)

Chondritic meteorites are among the most pristine extraterrestrial materials available for study in the laboratory. The principal components of chondritic meteorites are chondrules (millimeter-size spherules of silicate material) and matrix (an ultrafine-grained assemblage of silicates, oxides, sulfides, and carbonaceous material). The study of such components provides important insights into processes which occurred as the planets, comets, and asteroids formed from the cloud of interstellar dust and gas, the solar nebula. Our overall aim is to integrate these observations with current astrophysical data to develop a viable model for the early solar nebula.

Specific questions relating to the origin of chondritic meteorites which we are currently addressing are: (1) How and under what conditions did chondrules and matrix form and in what location in the nebula? (2) How were chondrules and matrix processed in the solar nebula after their formation? (3) How much and what type of presolar material is preserved in fine-grained matrix material? (4) How were chondrules and matrix affected after accretion by parent body processes such as thermal metamorphism, aqueous alteration, and brecciation? (5) What were the physical conditions and mechanisms of these secondary processes?

Our studies of ordinary and carbonaceous chondrites use a combination of petrographic studies, microbeam techniques (SEM, EMP, STEM, and synchrotron x-ray fluorescence microprobe) and SIMS analysis of mineral compositions, as well as experimental and isotopic studies.

c. Mechanisms and Kinetics of Aqueous Alteration Reactions in Chondritic Meteorites (Funded by NASA)

Many chondritic meteorites contain clear evidence that they have interacted with hydrous fluids at an early stage in their history. Although the mineralogical characteristics of these meteorites have become increasingly well known, the mechanisms and rates of the alteration reactions are still poorly understood. In order to understand these alteration processes we are carrying out experimental studies of specific mineral-fluid reactions pertinent to chondrites. The objectives of the study are to understand the behavior of chondritic materials during aqueous alteration in order to put constraints on the locations and timescales of alteration and the sequence of progressive alteration reactions which may have occurred within a parent body environment. The study will examine the reaction behavior of different types of chondritic precursor material which could potentially have been present in
the matrices of chondritic meteorites. These include crystalline phases, such as olivine, pyroxene and metal, as well as amorphous materials, such as glasses and amorphous condensates. The experimental run products will be studied by SEM and TEM techniques and we will also examine the evolution of the cation content of the fluid as a function of time, using ICP-MS analysis.

d. Geochemical Signatures of Melt Segregation in Static vs Dynamic Environments (funded by NSF)
Geoscientists concerned with crustal evolution are currently debating both the rates of melt segregation and the nature of pathways for melt transport. In particular, focus has been placed on magma geochemistry because these processes determine the extent to which the extracted melts are in equilibrium with their source rocks. It is very likely that melt segregation rates and melt transport paths are dependent on tectonic setting and vary according to the presence or absence of deformation. At this point, determining how the mechanics of melt segregation influence the melt chemistry would greatly enhance our understanding of the range of compositions observed in anatectic granitic terrains and of the evolution of the crust in general. In this project, in collaboration with Dr. Tracy Rushmer (University of Vermont), we are testing experimentally the hypothesis that the physical processes of melt segregation leaves a distinct chemical signature that can be observed and quantified in anatectic melts. Two different types of experiments are planned to effectively link melt composition to melt segregation processes active in static (hydrostatic) and dynamic (non-hydrostatic) environments. This will help tie tectonic environment to source melt geochemistry. The study will involve SEM and electron and ion microprobe studies of melt produced in the experiments in order to determine how melt geochemistry evolves as a function of time and degree of melting.

e. Educational Initiatives (Funded by NASA, LANL, NSF)
In the past year several educational initiatives for New Mexico students and teachers, and college of education faculty and graduate students, were implemented. These programs take advantage of the resources of the Institute of Meteoritics, including the research staff and the Meteorite Museum. The programs include “Hands-On the Solar System: Workshops for Middle School Students from Under-represented Groups and their Teachers in New Mexico” funded by NASA’s Space Telescope Science Institute. This project involves presentations to middle school groups from New Mexico Math, Engineering, Science Achievement (MESA), and this project will continue in the Fall. A follow-up to the teacher training Institute:
"The solar system for Elementary and Middle School Students" funded by the New Mexico State Systematic Initiative for Math and Science Education, was presented November 20, 1996, for teachers from Lincoln, Taylor, and Cleveland middle schools. The curriculum is based in part on materials developed under the auspices of NASA and NSF, but adapted to take advantage of local resources, such as the Institute of Meteoritics Meteorite Museum, and Scanning Electron Microscope. Another education program was funded by the Los Alamos National Laboratory, Faculty and Student Teams (FAST), research and educational program. This program involved faculty and students from the College of Education and the Institute of Meteoritics in a program designed to expose the education personnel to planetary research, and the IOM personnel to the concerns of the K-12 educational establishment.

f. Development of Advanced SIMS Techniques - Ion Microprobe Facility (Funded by NSF)

One of the main franchises of the Ion Microprobe Facility is the development of new and innovative applications of Secondary Ion Mass Spectrometry (SIMS) to the analysis of natural materials. Two main initiatives have occupied the bulk of technique development time.

The first is the optimization of the instrument for small, high current primary microbeams. This development has become essential for a number of projects involving quantitative trace element analysis of objects smaller than the traditional 25-30 μm lateral resolution of the ion microprobe. A number of optical and electronic modifications have been completed, allowing substantial primary beam currents to be focused routinely to diameters of less than 10 μm.

The second major development initiative has been in the area of Stable Isotope Ratio Analysis (SIRA). Optimization of a new detector and counting electronics has allowed the microbeam analysis of sulfur isotope ratios in sulfides to precisions approaching those of conventional gas source SIRA instruments (which require much larger samples). This new capability will be applied to isotopic investigations of both meteoritic and terrestrial materials in the coming year.
g. Formation of the Continental Crust: Evidence from Siderophile and Chalcophile Trace Elements. (Funded by NSF)

The abundances of siderophile and highly mobile elements are being used to investigate the accretion of the Earth and the separation of the Earth's core and the continental crust from the Earth's mantle. Well characterized samples from different geochemical reservoirs are being analyzed by inductively coupled plasma mass spectrometry for the moderately siderophile and chalcophile trace elements Mo, W, As, Sb, and Pb. The differing behavior of the chosen elements provides windows into different processes involved in the early evolution of the Earth. The earliest events of accretion and core formation are being studied directly by the abundance of Mo, which behaves coherently with the light rare earth elements, thus providing a window through the complicated crustal formation process. In contrast, the formation of the continental crust involves the extra enrichment of highly mobile elements including Pb, As, and Sb. The abundances of the siderophile elements in different terrestrial reservoirs including ancient and younger continental crust (arcs) are being used to determine the abundances in the bulk silicate Earth. These abundances provide clues to accretion and metal segregation in the mantle.

h. Geochemical and Mineralogical Characterization of Tuff and Related Rocks from Yucca Mountain, Nevada (Funded by SNL/DOE)

The Yucca Mountain Site Characterization Project of the U.S. Department of Energy is concerned with evaluation of the Yucca Mountain site as the host for a proposed commercial high-level nuclear waste repository. The site is located about 90 miles north of Las Vegas, Nevada, in the vicinity of the Nevada Test Site. Sandia National Laboratories is the prime DOE contractor involved in gathering data on geoengineering properties for site characterization. Sandia is also responsible for development of performance assessment models for all phases of the life of a repository based on the site characterization data. The Institute of Meteoritics supports the Sandia mission by providing sample-specific geochemical and mineralogical analyses of rocks from Yucca Mountain on an as-needed basis. Construction of an access tunnel for in situ study of the potential repository locality was completed in 1997. We are providing petrologic, mineralogic and geochemical data on rock samples obtained from the underground experimental facility. These data are being numerically quantified and integrated into a database of thermal, mechanical, hydrologic and other physical properties. The data will be analyzed statistically to determine which factors are reliable predictors of those properties.
required to produce accurate design and performance models. The importance of coupling of mineralogic, hydrologic, thermal, and mechanical processes is being recognized as crucial to the development of good models of total systems performance.

i. Mechanisms of High Pressure Phase Transformations Involving Olivine, β-phase and spinel in the mantle transition zone: Experimental Studies of Transformation Mechanisms in Mg$_2$SiO$_4$ and (Mg,Fe)$_2$SiO$_4$. (Funded by NSF).

The importance of the phase transformations of the polymorphs of Mg$_2$SiO$_4$ on the geophysical properties of the upper mantle has been widely recognized over the last 20 years. Olivine, the most volumetrically important phase in the Earth's upper mantle, undergoes a series of transformations as a function of increasing depth in the mantle, which result in the formation of modified spinel (b-phase) and finally, spinel (g). Transformations of olivine to b-phase are widely regarded as being responsible for the seismic velocity variations in the transition zone of the mantle in the 370-420 km range in the Earth. The mechanisms of the transformations have major implications for several important aspects of the behavior of the mantle in the transition zone, the dynamics of subduction zones and mantle convection. In particular the olivine-spinel transformation may provide one of the major forces for subduction, be one of the causes of deep focus earthquakes, and may significantly affect the rheology of subducting oceanic lithosphere.

The principal objective of this project is to study in detail the mechanisms of these high pressure mantle phase transformations over a wide range of pressure/temperature conditions relevant to the model mantle geotherm and subducting oceanic lithosphere. This study is the first to try and delineate the pressure/temperature regimes over which different transformation mechanisms may operate in the Earth's mantle and identify what factors may cause changes in the transformation mechanism. The research is a collaborative project involving high pressure experimental work coupled with transmission electron microscope characterization of the products of the experiments. Experimental work is carried out by Professor David Rubie on a multianvil press at the Bayerisches Geoinstitut, Germany, whilst transmission electron microscopy and subsequent interpretation are carried out in the Institute of Meteoritics.
2. **Grants and Contracts**

Table 1 documents that IOM was funded by a variety of agencies during FY 96/97 including NSF, NASA, SNL, and IGPP. Grant contract expenditures totaled $558,700. Table 2 lists grants and contracts that are already in effect or have already been approved; $721,500 remains in these grants and contracts. Table 3 tabulates proposals that are now in the review process. These proposals request $626,500 for IOM research support.

In summary, IOM continues to enjoy healthy grant/contract support in these times of rigorous competition and limited budgets in the major funding agencies.
<table>
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<tr>
<th>AGENCY</th>
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<td>NASA</td>
<td>&quot;Microbeam Studies of Planetary Materials&quot; (NAGW-3347 and MRA 97-282)</td>
<td>J. Papike/Brearley, Jones, Shearer</td>
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<td>NASA</td>
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<td>NSF</td>
<td>&quot;Formation of the Continental Crust; Evidence from Siderophile and Chalcophile Trace Elements in Volcanic Arcs (EAR 9304131)</td>
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<td>IGPP</td>
<td>&quot;Advanced Methods for the Determination of Moderately Siderophile Elements by Mass Spectrometry&quot; (No. 411)</td>
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<td>NASA</td>
<td>Hands on the Solar System: Workshops for Under-Represented Midschool Students from Under-Represented Groups and their Teachers in New Mexico (ED-90101.01-96A)</td>
<td>H. Newson</td>
<td>2.9K</td>
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<td>NSF/SIMSI</td>
<td>The Solar System for Elementary and Middle School Students</td>
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<td>Siderophile Elements and the Origin of the Continental Crust (EAR-95-06597)</td>
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<td>Siderophile Elements and the Origin of the Continental Crust. REU Supplement (EAR-9543543)</td>
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<td>NSF</td>
<td>Phase Transformations involving Olivine (EAR 93-06481)</td>
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<td>NSF</td>
<td>Acquisition of a Scanning Electron Microscope (EAR-9615257)</td>
<td>A. Brearley et al.</td>
<td>90K</td>
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<tr>
<td>NASA</td>
<td>Mechanisms and Kinetics of Aqueous Alteration Reactions in Chondritic Meteorites (AKA) Meteorites and Small Primitive Solar System Bodies (NAG5-4619)</td>
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<td>NASA</td>
<td>&quot;Microbeam Studies of Planetary Materials&quot; (MRA 97-282)</td>
<td>J. Papike/Brearley, Jones, Shearer</td>
<td>12/96 to 12/98</td>
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<td>12/97 to 12/98</td>
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<td>NSF</td>
<td>&quot;Support of UNM/SNL Ion Microprobe Facility&quot; (EAR 9706054)</td>
<td>M. Wiedenbeck/Papike, Shearer</td>
<td>8/97 to 7/98</td>
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<td>NASA</td>
<td>Hands on the Solar System: Workshops for Under-Represented Midschool Students from Under-Represented Groups and their Teachers in New Mexico (ED-90101.01-96A)</td>
<td>H. Newson</td>
<td>1/97 to 12/98</td>
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<td>LANL/FAST</td>
<td>The Origin of the Continental Crust and Teaching Geochemistry with the WWW</td>
<td>H. Newsom</td>
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<td>NSF</td>
<td>Siderophile Elements and the Origin of the Continental Crust (EAR-95-06597)</td>
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<td>NSF</td>
<td>Phase Transformations involving Olivine (EAR 93-06481)</td>
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<td>8/95 to 7/98</td>
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<td>NASA</td>
<td>Mechanisms and Kinetics of Aqueous Alteration Reactions in Chondritic Meteorites (AKA) Meteorites and Small Primitive Solar System Bodies (NAG5-4619)</td>
<td>A. Brearley</td>
<td>1/97 to 12/98</td>
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<td>NSF</td>
<td>Geochemical Signature of Melt Segregation in Static vs. Dynamic Environments (EAR-970606047)</td>
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<td>6/97 to 5/00</td>
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<td>NASA</td>
<td>Microstructural Studies Bearing on the Origin of Carbonates and Associated Minerals in Martian Meteorites ALH 84001</td>
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<td>NASA</td>
<td>Deciphering Sulfur Isotopic Systematics as a Potential Biomarker in ALH 84001</td>
<td>C. Shearer/Papike</td>
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<td>NASA</td>
<td>Site Selection Studies, Parana Basin, Margaritifer Sinus region of Mars</td>
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<td>NASA</td>
<td>&quot;Mars Oxidant and Dust Experiment for the Mars Surveyor 2001 Lander.&quot;</td>
<td>H. Newsom</td>
<td>7-1-98 to 6-30-02</td>
</tr>
<tr>
<td>NASA</td>
<td>&quot;Mechanisms and kinetics of aqueous alteration reactions in chondritic meteorites.&quot;</td>
<td>A. Brearley</td>
<td>1-1-98 to 12-31-98</td>
</tr>
</tbody>
</table>

TOTAL                                                                                          626.5K
3. **Papers Published (and in Press) in Peer Reviewed Journals and Books (1996-1997)** Staff members of IOM in bold print. *Student authors.


I. RESEARCH


4. Other Publications


5. Travel

During the period of the report, IOM Personnel attended nine international and national meetings. Twenty-two papers were presented orally, and seven papers were presented as posters. One was presented in the "print only" abstracts mode. One of the talks and one of the posters were presented by students. Abstracts of all presentations were published in abstract volumes for individual meetings. In the list of meetings below, names of IOM presenters are underlined, and student contributions are indicated with an asterisk.

July 22-26, 1996
59th Annual Meteoritical Society Meeting, Berlin, Germany
Attended by: A. Brearley, R. Jones
Abstracts were published in Meteoritics and Planetary Science, Supplement.

Oral presentations:

Brearley, A.J. "A comparison of FeO-rich olivines in chondrules, matrix, and dark inclusions in Allende and the discovery of phyllosilicate veins in chondrule enstatite."

Jones, R.H. and I.D. Hutcheon "Mineralogy and secondary alteration of a complex plagioclase-rich inclusion in Kainsaz."

Poster presentations:

Hanowski, N.P.* and A.J. Brearley "Alteration reactions in chondrules of the CM chondrite, LEW 90500."

R. Jones chaired session, "Carbonaceous chondrites."

August 11-15, 1996
30th Annual Meeting of the Microbeam Analysis Society and 54th Annual Meeting of the Microscopy of America, Minneapolis, Minnesota
Attended by: M. Spilde
October 16-18, 1996

Workshop on Evolution of Igneous Asteroids: Focus on Vesta and the
HED Meteorites, Houston, Texas

Attended by: H. Newsom, J. Papike, C. Shearer, M. Spilde

Oral Presentations:

Newson, H.E. "Core formation in the howardite-eucrite-diogenite parent body
(Vesta)."

Papike, J.J., L.E. Bowman,* M.N. Spilde, G.W. Fowler, and C.K. Shearer
"Diogenites: Cumulates from Asteroid 4 Vesta: Insights from Orthopyroxene
and Spinel Chemistry."

Shearer, C.K., G.W. Fowler, and J.J. Papike "Petrogenetic Models for the
Origin of Diogenites and Their Relationship to Basaltic Magmatism on the HED
Parent Body."

Poster Presentation:

Bowman, L.E.,* M.N. Spilde, and J.J. Papike, "Automated SEM modal
analysis applied to the diogenites."

October 28-31, 1996

Geological Society of America, Denver, Colorado

Attended by: A.J. Brearley, H.E. Newsom, J.J. Papike, C.K. Shearer, M.
Wiedenbeck
Abstract published in GSA Abstracts with Programs

Oral Presentations:

Brearley, A.J. "Disordered biopyroboles in the Allende meteorite: first
extraterrestrial occurrence."

Noll, Jr. "Decoupling of \(^{10}Be\), fluid-mobile elements (B, Pb), and refractory
lithophile elements (La, Nb) in arc lavas across the Quesada Sharp Contortion,
Central America."

Papike, J.J., G.W. Fowler, and C.K. Shearer "Evolution of the Lunar Crust:
SIMS Study of Plagioclase from Ferroan Anorthosites and Mg-Suite Norites."

Shearer, C.K., M. Wiedenbeck, M.N. Spilde and J.J. Papike "Element
Partitioning Between Immiscible High-Fe Basaltic Melt and High-Si Rhyolitic
Melt."

Poster Presentations:

Shearer, C.K., M. Wiedenbeck, M.N. Spilde, and J.J. Papike "Element
partitioning between immiscible high-Fe basaltic melt and high-Si rhyolitic
melt."
December 15-19, 1996
Fall American Geophysical Union Meeting, San Francisco, CA
Attended by: A. Brearley

Oral Presentations:

Brearley, A.J. and D.C. Rubie "Mechanisms of the olivine to modified spinel and spinel transformations under subduction zone conditions."

February 27-28, 1997
NASA Mars Soils Hazards Meeting, Jet Propulsion Laboratory, Pasadena, CA
Attended by: H. Newsom

Oral presentations:

Newsom, H.E. "Toxicology of martian soil."

March 16-21, 1997
28th Lunar and Planetary Science Conference, Houston, Texas
Attended by: C. Adcock, A. Brearley, S. Feldstein, N. Hanowski, R. Jones, H. Newsom, J. J. Papike, C. Shearer
Abstracts were published in Lunar and Planetary Science XXXVIII

Oral presentations:

Brearley, A.J. "Disordered biopyriboles and talc in chondrules in the Allende meteorite: possible origins and formation conditions."

Feldstein S.N.*, R.H. Jones and J.J. Papike "Experimental partial melting of the L6 ordinary chondrite Leedey."

Hanowski, N.P.* and A.J. Brearley "Chondrule serpentines as indicators of aqueous alteration in CM carbonaceous chondrites."

Hanowski, N.P.* and A.J. Brearley "Parent body alteration of large metal inclusions in the CM carbonaceous chondrite, Murray."

Jones, R.H. "Equilibration of pyroxenes in type 4-6 LL chondrites."

Krot, A.N., A.J. Brearley, V.V. Birykov, A.A. Ulyanov, K.K. Keil, T.D. Swindle, D.W. Mittlefehldt "Dark inclusions in the reduced CV3 chondrite, Efremovka: evidence for various degrees of aqueous alteration and thermal metamorphism."

Newsom, H.E. "Trace element composition of the Martian soil: possible components."
I. RESEARCH


Shearer, C.K., M.G. Wiedenbeck, M.N. Spilde, and J.J. Papike "Minor and Trace Element Partitioning between Immiscible High-Fe Basalts and High-Si Rhyolites. An Example from Melt Inclusions in Mare Basalts."


Poster presentation:


Brearley, A.J. "Contrasting microstructures of fayalitic olivine in matrix and chondrules in the Allende CV3 chondrite."

Shearer, C.K., G.W. Fowler, and J.J. Papike "Reconstructing HED Parent Body Magmatism from Orthopyroxene in Diogenites."

Print only:


April 23-27, 1997
Early Mars Conference, Houston, TX
Attended by: H. Newsom

Oral presentations:

Newsom, H.E. "Hydrothermal environments and chemical transport on Mars."

Poster presentations:

Newsom, H.E. and J.J. Hagerty "Composition of the Martian soil."

June 15-20, 1997
Gordon Research Conference on Origin of Solar Systems, Henniker, NH
Attended by: R. Jones

R. Jones Discussion leader for session: Meteorites as probes of the protosolar nebula.

Other professional travel by IOM Personnel:


**October 19-20, 1996.** Curation and Analysis Planning Team for Extraterrestrial Materials (CAPTEM), Houston, TX. H. Newsom.


**April 9-13, 1997.** Invited speaker to University of Tennessee. Knoxville, TN. J. Papike.


SECTION II
FACILITIES
II. FACILITIES

1. **Curation and Meteorite Museum**

As in previous years the Meteorite Museum has been an important educational and recreational attraction on campus and has been visited by many school parties and tourists alike. The interest in the museum and meteorites in general received considerable stimulation as a result of the announcement in August, 1996 of evidence for putative life on Mars and the number of visitors to the museum appears to have increased as a result. Several elementary and high schools from the Albuquerque area and elsewhere in the state arranged highly successful guided tours to the Museum and the Museum has also been visited by school parties from as far away as Los Angeles. The continuing popularity of the Museum for school parties visiting UNM emphasizes the important educational role of this facility for the local community. In addition to the activities centering on the Museum, we also exhibited samples from the Institute's collection at the Albuquerque Gem and Mineral Show, 1-3 March, 1997 and at Astronomy Day at the Winrock Mall, 27 April, 1997. These displays focused on the evidence for life on Mars and generated considerable public interest.

During the year, we made some additions to our World Wide Web site to provide additional information to the public about meteorites. Specifically, Adrian Brearley developed a Web page which provided basic information about how to identify meteorites and distinguish them from terrestrial rocks and minerals as well as man-made materials. We also made progress towards having digitized images of the Institute's thin section collection on the web. Volunteer Nancy Mattern greatly assisted this project by scanning negatives of all our thin sections into digital form, so that they are now in a format which can be incorporated into our web site at a future date.

The Institute's collection has continued to be a very important resource for researchers worldwide and we have been quite active loaning and providing samples to a number of scientists. Demand for samples in the collection has been moderate and this year 9 samples and thin sections were provided to 7 qualified investigators in the USA and Japan. In addition, the research agenda within the Institute continues to make extensive use of samples from the collection.
During 1997 we were fortunate to be able to make a major and important addition to the Institute’s collection. In a trade we obtained the main mass of the H5 chondrite Garabato, a spectacular 160 kg oriented stone meteorite with extremely well-developed flight markings and regmaglypts. This sample will make a superb exhibit piece for the Institute’s museum and we hope to be able to place this sample on display in the Fall of 1997. In addition, we have been fortunate to obtain new samples of 18 meteorites, 13 of which were not previously represented in the Institute’s collection. Several of these samples have been purchased with Institute funds and public donations to the museum. Most notable of these include a new howardite from North Africa, and the rare carbonaceous chondrites, Karoonda, Ninquiang, Kainsaz and Mighei. With the addition of these new samples, the Institute’s collection now contains samples of about 576 meteorite falls and finds from around the world. During 1996-1997 we also classified 5 new meteorite samples which were donated to us by private individuals and examined over 80 suspect meteorite samples for members of the public.

2. Experimental Petrology Laboratory

The experimental petrology laboratory includes two vertical muffle tube high-temperature furnaces: a Deltech furnace and an Astra furnace. Both have gas-mixing capabilities and programmable temperature control, and are operational up to 1600°C under a wide range of oxygen fugacities. Several different types of experiments are being conducted, including 1) an investigation of pyroxene microstructures formed at different controlled cooling rates, and during various annealing conditions, 2) measurement of diffusion coefficients, 3) a kinetic study of olivine reduction reactions and 4) a study of partial melting of an ordinary chondrite.

3. ICP/MS Laboratory

The ability to rapidly and precisely measure trace elements in sub-parts per billion concentrations is required in solving a wide range of environmental, petrogenetic, metallogenic and geochemical problems. For example, the analysis of "heavy metals" (e.g., As, Pb, Cu, Cd, Sb, Ag, Hg, Zn) in water/waste is critical to many environmental impact evaluations (e.g., ground water contamination). The same set of elements in planetary materials provides essential clues to early processes in the Earth and terrestrial planets, such as planetary accretion and core formation. In response to this need, geochemists have developed inductively coupled plasma-mass spectrometry.
II. FACILITIES

(ICP-MS) for the environmental and geological sciences. ICP-MS is an analytical technique for multi-trace element and isotopic analysis. The technique combines an inductively coupled argon plasma generating ions at 8000 K and a quadrupole mass analyzer for ion detection. The main advantages of ICP-MS as a method for geochemical analysis are its multi-element (and isotopic) capability, sensitivity, and speed at a reasonable cost. It is possible to routinely determine 33 elements spanning the realm of geochemical behavior with detection limits to .001 mg/ml.

The Institute of Meteoritics operates a VG Plasma Quad PQ2 ICP/MS for Institute, Departmental, campus and off-campus analytical needs. An analytical methods course in ICP-MS is offered to undergraduate and graduate students interested in using trace element techniques in solving geologic problems. This course has helped undergraduate students gain acceptance into graduate school and graduates find employment. The laboratory has developed analytical procedures for the analysis of most stable elements in the periodic table in a wide range of analytical matrices.

Current and projected use of the laboratory for trace element analysis include faculty, staff and students from the Institute of Meteoritics, Department of Earth and Planetary Sciences, Department of Chemistry, and Department of Civil Engineering at UNM. A total of 15 students (undergraduate and graduate) within the Department of Earth and Planetary Sciences used the ICP-MS facility as part of their research interests. This involved eight faculty and staff in the department. Analyses were also carried out for the following off-campus projects:

David Vaniman and Grant Heiken, Yucca Mountain trace element characterization of minerals (Los Alamos National Laboratories)
E. Peterson, Super-conductor analysis (Los Alamos National Laboratories)
Fluid flow studies (Sandia National Laboratories)
Soil contamination studies (Sandia National Laboratories)
Groundwater contamination (Jacobs Engineering, Albuquerque)
G.C. Ulmer, Analytics of carbonates for REE (Temple University)

4. Electron Microprobe and Scanning Electron Microscope Laboratories

The Institute of Meteoritics operates a JEOL 733 electron microprobe and a Hitachi S-450 scanning electron microscope. Both labs fulfill Institute, Departmental, campus and off-campus analytical needs by providing training for users or supplying experienced personnel to conduct analysis for clients. The microprobe and the SEM
II. FACILITIES

labs have enjoyed a busy year in 1996-97. Although the number of Departmental users was less than previous years, an increase in out-of-department clients more than offset the decline of trained users. The probe currently has 13 Departmental and IOM users and 1 user from the University of Nevada, Las Vegas; two new users were trained this period. The SEM has 16 total users, including 2 new trainees. Of the 16 users, 2 are from NM Tech, 2 from Sandia, 1 from the NM Museum of Science and Natural History, and 2 are commercial users. Chris Adcock was hired as a Laboratory Assistant to help with training, sample preparation and analyses. Analyses were conducted by C. Adcock or M. Spilde for the following academic and commercial clients:

Y. Asmeron, Department of Earth & Planetary Science (SEM)
S. Barger, Department of Earth & Planetary Science (microprobe)
C. Bryan, Sandia Nat. Labs (microprobe)
T. Burns, Anthropology Dept., UNM (microprobe)
Center for Nuclear Waste Management, UNM (SEM & microprobe)
J. Cline, University of Nevada, Las Vegas (microprobe)
N. Creager, Anthropology Dept., UNM (SEM & microprobe)
D. Czor, Albuquerque (SEM)
G. Derosa, NM Tech (microprobe)
M. Drummond, University of Alabama, Birmingham (microprobe)
G. Everage, Rio Crystals, Albuquerque (microprobe)
A. Garza, Department of Earth & Planetary Science, UNM (microprobe)
J. Hall, NM Tech (microprobe)
K. Jenkins, Chemistry Dept., UNM (microprobe)
A. Meldrum, Department of Earth & Planetary Science, UNM (SEM & microprobe)
R. Molina-Garza, Department of Earth & Planetary Science, UNM (SEM)
Motorola Ceramics Research Lab, Albuquerque (SEM)
P. Mozley, NM Tech (microprobe)
P. Napolitano, Chemistry Dept., UNM (SEM)
N. Olsen, Anthropology Dept., UNM (microprobe)
Placer Consultants, Albuquerque (microprobe)
G. Shang, Chemistry Dept., UNM (microprobe)
Solv-Ex Corp., Albuquerque (SEM & microprobe)
S. Taank, Center for Micro-Engineered Materials, UNM (microprobe)
J. Ward, NM Tech (microprobe)
M. Whitworth, NM Bureau of Mines (microprobe)
P. Yost, Albuquerque (SEM)
Zeotech Corp., Albuquerque (SEM)

In addition to providing training and analysis, we conducted tours and presentations for other UNM classes to expose students to modern analytical techniques. As such, demonstrations were given for Anthro 570 and E&PS 551. SEM demonstrations are
conducted in conjunction with UNM community out-reach programs, and classes from Grants High School, Los Lunas and Garfield Middle Schools, and Adobe Acres Elementary School visited the lab, along with a group of MESA students and a Boy Scout den from Albuquerque. Finally, as additional community service, we provided SEM photos for a high school science project for the regional science fair for two students from Del Norte High School.

We were successful during 1996-97 in acquiring NSF and NASA grants, along with matching funds from UNM, to purchase a new scanning electron microscope. A JEOL 5800LV with an Oxford Isis analytical system was ordered and will arrive for installation during the summer of 1997. The new microscope will replace our aging Hitachi, which was purchased in 1980. The new instrument will add state-of-the-art capabilities to the lab, including the capacity to operate in a low vacuum mode, without coating or preparing samples. This will be especially useful for friable and easily damaged samples such as sandstone and clays. In addition, the new system will employ a cathodoluminescence detector that will expand our imaging capabilities. The new SEM will be ready for use in the Fall semester.

5. The UNM/SNL Ion Microprobe Facility

A CAMECA IMS 4f Secondary Ion Mass Spectrometer (SIMS), originally purchased by Sandia National Laboratories (SNL) in 1989, was relocated in June 1992 from SNL to the Advanced Materials Laboratory on the UNM South Campus. This instrument is used primarily for trace level (ppb range) chemical analyses on small (<30μm) areas. In addition, it is also used for determining the isotopic signatures of small domains within geochemically significant specimens. In the past 12 months there has been growing interest in the use of this machine for determining high resolution (<10μm) chemical depth profiles within engineered materials.

This instrument is jointly operated by IOM and SNL Department 1823, managed by Michael Wiedenbeck. In January 1997 a significant organizational change occurred at the UNM/SNL SIMS facility with the departure of Joe Simonson from Department 1823, who had previously managed all Sandia analytical requirements; currently all operational aspects of the facility are the responsibility of IOM staff members. In addition to Wiedenbeck, IOM Research Associate Grant Fowler is deployed as a full time member of the SIMS laboratory.
Since mid-1993 the Facility has been funded by the National Science Foundation as an external user facility (Facilities and Instrumentation Program). A request for an extension was submitted to NSF in December 1996 (PIs: Wiedenbeck, Papike and Shearer). This application was successful and the current arrangement is funded through July 1999.

**External Users of the Facility: 1 July 1996 - 30 June 1997**

T. Arai -- University of Tokyo  
M. Bode -- Sandia National Laboratories  
T. Boyle / W. Warren -- Sandia National Laboratories  
A. Campbell -- NM Institute of Mining and Technology  
J. Collins -- Sandia National Laboratories  
D. Dimos -- Sandia National Laboratories  
M. Drummond -- University of Alabama Birmingham  
D. Dyar -- West Chester University  
J. Evensen -- Colorado School of Mines  
D. Fisler -- Sandia National Laboratory  
E. Grew -- University of Maine  
C. Guidotti -- University of Maine  
M. Hodgins / J. Selverstone -- University of New Mexico  
J. Knorovski -- Sandia National Laboratories  
D. London -- University of Oklahoma  
N. MacRae -- University of Western Ontario  
R. Mishler / L. Sveum -- NM Highlands University  
P. Mozley -- NM Institute of Mining and Technology  
K. Nagy -- Sandia National Laboratories  
J. Nelson / D. Adams -- Sandia National Laboratories  
M. Nyman / M. Hampden-Smith -- University of New Mexico  
K. Peterson -- Sandia National Laboratories  
B.G. Potter -- Sandia National Laboratories  
C. Schwandt -- Johnson Space Center, Houston  
H. Stowell -- University of Alabama Tuscaloosa  
R. Sours-Page / R. Nielsen -- Oregon State University  
S. Wilson -- U.S. Geological Survey (Denver)

**Institute of Meteoritics Users of the Facility: 1 July 1996 - 30 June 1997**

Adrian Brearley  
Sharon Feldstein / Rhian Jones  
Horton Newsom  
James Papike  
Charles Shearer  
Michael Wiedenbeck
SECTION III

TEACHING
III. TEACHING

1. Courses Taught

Fall 1996

  Guest lectures by A. Brearley, G. Fowler, N. Hanowski, R. Jones, S. Maehr,
  H. Newsom, F. Rietmeijer, C. Shearer, and M. Spilde.

Spring 1997

EPS 515 "Application of Inductively Coupled Plasma Mass Spectrometry to Geologic
  and Environmental Problems" Taught by C. Shearer

EPS 587 "Advanced Mineralogy" Taught by J. Papike. Guest lectures by F.
  Rietmeijer

Summer 1997

EPS 365 "Exploring the Solar System" Taught by H. Newsom. Guest lecture by F.
  Rietmeijer

2. Student Committees

Graduate Student Advisement

<table>
<thead>
<tr>
<th>Student</th>
<th>Committee</th>
<th>IOM Committee Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deborah Bergfeld</td>
<td>Ph.D.</td>
<td>J. Papike</td>
</tr>
<tr>
<td>Laurie Bowman</td>
<td>M.S.</td>
<td>J. Papike (Advisor), C.K. Shearer</td>
</tr>
<tr>
<td>Tracy Cascadden</td>
<td></td>
<td>C.K. Shearer</td>
</tr>
<tr>
<td>Sharon Feldstein</td>
<td>Ph.D.</td>
<td>R. Jones, J. Papike</td>
</tr>
<tr>
<td>Nicolaus Hanowski</td>
<td>Ph.D.</td>
<td>A. Brearley (Advisor) J. Papike</td>
</tr>
<tr>
<td>Jim Karner</td>
<td>M.S.</td>
<td>J. Papike</td>
</tr>
<tr>
<td>Gordon Keating</td>
<td>Ph.D.</td>
<td>J. Papike</td>
</tr>
<tr>
<td>Stephanie Maehr</td>
<td>M.S.</td>
<td>H. Newsom (Advisor), C.K. Shearer</td>
</tr>
<tr>
<td>Al Meldrum</td>
<td>Ph.D.</td>
<td>J. Papike</td>
</tr>
<tr>
<td>Shixin Wang</td>
<td>Ph.D.</td>
<td>J. Papike</td>
</tr>
</tbody>
</table>
III. TEACHING

Ivan Thorsos  Ph. D.  J. Papke, A. Brearley, R. Jones, H. Newsom

Undergraduate Student Advisement

Justin Hagerty  H. Newsom (Advisor)

4. Progress of Earth and Planetary Sciences Department Graduate Students Supported by IOM

Laurie Bowman joined IOM as an M.S. student in the fall of 1994. She received her B.S. in Earth and Planetary Sciences from the University of New Mexico in the summer of 1994. Her continuing research involves spinel chemistry of diogenites, which are believed to be meteorites from asteroid 4 Vesta. She received a New Mexico Space Research fellowship for 95/96. Laurie plans to graduate December, 1997.

Sharon Feldstein is a Ph.D. candidate at the University of Michigan. She is conducting a research project at UNM as part of her Ph.D. research, focusing on an experimental partial melting study of the Leedey ordinary chondrite. She plans to graduate in Spring 1998.

Nicolaus Hanowski studied physics and geology as an undergraduate at the University of Munich and taught astronomy and planetary science for the adult education program, Munich. At the same time he was running a sales business for astronomical instruments and equipment. A one-year research project in spectroscopy followed at the German Space Research Establishment (DLR), Berlin, Nicolaus received his masters degree (diploma) in geology from the University of Munich in 1994 and joined IOM in August 1994 as a research assistant on a NASA grant. He successfully passed his comprehensive Ph.D. qualifying exam in October 1995 and expanded his research on the alternation behavior of various CM chondrites. Nicolaus finished his coursework with training as an ICP-MS user and began writing his thesis in the fall of 1996. As in the previous year, he received a Geology Alumni Scholarship.

Stephanie Maehr joined IOM as an M.S. student in the spring of 1994. She successfully defended her master's thesis proposal in November of 1994. Her research involved examining the geochemistry of Pb, Th, and U with respect to B, Ba, La, and Nb in arc lavas from volcanoes located on both sides of the Quesado Sharp Contortion
in Costa Rica. Her assistantship from the Institute of Geophysics and Planetary Physics was renewed for a third year. In the summer of 1996, she received a grant from the Science Educational Outreach Center, Los Alamos National Laboratory. This grant involved working in conjunction with Horton Newsom of the Institute of Meteoritics, Teresa Kokowski, a faculty member of the College of Education, and Carol Brown, a graduate student in the College of Education to expose and involve education majors to science and scientific research. The primary goal for this project was to develop a working dialog between the College of Education and Arts and Sciences. She defended her thesis “Trace element geochemistry of arc lavas from volcanoes Northeast and Southwest of the Quesada Sharp Contortion, The Center American Volcanic Arc” in May 1997.

Ivan Thorsos is continuing to make progress towards his Ph.D. degree. By the end of 1997 he will have completed his course work and will have submitted abstracts for two research proposals which will form the basis of his Ph.D. comprehensive exam. His likely dissertation topic is “Impact crater processes on Mars resulting in lakes and hydrothermal systems.”
SECTION IV

DEPARTMENTAL AND UNIVERSITY ACTIVITIES
IV. DEPARTMENTAL AND UNIVERSITY ACTIVITIES

C. Adcock

Research Technician, Electron Microprobe and Scanning Electron Microscope Labs

A. Brearley

Curator of the Meteorite Museum and Collection, Institute of Meteoritics engaged in cataloging, acquiring and loaning of meteorites. Developed Institute Home Pages and Catalog for the World Wide Web

Member, Dept. of Earth and Planetary Sciences and Institute of Meteoritics Facilities Committee

Member and Official Interviewer, EPS TEM Laboratory Manager Search Committee

J. Connolly

Member, Departmental Computer Facilities Committee

Manager, Earth & Planetary Sciences Local Area Network

Instructor, UNM Continuing Education Computer Program

Instructor, UNM Elderhostel Program

R. Jones

Manager of Experimental Petrology Laboratory

Assistant Curator of Meteorite Collection

Member of Chemical Hygiene Committee, Department of Earth and Planetary Sciences

Mentor in the Women in Science and Engineering program, UNM

H. Newsom

Member, New Mexico Space Grant Faculty Advisory Board

Educational Outreach Coordinator, Institute of Meteoritics

Representative to faculty meetings, Spring, 1997

J. Papike

Director of IOM

Member of Earth and Planetary Sciences Facilities Committee

Member, Department of Earth and Planetary Sciences Graduate Student Committee

Member, Faculty Senate Research Advisory Committee
IV. DEPARTMENTAL AND UNIVERSITY ACTIVITIES

Chair, Arts and Sciences Committee for Analytical Laboratory Coordination (CALC)

C. Shearer
Manager, ICP-MS Laboratory
Member, Department Facilities Committee
Member, University-New Mexico State Legislature Committee

M. Spilde
Manager, Electron Microprobe and Scanning Electron Microscope Labs
Member, Department of Earth and Planetary Sciences Computer Committee

Visitors to IOM

Visitors to IOM during the period of this report included:

Dr. Sasha Krot, University of Hawaii, September 16-30, 1996. Hosted by A. Brearley

Dr. Bruce Jakosky, Feb. 5-7, 1997. Hosted by H. Newsom


SECTION V

PROFESSIONAL ACTIVITIES
V. PROFESSIONAL ACTIVITIES

Adrian Brearley
Associate Editor, American Mineralogist (1994-1997)
Abstractor for Mineralogical Abstracts, abstracted papers from Analytical Chemistry
AGU 1996 Editor's Citation Award for Excellence in Reviewing Laboratories, 1994-1995

Rhian Jones
Associate Editor of the journal "Meteoritics"
Abstractor for Mineralogical Abstracts
Member of Lunar and Planetary Science Conference Program Committee, 1997

Horton Newsom
Associate Editor, Geochimica et Cosmochimica Acta, Journal of the Geochemical Society and the Meteoritical Society

Jim Papike
Member of the Advisory Committee for the Institute of Geophysics and Planetary Physics (IGPP), Los Alamos National Laboratory
Council Member, Mineralogical Society of America, 1996
Co-Organizer (with Dr. David Mittlefehldt, JSC) of Lunar and Planetary Institute Workshop "Evolution of Igneous Asteroids: Focus on Vesta and the HED Meteorites."
Chair, NASA Curation and Analysis Planning Team for Extraterrestrial Materials (CAPTEM). 1997-2000
Member, NASA Mars Expeditions Strategy Group (MESG). 1997 --
V. PROFESSIONAL ACTIVITIES

Charles Shearer

Mineralogical Society of America Representative to American Geological Institute

AGI Ian Campbell Medal Committee

Representative to TEAMS facility at the Office of Naval Research, Washington D.C.

Participated at a NASA sponsored press conference on LIFE ON MARS at the Johnson Space Center

Invited speaker to the NASA special session on “Mars Meteorites and Life”

Organizer for GSA theme session on “Volatile in planetary basalts and mantles”

In addition to the activities listed above, members of IOM acted as reviewers of numerous manuscripts submitted to international journals and proposals submitted to federal funding agencies.
SECTION VI
EDUCATIONAL OUTREACH
AND
PUBLIC SERVICE
VI. EDUCATIONAL OUTREACH AND PUBLIC SERVICE

1. **Meteorite Museum**

   The Meteorite Museum is the most important focus of IOM's educational outreach. Several thousand people of all ages visit the Museum each year and many school parties visit the Museum to enhance scientific projects in Earth Sciences and Solar System studies. IOM personnel commonly volunteer to give guided tours of the Museum and laboratories to groups of visiting students. During the period of this report, groups that have been given tours include: Mirman School, Los Angeles; Kindercare; Los Volcanes Seniors; UNM Astronomy 270 students; Cleveland Middle School; Monte Vista Elementary School; UNM Astronomy Student Society; Bear Canyon Seniors; Society of Women Engineers Family Program, and MEMS Summer Bridge program, MEMS Summer Bridge program. Several members of IOM have also visited schools in the area to give talks on various aspects of planetary sciences. Considerable interest was generated by a display of meteorites set up by IOM at the Albuquerque Gem and Mineral Club show, March 1-2, 1997, and an exhibit at Astronomy Day at the Coronado Center, April 19, 1997. In addition to the public education provided by the Museum, we are routinely consulted by members of the public to help identify suspect meteorites and to provide information on meteorites and associated phenomena. We have met and corresponded with numerous people from all over the world in providing this service.

2. **Public Service**

   **Christopher Adcock**

   Gave several "Scanning Electron Microscope" presentations to New Mexico Middle and High Schools students

   Assisted with meteorite display at Astronomy Day, Coronado Mall, 1997

   **Adrian Brearley**

   Helped devise, organize and set up meteorite display for Albuquerque Gem and Mineral Club Show, March 1-2, 1997

   Devised and participated in meteorite display for Astronomy Day at Coronado Mall, Albuquerque, 19th April, 1997
Identified numerous suspect meteorites and provided information on meteorites for members of the public from both within and outside New Mexico

Jim Connolly

Introduction to Geology for Students at YWCA Science and Environment Camp, Pinon Canyon Center, Tijeras, NM. Numerous half-day sessions in Fall Semester, 1996 and Spring Semester, 1997

Field trip through the Inner Valley of the Rio Grande, for Garfield Middle School students, November 13, 1996


UNM Continuing Education Classes (Taught at various times throughout 1996-1997):
5400: Cruising the Internet and the Worldwide Web
5402: Researching on the Internet
5244: Introduction to Computer Networks
5348: Windows NT Workstation 4.0: System and Network Support
5349: System Administration for NT Server 4.0

Nicholas Hanowski

Gave 17 tours of the Meteorite Museum for visiting elementary, middle and high school students and senior citizens

Gave presentations of the Solar System at two Albuquerque elementary schools

Assisted with the meteorite exhibit at Astronomy Day, Coronado Mall, 19 April 1997

Organized telescopic observations of comet Hale-Bopp and other objects for members of the Institute of Meteoritics and the Department of Earth and Planetary Sciences

Rhian Jones

Co-Coordinated and gave tours of Meteorite Museum for visiting elementary, middle, high school and UNM students as well as other interest groups

Identified numerous suspect meteorites for members of the public


Acted as judge for Sandia Preparatory School Science Fair. Feb. 11, 1997

Set up meteorite display for Albuquerque Gem and Mineral Club Show. March 1-2, 1997
VI. EDUCATIONAL OUTREACH AND PUBLIC SERVICE

Set up and coordinated meteorite exhibit at Astronomy Day, Coronado Mall. April 19, 1997

Horton Newsom

Gave talk at the Intel VIP Reception at Centennial Science and Engineering Library, September, 16, 1996

Chip Shearer

Presented lectures about the Moon at Albuquerque Academy

Led field trips for Sandia Prep and Albuquerque Public Schools

Presentations for the following organizations: Office of Naval Research, New Mexicans For Science and Reason, Albuquerque Gem and Mineral Society, Kiwanis Club, UNM Geology Club, Department of Physics and Astronomy, and Albuquerque Geological Society

Mike Spilde


Helped a Boy Scout Den (Pack 356) earn Geology merit badges

Conducted SEM demonstrations for numerous school groups

Assisted two students from Del Norte High School with a science fair project

Michael Wiedenbeck

Gave Laboratory tour for Highland University Forensic Anthropology class

Gave lab demonstration for New Mexico Science Teachers Day

Judged geoscience division of Central NM Regional Science Fair
APPENDIX

PUBLICITY
Meteors could have provided environs for Martian life

ALBUQUERQUE, N.M. — When a U.S. space probe lands on Mars in July, it will be searching out, among other things, any possible sign of life. Where to look?

Wherever there are signs of water, says University of New Mexico planetary scientist Horton Newsom, and other scientists tend to agree.

"When we think of the evolution of life, one of the things that is most important is liquid water," said Aaron Zent, a planetary scientist at NASA's Ames Research Center.

Though Mars is far too cold to harbor surface water in liquid form, Newsom says, its many meteor craters, now covered by ice, probably conceal lakes still warmed by latent heat energy left over from the meteor impact. He thinks these lakes may provide a home to some form of life.

Scientists have discovered this phenomenon in Antarctica, he says, though the temperatures there are milder than night time temperatures on Mars, which makes the planet a frozen wasteland far more forbidding than Earth's polar zones.

Since the beginning of time, meteors and asteroids have bombarded all the planets, said Newsom. On Earth, the craters which formed when these meteors struck the surface have become lakes, filled with a combination of groundwater and surface water.

On Mars, he said, there appears to be little or no surface water, though an impressive system of channels on the planet's surface suggest that water once existed there. But Mars does have polar ice caps similar to those at Earth's poles, according to Newsom, and the ice that covers the craters may conceal a more temperate water world under the surface.

Newsom's theory is that heat from a meteor impact could be sufficient to create a lake, which would persist even after Mars' cold surface freezes over the lake's surface. In a recent paper published in the Journal of Geophysical Research, Newsom argued that such crater lakes — the larger ones from two to three miles deep — could persist for thousands of years.

That isn't enough time for life to evolve, said Newsom. But he believes it provides a possible mechanism for organisms living in groundwater to make their way to Mars' surface where scientists can get to them.

Newsom is one of the organizers of a major conference on "Early Mars" to be held this April in Houston. The conference, sponsored by the Lunar and Planetary Institute, a national facility funded by NASA, will explore many questions, said Newsom, in an attempt to unlock the secrets of the planet's past.

The conference will explore many questions concerning Mars. How has the planet changed over the eons since its formation? How warm was it in its earliest stages of existence? How wet? What kinds of conditions may have been present — oceans, rainfall, lakes, for example — that would foster the development of life?

"All these subjects are still big question marks," said Newsom. "We hope the Mars probes will give us some answers. In any case, the craters will give us a very interesting place to start."
Finding Water Is Key To Finding Life

Scientists are scouring the Martian surface — and beneath — looking for liquid water, which may hold microbial life.

By JOHN FLECK
Journal Staff Writer

Looking for life on Mars means looking for water, and University of New Mexico planetary scientist Horton Newsom has a suggestion about where to look.

In research published earlier this year, Newsom said meteor impacts could leave crater lakes on the planet, creating pools of water even though most of Mars' surface is forbidding, frozen wasteland.

Newsom's work comes as NASA is trying to decide where on Mars to look for evidence that the planet might once have harbored life.

"When we think of the evolution of life, one of the things that is most important is liquid water," said Aaron Zent, a planetary scientist at NASA's Ames Research Center.

While some scientists are studying underground life on Earth as a way of understanding what life on Mars might be like, others are looking for evidence of surface water on the red planet.

Localized regions of Mars show evidence of past water on the planet, including river valleys, said Gail Gulick, a planetary geologist at NASA's Ames Research Center in California who is also an adjunct professor at New Mexico State University.

Newsom's work suggests heat from a meteor impact could be sufficient to create a lake, which would persist even after Mars' cold freezes over the lake's surface.

Newsom, in a paper published in June in the Journal of Geophysical Research, argued that such crater lakes could persist for thousands of years.

That isn't enough time for life to evolve, Zent said.

But Newsom believes it provides a possible mechanism for organisms living in groundwater to make their way to Mars' surface where scientists can get to them.
ANNUAL REPORT

Department of Economics
University of New Mexico

July 1, 1996 - June 30, 1997

David S. Brookshire
Chair
1. Significant Developments During the 1996-1997 Academic Year

Steady progress toward department goals was carried out during the last year. Prominent were continued graduate student support through the external and internal grants program and continued collaboration with other departments, extension of the use of the experimental lab into the teaching arena, development of an outcomes assessment program, the initiation of an outreach program with our undergraduates, and revisions in the undergraduate program.

The department continued its efforts to support graduate students through work on our external grants and collaboration with other departments. Our grant programs with the Environmental Protection Agency and the U.S. Geological Survey provided support for graduate students. Also, collaboration with the Bureau of Business and Economic Research, the City of Albuquerque, the Institute for Public Policy, and work with Professor Emeritus Al Parker provided support. The internal set of grants received are "seed" research projects that lay the basis for stronger proposals for external support.

The department continued its efforts for collaboration with other departments at the university. Faculty from Economics, Political Science, the Institute for Public Policy, and Anthropology are planning new projects. Discussions with the Anderson School were undertaken to further ease the ability of our students and theirs to take courses within each program.

Two faculty and graduate student workshops about the use of the experimental laboratory were held in the spring. Faculty presented their experiences in utilizing market experiments in the classroom. The sharing of information led to an increased interest of other faculty in possibly incorporating these materials into their curricula. In addition, the department had obtained from the University of Arizona an extensive software base for market experiments. The laboratory was utilized as a classroom setting for some of these market experiments. Inclusion of laboratory experiments provides students with a better understanding of how markets actually operate.

The department enhanced its contacts with undergraduate majors. Initial meetings were held with a core set of undergraduates interested in activating the undergraduate student association. A strong undergraduate student association will lay the foundation for better communications with our majors.

In concert with this effort of contact with undergraduates, the department designed and
implemented an outcomes assessment process at the undergraduate level. The results from the assessment are still being considered.

Finally, revisions in the undergraduate program were accomplished. The department revised the catalogue and committed to a three-year program to offer a minor in economics through evening and weekend classes. The revisions in the catalogue included reduction and modernization of offerings and renumbering the principles classes to the 100-level. The moving of principles to a 100 level should attract additional enrollment.

2. Significant Plans

The department will continue its commitment to improvement in teaching. This will involve the design and implementation of an improved outcomes assessment and the implementation of a peer teaching review process.

We will be searching to fill a beginning faculty position in the area of labor economics. This individual is needed to teach in both the undergraduate and graduate core labor program. This position is critical to the Ph.D. program, as it is one of our three fields of study. It is also critical to fulfill our offerings in the undergraduate program. This position supplies courses that are cross-listed with courses from other programs and for students from other programs that have interests in this area. Hiring in this area may foster further links with the Southwest Hispanic Research Institute, the Latin American Institute, the Institute for Public Policy, the Bureau of Business and Economic Research, and the Women Studies Program.

3. Appointments to Staff

David Brookshire was reappointed as chair of the department.
Michael McKee was promoted to full professor.
Robert Berrens and Janie Chermak passed their mid-probationary reviews.

4. Publications

Eight of the department faculty had 14 journal articles accepted for publication.

5. Outside Professional Activities

Eight faculty members presented nine papers at professional meetings.

6. Research Grants and Contracts Funded

The department received the following grants to fund faculty and graduate research during this academic year.
New Mexico Legislative Finance Committee
McKee, M. "CGE Model for the State of New Mexico: Year Three Program"
$12,050
June 1996 to October 1996

U.S. Environmental Protection Agency
Brookshire, D. "Preference Formation and Elicitation in Valuing Non-Market Goods"
(Berrens, R.) $120,249
(Ganderton, P.) January 1996 to December 1997
(McKee, M.) With IPP and Anthropology

U.S. Geological Survey
Brookshire, D. "Land-Use Models and Non-Market Values for the Rio Puerco Basin"
(McKee, M.) $49,998
(Berrens, R.) September 1995 to August 1997

The following grants are from internal sources.

Research Allocations Committee, UNM
Bohara, A. "Investigating the Build-up of U.S. Hazardous Waste Sites and Resulting Migration"
$2000
February 1997 to September 1997

$1560
February 1997 to September 1997

Krause, K. "Experimental Tests of Altruism and Free-Riding Among Grade-School Children"
$1975
February 1997 to September 1997

Teaching Allocation Subcommittee
$2474

Research Grants and Contracts Submitted

In addition to the grants funded above, the faculty submitted the following proposals for
consideration.

The Energy Foundation
Chermak, J. “The Effects of Order 636 on Productivity in the Natural Gas Industry”
$63,366
May 1997 to August 1998

National Science Foundation
$18,000
July 1997 to December 1998

Research Allocations Committee, UNM
Binder, M. “Length of Residence and Community Effects in Determining Youth Behavior in Albuquerque”
$7440

7. Attachments

Bachelor of Arts Degrees Conferred
43 Bachelor of Arts degrees conferred

Bachelor of Science Degrees Conferred
3 Bachelor of Science degrees conferred

Master of Arts Degrees Conferred
Mohammed Al-Hazzab
Amy Baker
Kenneth Baker
Abdulla Bohaimed
Martin Boyett
Larry Browning
Timothy Cone
Andrew Core
Selim Demusaj
Brian Ivener
Mark Leonard
Paul Leonis
Mitchell Moore
Victoria Nielsen
Melissa Vigil
Ye Yang

Doctoral Degrees Conferred
Mark Allen (Gisser) "An Economic Analysis of the Personal Computer Software Markets"
Edward Blomdahl (Gisser) "Intergenerational Equity and Sustainability from the Implementation and Management of a Resource Indemnity Permanent Trust Fund"
Mohamad Issa (Pham) "Currency Substitution and Its Implications for Macroeconomic Policy: A Case Study of Egypt"

J. Raymond Stuart Award
Steve Stewart received this honor.

Distinguished Alumnus
Jim Hinton received this honor.
### Table 1
UNM Department of Economics
Sponsored Research Money Generated

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<th>Grant Research</th>
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<tr>
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<tr>
<td>1995-96</td>
<td>136,778</td>
</tr>
<tr>
<td>1996-97</td>
<td>58,007</td>
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</table>

### Table 2
UNM Department of Economics Degrees Awarded

<table>
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<tr>
<th>Academic Year</th>
<th>Bachelors Degrees</th>
<th>Masters Degrees</th>
<th>Ph.D. Degrees</th>
</tr>
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<tr>
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<td>37</td>
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<tr>
<td>1996-97</td>
<td>46</td>
<td>16</td>
<td>3</td>
</tr>
</tbody>
</table>
The administrative structure of the English Department remained the same during the year, with the directors of the various programs also remaining the same as in the previous year. Gary Harrison served as Director of Graduate Studies; Cheryl Fresch was Director of Undergraduate Studies; Patricia Clark Smith was Director of Creative Writing; and Wanda Martin was Director of Freshman English. Next year James Thorson will replace Cheryl Fresch as Director of Undergraduate Studies; the other directors will remain in place. The department conducted an election in the spring, and a new Chair, Scott Sanders, will take office on August 4.

There were some important changes in the status of personnel during the year: Tom Mayer retired, effective June 30. Joy Harjo resigned her professorship to pursue her career as poet and musician. Monica Espinosa was denied a second three-year term and has been issued a one-year terminal appointment for the 1997-1998 academic year. Mary Swander was our Visiting Writer for the spring semester. After our search for a new assistant professor was cancelled, we were allowed to hire our top candidate as a visiting assistant professor for the 1997-1998 academic year. James Colbert, author of four novels and a book of nonfiction, comes to us from the University of Arkansas, where he has just completed his MFA degree.

The department also lost several staff members during the year. Patty Sprott, our journals associate editor, transferred to the Department of Biology, where she will be a technical writer. Janet Erwin, of the Office of Undergraduate Studies, left to take a job off campus. Ovella Minssen, from the Office of Graduate Studies, resigned and is now at the Department of Chemistry.

A major problem which the department will face over the next five years is a large number of retirements. Ivan Melada and Robert Fleming will retire at the end of the fall 1997 semester, but their retirements are simply the first in a long list. David McPherson, James Thorson, Mary Bess Whidden, Patrick Gallacher, and David Johnson are also near enough to retirement age to suggest that in five years as much as twenty percent of the faculty will be replaced.

Enrollment problems plagued the department during the past year. ITEL-UNM now allows us to see where students are turned away from classes. This year the chair formed a committee consisting of the directors of undergraduate studies, graduate studies, and freshman English and two graduate students to help plan a schedule that would use our faculty and teaching assistants to the best advantage. The committee was only partly successful. We still face the problem of some students boycotting evening courses, while
others must have them if they are to complete their degrees. Courses at peak times (e.g. M W F, 9:00, 10:00, or 11:00) fill and the department is urged to enlarge them. Courses at 5:30 fail to attract the necessary 13 undergraduates and have to be cancelled. The committee will continue to work with enrollments next year. We hope that the student body will prove as flexible as the department is attempting to be.

The major piece of business for the year was the revision of the MA degree and the reading lists used by graduate students in preparing for the MA comprehensive examinations. One of the strongest recommendations of last year's outside review committee was that these sectors of the graduate program should be overhauled. After preliminary meetings by the department Graduate Committee and the Policy and Personnel Committee, the entire department met several times and finally agreed on a revised set of requirements. Gary Harrison, Director of Undergraduate Studies, is working over the summer on the necessary Forms A, B, and C to effect the changes in the MA program. It is anticipated that the Department will be able to offer the revised MA beginning in the spring 1998 semester. Students currently in the program will be allowed the option of finishing their degrees under the old plan or choosing the revised plan.

Following the revamping of the MA program, the professors teaching in each respective field met and designed new, more selective reading lists for each discipline within the department on which students are examined. These are being compiled and formatted uniformly during the summer so that graduate students will be able to use them when the fall 1997 semester begins.

Faculty and staff salaries were addressed in last year's external review. Briefly, the reviewers felt that salaries were very low at UNM. This year's budget, which made no provision for raises, exacerbates the problem addressed by the review team. For several years, UNM appeared to be gaining on its peer institutions. The current year marked a step backward. Not surprisingly, the failure of the legislature to offer any money at all toward increased compensation left morale at a low point. It is essential that this problem be addressed next year.

Similarly, the hiring freeze put in effect during the middle of our recruiting process hurt morale. After screening a large number of applications, a selection committee attended the Modern Language Association Conference in Washington, D.C., interviewed the top candidates, and returned to Albuquerque. In conference with the Chair, the committee selected and ranked four candidates to be asked to campus to meet the rest of the faculty. James Colbert emerged as the first choice in the ranking. At that point, the freeze was announced. The Chair called each of the nine semi-finalists and broke the news to them. The freeze has not only hurt faculty morale internally but has diminished our credibility nationally.
1996-1997 Graduate Program. Voting members of the Graduate Committee for 1996-1997 were Professors Gary Harrison (Director), David Jones, Patrick Gallacher, Chuck Paine, Sharon Warner, and Carolyn Woodward and graduate student Andy Smith. Ex-officio members were Wanda Martin, and Patricia Clark Smith. In addition to the major overhaul of the MA program highlighted above, the Graduate Committee approved a new area of study for comprehensive examinations, Modern Irish literature, approved a new course, "Survey of American English," and set up a new system for admission of PhD candidates.

The program graduated four PhD students and 15 MA students during the year. Six new PhD students were admitted to the program. Thirteen new MA students were admitted, seven into the literature program and six into the creative writing program. The department encountered great difficulty recruiting. We were frequently turned down by students we accepted because of the low stipends we pay our graduate students and because we do not offer them health insurance. See Gary Harrison's report, attached to this report as an appendix.

1996-1997 Undergraduate Program. Voting members of the Undergraduate Studies Committee were Professors Cheryl Fresch (Director), James Thorson, Richard Johnson-Sheehan, Minrose Gwin, E. A. Mares, and Mary Power.

The curriculum for the undergraduate program remained basically the same for the year. The program continued to enroll well, with all six of the English concentrations drawing healthy numbers of students.

Graduated by the end of the 1996-1997 academic year were 127 English majors. Eight of the 127 majors were awarded honors, two of those summa cum laude and four magna cum laude. Work continued on the expansion and revision of the departmental Honors program. The English Honors Seminar, formerly optional, is now required of all students seeking honors in English.

During the 1996-1997 academic year, the Department of English continued to participate in the activities of Sigma Tau Delta, the international English honor society. Seven students from our Alpha Epsilon Pi chapter had papers accepted for presentation at the 1997 international convention of Sigma Tau Delta that was held in Savannah, Georgia, in March. Six of the students attended, thanks to a grant from the College of Arts and Sciences. Sigma Tau Delta works closely with the departmental honors program.

Cheryl Fresch worked with her committee during the year to set up a pilot student outcomes assessment program, which was initiated in the spring of 1997. See Cheryl Fresch's report, appended to this document.

A screening procedure for students who wish to major in creative writing was begun at the end of last year, but this year saw the program working though its growing pains. Prior to the screening program, any student who wished to sign up for a creative writing course at any level simply did so. Students took the courses out of sequence, and 400-level courses
sometimes included students from beginners to graduating seniors. English 221 and 222 are still open to anyone who wishes to enroll, but admission to 321, 322, 421, 422, 521, and 522 is by permission only. Students who wish to enter one of these courses submit a small portfolio of work done in their prior creative writing courses (or independently) to the Creative Writing Committee. Those who are deemed ready for the upper-division course are given the call number of the appropriate course. Once a student has been formally accepted as an English major in the creative writing concentration, s/he no longer has to face screening each semester.

1996-1997 Freshman English Program. Members of the Freshman English Committee were Professors Wanda Martin (Director), Jerry Shea, and Chuck Paine.

The highlight of the year for the freshman English program was the creation of a textbook for English 101, *La Puerta: A Doorway into the Academy*. The book contains essays, articles, and creative work produced by members of the UNM community. Thirty teaching assistants worked on the editing and production of this textbook.

Teaching assistants taught 230 sections of 13 different courses this year, including 80 sections of Engl. 101 and 104 sections of Engl. 102. Although it was not required by the Provost's mandate, the committee instituted an outcomes assessment program for 101 and 102 by analyzing a random sample of 25 portfolios from each course each semester. This will be an ongoing program.

Another diagnostic effort was the adoption of a new ICES questionnaire with questions geared more specifically to the teaching of writing. See Wanda Martin's report, appended to this document, for more details.

Faculty accomplishments. The departmental faculty continued to enjoy major accomplishments during the 1996-1997 academic year. Members of the department lectured in the USA and abroad, attended scholarly meetings, and published a number of significant works. Several received awards. Some specific highlights follow:

David Dunaway received two awards—the Silver Reel and the Gabriel Award—for his work with radio scripts that have made southwestern literature accessible for a large radio audience.

Robert Fleming was program chair for the Seventh International Hemingway Conference in Sun Valley, Idaho, and has edited a book of selected papers from that meeting. The manuscript of *Hemingway and the Natural World* has been delivered to the University of Idaho Press.

Barry Gaines left his hospital bed after open heart surgery and travelled to Washington to head a conference on the teaching of Shakespeare at the Folger Library. Later in the summer he read papers at several meetings and lectured in Poland.
Patrick Gallacher's edition of The Cloud of Unknowing has just been published. This is a medieval text previously not available for classroom use.

Minrose Gwin was awarded a Research Semester Award from the College of Arts and Sciences for the fall semester.

Mary Power has edited a book on James Joyce's Dubliners. Publication is expected shortly.

Scott Sanders spent two weeks in Poland, lecturing on business communication, as part of a program planned and financed by the United States Information Agency.

Gary Scharnhorst received the Research Semester from the College of Arts and Sciences for spring. This year saw the publication of Professor Scharnhorst's edition of the letters of Bret Harte (University of Oklahoma Press). Scharnhorst continues as co-editor of American Literary Scholarship (Duke University Press) and American Literary Realism.

Patricia Clark Smith, with Paula Gunn Allen, has published As Long As the Rivers Flow, a book on Native American leaders, for younger readers.

The Department of English had a good year in spite of some setbacks dealt to it by forces beyond its control. Members of the department will labor on to improve our various programs, and they hope to see their efforts rewarded in the near future.
The overall mission and goals of the English Department are a commitment to the following:

Educating students to read critically, write clearly and imaginatively, think logically and speak articulately about literature and language;
Promoting critical literacy, that is, the capacity to interpret, evaluate, and contextualize literary and social texts;
Acquiring and disseminating knowledge of our expanding literary and cultural heritages;
Teaching a historical sense of language and literatures in English in all their diversity to the multi-cultural student body from the state;
Leading students to realize how the personal, professional, and social or political skills they acquire and exercise in their study of English prepares them for a wide variety of meaningful professional employment opportunities upon graduation.

To educate its undergraduate students, the English Department is committed to the following more specific goals and desired outcomes for each undergraduate about to receive a B.A. in English from The University of New Mexico:

Able to identify the thesis or theme of a suitably complex piece of writing, expository or literary;
Able to recognize rhetorical strategies in a suitably complex piece of writing, expository or literary;
Able to follow the development of an argument in a suitably complex piece of writing, expository or literary;
Able to understand structural integrity in a suitably complex piece of writing, expository or literary;
Able to write English that demonstrates a mastery of English grammar;
Able to write English that demonstrates a mastery of argumentative strategies;
Able to write English that demonstrates a mastery of organizational strategies;
Able to write English that demonstrates a mastery of literary or critical analysis;
Able to understand the various social or cultural environments within which English literature and language speak;
Able to understand the influence of past English literature and language upon later English literature and language;
Able to understand human experiences different from one's own which are available to the reader of English literature and language;
Able to understand the power of words to interpret and re-structure the human experience.
I.

Unit: English Department
Authors: Cheryl Fresch, Undergraduate Director
         Robert Fleming, Interim Chair
Date: 1 July 1997
Reviewers: Undergraduate Studies Committee, Department of English

2.

A. GOAL 1: MASTERY OF ENGLISH GRAMMAR

1. The writer punctuates sentences and clauses correctly, using periods, commas, semi-colons, colons, dashes, and quotation marks:

2. The writer makes appropriate diction choices.

3. The writer appropriately varies sentence structure.

B. SUBJECT POPULATION

Twenty-three graduating English majors, with from three to six students selected from each of the English Undergraduate concentrations (Creative Writing, Professional Writing, Liberal Arts, Pre-Graduate, Pre-Law, English/Philosophy).

C. ASSESSMENT METHOD

Portfolio analysis

D. OPERATIONALIZATION OF THE GOAL

See attached copy of the assessment instrument.
Assessment score of 7: 1 portfolio
Assessment score of 6: 5 portfolios
Assessment score of 5: 1 portfolio
Assessment score of 4: 2 portfolios

F. CONCLUSIONS:

The group score of 91 seems appropriate. This score, two points lower than the group score for GOAL 1, reflects the greater difficulties posed by the challenges of organization, over the challenges of grammar. Organizational strategies really reflect reasoning and argumentation, and they vary depending upon the type of document one is writing. Today's English major must be able to organize various types of documents.

Once again the range of individual scores (4 to 10) is striking and surprising. While fourteen of the twenty-three students received assessment scores between 8 and 10, eight students earned scores of six or lower. It might therefore be concluded that while more than half of our students measure up impressively when GOAL 2 is evaluated to assess outcomes, the one-third whose writing scored 6 or lower do not demonstrate their mastery of organizational skills.

Apparent limitations: See above.

G. IMPLICATIONS:

See above.

H. PROBLEMS:

See above.

Summer Contact person: Professor Robert Fleming, Interim Chair, English 277-6347
GOAL 2: MASTERY OF ORGANIZATIONAL STRATEGIES

1. The writer presents well-developed and coherent paragraphs or poetic units within a larger whole.

2. The writer presents a larger whole that is unified and satisfyingly complete

B. SUBJECT POPULATION

See above.

C. ASSESSMENT METHOD

See above.

D. OPERATIONALIZATION OF THE GOAL

See above.

E. SUMMARY OF FINDINGS

GOAL 2 (Organization)

1. Paragraphs: Group score: 91
   Individual scores: Assessment score of 5: 10 portfolios
   Assessment score of 4: 6 portfolios
   Assessment score of 3: 4 portfolios
   Assessment score of 2: 2 portfolios
   Assessment score of 1: 1 portfolio

2. Whole: Group score: 91
   Individual scores: Assessment score of 5: 10 portfolios
   Assessment score of 4: 4 portfolios
   Assessment score of 3: 7 portfolios
   Assessment score of 2: 2 portfolios

The group score (91) was identical for both sub-goals under the organization goal. The range of individual scores was wide. The highest possible individual score was 10, indicating that a student’s portfolio received a 5 in each of the two sub-goals. The twenty-three portfolios yielded the following individual assessment scores for GOAL 2:

Assessment score of 10: 9 portfolios
Assessment score of 9: 2 portfolios
Assessment score of 8: 3 portfolios
and sentence structure. These mechanical skills remain basically consistent, no matter what type of document one is writing: a literary-critical essay, a short story, or a business report.

English majors across the five undergraduate concentrations must exercise these same writing skills in all of their undergraduate English classes.

The range of 8-15 within the individual scores is more striking and surprising. While fourteen of the twenty-three students received assessment scores between 12 and 15, nine others earned scores between 8 and 11. Forty percent of the subject population appear not to have mastered the basics of punctuation, diction, and sentence structuring.

Apparent limitations: A more complete portfolio from each of the student subjects is needed, a portfolio which will include a writing sample from the point at which each declared English as a major. Those entry-level essays will probably be most appropriately gathered from the English 250 course required of each beginning English major.

G. IMPLICATIONS

A more sustained emphasis on the basic skills of English grammar is needed throughout the undergraduate program and across all five of the concentrations. Except for those courses such as English 240 (Traditional Grammar) and English 441 (English Grammars) which focus on grammar, but which are not required of any English major, the undergraduate English curriculum may not appear to give sufficient or clear importance to grammar and grammar skills.

That forty percent of the subject population appear not to have mastered the basics of grammar raises a challenging issue and prompts important questions. Is the undergraduate English program grading appropriately as those students move from course to course, or is the program passing students on with the UNM "C"? The faculty needs to consider grading policies, as well as curricular issues.

H. PROBLEMS:

The portfolios of the subject population were gathered by means of letters sent to graduating seniors. The letters explained the outcomes assessment project and asked each student to bring in an appropriate, recent writing sample. More than thirty letters were mailed. The letters were sent the week following spring break, but as the week before the final examination period ended, only about eight writing samples had been submitted. Perhaps the final writing sample in each student’s portfolio might more appropriately be collected when that student comes to the Undergraduate English Director to have the Arts & Sciences Degree Application completed.
E. SUMMARY OF FINDINGS

The rating scale on the portfolio assessment form moves from 1 to 5, the higher the number the stronger the student performance.

1 = Unsatisfactory, 2 = Limited, 3 = Adequate, 4 = Strong, 5 = Excellent

GOAL 1 (Grammar)

1. Punctuation: 
   Group score: 95, out of a possible 115
   Individual scores:
   - Assessment score of 5: 8 portfolios
   - Assessment score of 4: 11 portfolios
   - Assessment score of 3: 3 portfolios
   - Assessment score of 2: 1 portfolio

2. Diction: 
   Group score: 93
   Individual scores:
   - Assessment score of 5: 8 portfolios
   - Assessment score of 4: 9 portfolios
   - Assessment score of 3: 5 portfolios
   - Assessment score of 2: 1 portfolio

3. Sentence structure: 
   Group score: 93
   Individual scores:
   - Assessment score of 5: 9 portfolios
   - Assessment score of 4: 8 portfolios
   - Assessment score of 3: 4 portfolios
   - Assessment score of 2: 2 portfolios

The range of individual scores was far greater than the range within the group scores (93-95).

The highest possible individual score for GOAL 1 was 15, indicating that a student's portfolio received a 5 in each of the three sub-goals for GOAL 1. The twenty-three portfolios yielded the following individual assessment scores for GOAL 1:

- Assessment score of 15: 6 portfolios
- Assessment score of 14: 2 portfolios
- Assessment score of 13: 2 portfolios
- Assessment score of 12: 4 portfolios
- Assessment score of 11: 3 portfolios
- Assessment score of 10: 3 portfolios
- Assessment score of 9: 2 portfolios
- Assessment score of 8: 1 portfolio

F. CONCLUSIONS

The range of 93-95 within the group scores appears appropriate. Graduating English majors should demonstrate mastery of English grammar, including punctuation, diction,
Assess each of the elements listed below, using the following values:

5 Excellent  4 Strong  3 Adequate  2 Limited  1 Unsatisfactory

I. Mastery of English Grammar:

1. The writer punctuates sentences and clauses correctly, using periods, commas, semicolons, colons, dashes, and quotation marks.

   5  4  3  2  1

2. The writer makes appropriate diction choices.

   5  4  3  2  1

3. The writer appropriately varies sentence structure.

   5  4  3  2  1

II. Mastery of Organizational Strategies:

1. The writer presents well-developed and coherent paragraphs or poetic units within a larger whole.

   5  4  3  2  1

2. The writer presents a larger whole that is unified and satisfyingly complete.

   5  4  3  2  1
Overall Goals and Activities: Following up recommendations of the 1996 report from the External Review Committee, the primary goals for Fall 1996 and Spring 1997 were to undertake a complete revision of the M.A. and Ph.D. reading lists and to develop a new curriculum for the Master's Program. Both of these goals have been accomplished. In addition, the graduate office continued its efforts to improve communication between faculty and graduate students; ran a biweekly series of placement workshops for Ph.D. students on the job market; supervised the activities of the EGSA; managed the routine series of examinations, admissions and graduations; oversaw the further development of the English Department Home Page; and participated in curriculum planning for each semester.

Clearly the major project for Fall 1996 was to construct an innovative, comprehensive Master's curriculum that would meet our departmental goal of producing Master's Degree students who have a broad familiarity with English and American literature, Language and Rhetoric, and Literary Theory, while at the same time allowing these students room to begin specialization in a particular field. The graduate committee recognized that we wanted a Master's program that would benefit a variety of prospective graduates, including those who want to go on to a Ph.D. program, those who need to enhance their credentials for primary, secondary and community college teaching, those who intend to pursue careers in publication and writing, and those who see the Master's Degree in English as the culmination of their liberal arts education. Thus, after extensive research of various models of graduate education in English, the Graduate Director drafted an initial proposal for a Master's Degree that can serve all those needs, while maintaining the highest of academic standards. The program (Appendix 1) moves our department from an exam-based model to a model integrating several measures of academic performance, including a distributed course requirement, a capstone Master's Colloquium, a 50-item Master's examination, and a portfolio of two samples of the student's writing. Throughout the Fall semester various modifications went through the Graduate and P & P committees, culminating in a Departmental vote unanimously in favor of the final proposal. Throughout the Spring semester the Graduate Director guided the Department in revising course descriptions to meet the needs of the new curriculum; the appropriate forms A, B and C reflecting this massive curriculum change will be presented to the A & S curriculum committee in Fall of 1997, so that the new program can be implemented in Spring semester 1998.

The External Review committee also recommended that the Department of English modify its Ph.D. and M.A. exam reading lists. The graduate director formed various committees among the faculty representing the various fields in the English Department. These committees began revising the reading lists in February 1997; as of this writing, June 3, 1997, all but one list has been completely revised. All of the new reading lists will be available to graduate students by June 16, 1997.

What follows is a chronological overview of the activities of the Graduate Committee, a description of graduate student awards for 1995-96, admissions information, graduation and enrollment information, and a description of the activities of the English Graduate Student Association.

Graduate Committee: The Graduate Committee this year voted on a number of minor policy changes (see list below); approved the Fall, Spring and Summer M.A. and Ph.D. comprehensive examinations; and reviewed applications for Spring 1997 and Fall 1997 admissions. The voting members of the Graduate Committee from September 1996 through June 1997 were David Jones, Patrick Gallacher, Chuck Paine, Sharon Warner, Carolyn Woodward, and graduate student representative Andy Smith. Non-voting, ex-officio members were Wanda Martin (Spring 1996) and Patricia Clark Smith (1995-96). The chronological account of the activities of the Graduate Committee below is followed by a break out of important policy decisions.
In September and October the Graduate Committee reviewed several versions of the new Master's curriculum proposal, approved a Ph.D. reading list in Modern Irish Literature, and reviewed the justification for the Philology requirement for the Ph.D. In November and December 1996, the Graduate Committee reviewed applications for Spring 1997 admissions and continued to revise the Master's curriculum proposal.

In January 1997 the Graduate Committee approved a final version of the Master's curriculum, which the P&P committee and Department approved in February. The committee also approved the February M.A. and Ph.D. exams, and unanimously voted in favor of Wanda Martin's proposal to remove English 538, Composition Theory, as a requirement for Teaching Assistants. In addition, the committee approved Harrison's guidelines for the revisions of the M.A./Ph.D. reading lists. These guidelines formed the basis for the new exam reading lists. The committee unanimously decided that Master's Exams should henceforth be proctored by a person designated by the Graduate Director.

From February through March 1997 the committee reviewed 124 applications (up 8 from Spring 1996) for graduate study at UNM. In March the committee approved Lynn Beene's petition to have English 540, "Survey of American English," count toward the Philology requirement. The committee also finalized its offers for admission for Fall 1997 (see below) and awarded three grants of $200.00 each to help defray travel costs to three students attending professional conferences. The $600.00 was made available by Bob Fleming, to help supplement the low total of RPT money our graduate students received this year.

In April the committee voted to implement an "alternate" system for Ph.D. admissions in the future to ensure that we do not have more acceptances than we predict and to admit only those students to the Ph.D. program who have some form of departmental support. The committee recommends that we admit no more than five (5) Ph.D. students each year, thereby leaving more funding available to support Master's students. Thus, we will offer our top five Ph.D. candidates a teaching assistantship or, when available, a full fellowship. We will create a list of five to ten alternates (as feasible), who will be notified of their standing at admissions time, then make substitutions as necessary.

Policy Decisions
1. Approved a Ph.D. reading list in Modern Irish Literature (on file).
2. Approved guidelines for writing the M.A./Ph.D. reading lists. Reading lists from now on must contain between 45 and 65 "items"; readings for the M.A. will be integrated with the readings for the Ph.D. and will be marked with an asterisk (*). (See Appendix 2 for more details.)
3. Decided that all Master's Comprehensive Examinations should from now on be proctored by the Graduate Staff Assistant or another person designated by the Graduate Director.
5. Agreed to set up an "alternate" system for Ph.D. admissions. We will fund five (5) new Ph.D. students each year, and admit only those five. We will set up an alternate list of replacements. Only Ph.D. students with funding will be admitted into the program.

Graduate Student Awards: During the 1995-96 academic year, English Department graduate students won a number of awards, fellowships and scholarships from the Department of English, the College of Arts and Sciences, and the Office of Graduate Studies. The awards earned are listed below:

Departmental:
- Buchanan Arms Award for Outstanding Achievement in Graduate Studies: Andy Smith
- Writing Fellowships: Mary Beth Folia
- Writing Fellowship: Wendell Ricketts
- D.H. Lawrence Fiction Award: Mary Beth Folia
- American Academy of Poets Prize: Bronson Elliott
Graduate Studies/College of Arts and Sciences:
Dean's Dissertation Fellowship: Susan Cannata
Graduate Tuition Fellowships: Victoria Kittredge,
Graduate Fellowship: as of this writing, Graduate Fellowships have not been funded by the
CHE. Students nominated are Jennifer Jo Phillips and Wendell Ricketts.

University Awards
Outstanding Teaching Assistant Awards: Adam Cohen, SueAnn Schatz, Liz Wright, Jen Riley

Research, Project and Travel (RPT) Grants.
Twelve proposals were funded out of the twenty-seven sent in by our department, for a
departmental total of $6037.00. Projects funded were as follows:

<table>
<thead>
<tr>
<th>Funding</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 1996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bigrigg, Carin</td>
<td>Paper at Midwest MLA</td>
<td>$450.00</td>
</tr>
<tr>
<td>Joyce-Brown, Linda:</td>
<td>Paper at Michigan State University</td>
<td>$450.00</td>
</tr>
<tr>
<td>Hague, Vicky</td>
<td>Paper at Aphra Behn Conference</td>
<td>$450.00</td>
</tr>
<tr>
<td>Riley, Jen</td>
<td>Interview Eavan Boland at MLA</td>
<td>$500.00</td>
</tr>
<tr>
<td>Aigner-Varoz, Erica (PhD):</td>
<td>Research in Canada</td>
<td>$500.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring 1997</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mcclure, Andrew</td>
<td>Paper at 4Cs</td>
<td>362.50</td>
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<td>Metzger, Sheri</td>
<td>Paper at Shakespeare Assoc.</td>
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<tr>
<td>Larrieu, Gloria</td>
<td>Paper at 4Cs</td>
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<tr>
<td>Hunt, Elizabeth</td>
<td>Paper at ASECS</td>
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<tr>
<td>Schatz, SueAnn</td>
<td>Paper at British Wmn Writers</td>
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<tr>
<td>Smith, Andrew</td>
<td>Paper at Pac NW Am Studies</td>
<td>564.00</td>
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<tr>
<td>Wright, Elizabeth</td>
<td>Paper at ASECS</td>
<td>600.00</td>
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</table>

Graduate Admissions: Reflecting a nationwide trend in Graduate programs in English, the
number of applicants to our graduate program dropped by about 18%, from a total of 168 in
1995-96 to 136 for 1996-97. By comparison, Eric White, graduate director at the University of
Colorado, Boulder, reported a 12% decline this year in graduate applications. The decrease in
applicants has been compounded by a further decline in the number of admitted students who
accepted our offers of admission: only 31.6%. Last year our rate of acceptance was 38%. The
possible reasons for this drop-off in acceptances are discussed below under "Recruitment";
personal interviews with applicants point very directly at our compensation package for Teaching
Assistantships which is not keeping up with those of peer institutions.

The figures below show admissions statistics for students entering in Spring 1996 and
Fall 1997.

<table>
<thead>
<tr>
<th></th>
<th>for Spring 1995</th>
<th>for Fall 1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of applicants</td>
<td>Number Admitted (10)</td>
<td>Number Admitted (126)</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>4</td>
<td>22</td>
</tr>
<tr>
<td>MA Lit</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>MA CW</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Number Accepted (6)</td>
<td></td>
<td>Number Accepted (19 [+ 4])</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>2</td>
<td>6 (+1 defer)</td>
</tr>
<tr>
<td>MA Lit</td>
<td>2</td>
<td>7 (+2 defer)</td>
</tr>
<tr>
<td>MA CW</td>
<td>2</td>
<td>6 (+1 defer)</td>
</tr>
</tbody>
</table>
Recruitment
As was true last year, despite the increased attention to promoting our graduate programs, the Department of English continues to be hampered in its efforts to recruit top graduate students because of the lack of fellowships, grants and teaching assistantships available for incoming graduate students. Moreover, our compensation package for Teaching Assistantships in English falls below those at many peer institutions.

Since the Pepsico Foundation Award of $2,000.00 for recruitment was suspended this year, we rely completely upon Teaching Assistantships to recruit graduate students. Several graduate students admitted to our program with Teaching Assistantships declined our offers for various institutions, including the University of California, Davis; Indiana University; Washington State University; University of Arizona; Arizona State University; and even New Mexico State University. Those students we were able to interview indicated that they received from these institutions compensation packages—including Teaching Assistantships and Fellowships—more appealing than our own. More details on the discrepancies are outlined in the May 5, 1997 memo to Robert Fleming, which appears as Appendix 3.

Gary Harrison, who will be Director of Graduate Studies through Spring 1998, will be attending the Associated Departments of English (ADE) Summer Seminar for Directors of Graduate Studies, June 4 through 8, where strategies for increasing funding for graduate programs will be the central topic of discussion. One of the primary goals for the English Graduate Office next year will be to increase our outreach and marketing efforts, as well as to find sources of funding for graduate students in English. We believe that once it is advertised, the new Master's program will attract many new applicants to our department, many of whom will come without funding.

Graduation and Degrees Granted
The Department of English graduated four Doctors of Philosophy and fifteen Master's of Arts during academic year 1996-97. For the record, the graduates are as follows:

<table>
<thead>
<tr>
<th>Ph.D. Graduates</th>
<th>Fall 1996</th>
<th>Spring 1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 1996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don Reese</td>
<td>Michelle Marsee</td>
<td>Sheri Metzger</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>M.A. Graduates</th>
<th>Fall 1995</th>
<th>Spring 1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 1996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Beck</td>
<td>Elizabeth Affeldt</td>
<td>Robert Bristol</td>
</tr>
<tr>
<td>Elissa Hannam</td>
<td>Brigid Hart</td>
<td>Christina Carlson</td>
</tr>
<tr>
<td>Danna Strech</td>
<td>Hossein Ordoubadian</td>
<td>Anita Daniels</td>
</tr>
<tr>
<td>Tracy Thompson</td>
<td>Avrum Organick</td>
<td>Carolyn Kraft</td>
</tr>
<tr>
<td></td>
<td>Eric Smith</td>
<td>Gayle Krueger</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cathryn McCracken</td>
</tr>
</tbody>
</table>

Enrollment
Last year's report mentioned the alarming number of ABDs enrolled in our program. As of Spring 1997, we have a graduate enrollment 147 students, broken down as follows: 90 Ph.D.s, 29 M.A. Lit students, and 28 M.A CW students. Of those 90 Ph.D. students, 43 are ABD. As it did last year, this large number of ABDs (47%, down from 50% last year) reflects the continued erosion of the job market for Ph.D.s in English, and underscores the need for our department to pursue policies to encourage Ph.D. students to complete their dissertations in a timely fashion; moreover, we need to continue and even upgrade our job-search workshops and employment advisement in order to help graduating Ph.D.s find tenure-track teaching jobs, as well as employment in non-traditional areas, such as community colleges, private high schools, as well as in business and technological careers.
Employment for Ph.D. Graduates

The Graduate Director held a series of bi-weekly workshops for job seekers in the months preceding the MLA meeting in Chicago, December 1996. Of the nine Ph.D.s in the job-placement workshop this year, only three obtained interviews at MLA: Bill Foreman, Janice Gould, and Megan Simpson. Gould accepted a tenure-track, Assistant Professorship offer from the University of Northern Colorado, Greeley; Simpson accepted a tenure-track, Assistant Professorship offer from University of Texas, Permian Basin; Foreman did not get a job offer this year. This year's success rate of 22% for placing Ph.D.s in tenure-track positions compares roughly to the 20% from last year. Again, our statistics are in line with national averages; last year UCLA, for example, employed only four of its 22 job seekers in tenure-track positions.

With such numbers it remains incumbent on the department to continue with job advisement workshops and to do all it can to participate in the Post-doctoral exchanges that some graduate programs in English are now setting up. To repeat what we noted last year, we must promote timely completion of the degree, by whatever means we can, and we should consider the advisability of maintaining the Ph.D. program at past levels. Limiting our Ph.D. enrollment to five should eventually help alleviate this high degree of ABDs.

English Graduate Student Association (EGSA)

The Graduate Director supervised the EGSA in a number of activities this year, including research, recruitment and orientation of new graduate students, setting up departmental colloquia, holding the Readings for Writers series, and coordinating the Southwest Symposium, the two-day regional conference that we now host annually. EGSA participated in the new-student orientation in Fall and Spring, and hosted a reception and party for new graduate students at the beginning of Fall semester. Three times each semester, EGSA also hosted our departmental colloquia, which focused this year on topics concerning the role of English departments in the community, the multiple responsibilities of English departments, the formation of English as a discipline, and pedagogy. A very noticable accomplishment promoted by EGSA was to refurbish and redefine the function of the Departmental Lounge—now set up to be a comfortable place for relaxing, reading, and for holding small-group discussions. More importantly, EGSA lobbied strongly—and with some degree of success—for better TA compensation packages and for better access to mailroom and computer facilities. Dean Michael Fischer responded to EGSA's queries by holding a candid question and answer session with them regarding their salaries and the future of English studies at UNM. Throughout the year the graduate director held several informal open meetings with the graduate students and EGSA members, in order to keep lines of communication open.

Finally, Susan Cannata directed this year's Southwest Symposium. The symposium drew students and faculty from as far as North Dakota and California. Nina Baym, Professor of English, was the plenary speaker. Local attendance at the conference this year was disappointing, and the graduate director has met with next year's Symposium director, Karen McKinney, to suggest ways of improving attendance and involving more of the UNM community. The Southwest Symposium has the potential to become a major regional conference, and it would be worth the Department's efforts to seek better ways to support this graduate-student run effort.

Attachments:
- Appendix 1
- Appendix 2
- Appendix 3
Appendix 1

UNM Master’s Degree Program in English
(final rev: approved 2-21-97)

The Program for the Master’s Degree in Language and Literature involves successful completion of 32 hours of coursework, as well as passing a 50-item Master’s Examination, and submitting a Portfolio consisting of two 20- to 30-page critical essays on topics representing different distribution areas (see below). The 32 hours of coursework include seven hours of required courses, nineteen hours of courses distributed across five different areas, as explained below, one four-hour seminar (which may be counted toward the distribution requirement), and six hours of electives.

The Program for the Master’s Degree in Writing involves successful completion of 33 hours of coursework, as well as submitting a book-length volume of original poems, fiction or creative non-fiction, or the equivalent for technical and professional writing. The 33 hours of coursework includes twelve hours of required courses, nine hours of courses distributed across two different areas, as explained below, and twelve hours of writing workshops.

MASTER'S DEGREE IN LANGUAGE & LITERATURE (32 hours)

Required Courses (7 hours)
The following courses are required for all Master's students in Language and Literature.

Eng 500 (3) Introduction to Graduate Studies
Eng 5XX (3) Master’s Colloquium*
Eng 599 (1) Portfolio

*Master’s Colloquium: A capstone course that takes a broad view of English and American literature, using topical, thematic, generic, and other approaches, the colloquium will allow students to study large patterns of similarities and differences across historical and cultural boundaries. This course will be offered once every semester, and possibly during summer semesters when demand so allows. (Note: In some cases, students may present a second seminar in lieu of the Master's Colloquium.)

Distribution Requirement (19 hours)
In addition to the core courses, each MA student in Language and Literature must take at least nineteen hours of coursework from groups A through E, with at least three hours from each group. (Note: Problems and Independent Study courses, 597/598 and 697/98 do not count toward the distribution requirement.)

Distribution Areas:
Group A: British Literature to 1660
Group B: British Literature 1660 to 1900
Group C: American Literature to 1900
Group D: Literatures in English since 1900
Group E: Criticism and Theory; Language, Rhetoric and Composition

Seminar (4 hours; may be counted toward distribution requirement)
All MA students must take at least one 4-hour seminar.

Electives (6 hours)
All MA students in Language & Literature must take an additional six hours of electives from any groups A through E, or from approved courses outside the department.
Foreign Language Requirement
All MA students must demonstrate a competency through the second semester, second year sequence in one language other than English.

Master's Examination
At the beginning of their fourth semester (or after completing eighteen hours of graduate credit in English), all Master's students must complete a four-hour written examination, based on an examination list of 50 items representing works from the earliest to the most recent periods of English and American literature, Language & Rhetoric, and Literary Criticism and Theory. Students will be expected to discuss these works in terms of content, form, and cultural and historical context, but will not be required to address specific critical works about these works. The MA examinations will take place twice each year: in the first week of September and the first week of February.

Note: Students may take the examination and submit their portfolio in the same semester.

The 50-item examination list: Each Spring semester the Graduate Committee will meet to review the fifty items for the examination list, which will take effect for the class entering the following Fall semester.* This list will remain in effect for members of the incoming Fall class for four semesters (excluding summer), after which time, if the student has not taken the MA examination, he or she will be responsible for the list in effect for the semester in which he or she takes the MA examination.

*The Graduate Committee will select the examination list from the items recommended for M.A. readings on the Ph.D. reading lists; these lists should be reviewed and revised at least every two years by specialists in each field. An item is defined as: a) any book-length work, such as a novel, play, or book of poems or essays; a set of selections of shorter poems by a single author; a set of three to five essays, short stories, or short non-fiction works by the same author.

Writing the Master's examination. A special subcommittee of the Graduate Committee will write and grade the MA examination, based upon the 50-item reading list.

Exam results. Students who pass the exam may proceed to submit their portfolio. Students who fail the MA examination may retake it only once, at the next regularly scheduled examination date; if upon the second attempt the student does not pass the MA examination, he or she will be disenrolled without a degree.

Portfolio (1-hour)
In their final (normally the fourth) semester, students in the MA Language and Literature program must enroll in no more than 1 hour of English 599 to prepare their portfolio. Students must submit two article-length essays (20 to 30 pages, inclusive of notes), representing a professional level of scholarship, critical thinking, and writing. Students may submit revised versions of papers written during their MA coursework, but both students and their advisors should keep in mind that these papers will be held to a more rigorous scrutiny and higher level of professional quality than papers written for courses; hence, heavy revision and editing of these papers, supervised by the student's advisor, will be expected.

For MA Language and Literature students, these papers must represent either two different periods in literary history (as defined by distribution requirements A through D) or one historical period and either literary theory, language and rhetoric, philology, or composition theory (as defined by distribution requirements E and F).
Submitting the portfolio. Once approved by the MA student’s advisor, the portfolio will be submitted to the Director of Graduate Studies no later than three weeks before the deadline for filing the intent to graduate form each semester. The graduate director will send the essays to two readers who will evaluate the papers and give the portfolio a grade of pass with distinction, pass, pass with revisions (in which case the readers must agree upon and provide clear guidelines for the revisions), or fail. Disagreements will be resolved by a third reader. In the case of a fail or a pass with revisions, the student will have one opportunity to resubmit the portfolio for approval. The Graduate Committee will have final authority on approving the portfolio and reconciling disputes. 

(Note: All students must file an "intent to submit portfolio" with the Director of Graduate Studies in the semester before the one in which they submit the portfolio.)

Graduation (Master's Degree in Language & Literature)

Upon completion of 32 hours of coursework, passing the MA comprehensive exam, approval of the portfolio, and fulfilling the Foreign Language requirement, the student will have completed all requirements for the Master's Degree in Language and Literature.

MASTER’S DEGREE IN WRITING (33 hours)

Required Courses (12 hours)

- Eng 520 (3) Publishing
- Eng 587 (3) Studies in Genre
- Eng 599 (6) Thesis

Distributed Course Requirements (9 hours)
In addition to the core courses, each MA student in Writing must take 9 hours of coursework, inclusive of the 4-hour seminar, from groups A through F.

Distribution Areas:
- Group A: British Literature to 1660
- Group B: British Literature 1660 to 1900
- Group C: American Literature to 1900
- Group D: British and American Literature since 1900
- Group E: Literary Criticism and Theory and Cultural Studies, Language & Rhetoric; Philology; Composition Theory

Seminar (4 hours; may be counted toward distribution requirement)
All MA Writing students must take at least one 4-hour seminar.

Writing Workshops (12 hours)
All MA students in Writing must take 12 hours of writing workshops. Students are encouraged to define an area of concentration in poetry, fiction, creative non-fiction, or professional and technical writing, by taking at least 9 hours of writing workshops in the area of concentration.

Thesis (MA in Writing)
Thesis. MA students in writing must enroll for at least 6 hours of thesis hours and produce a book-length volume of original poetry, fiction, creative non-fiction, or an equivalent project in professional and technical writing. Once approved by the MA student's advisor, the thesis will be submitted and approved by a committee composed of at
least three members of the faculty. In addition, the student must present an oral defense of the thesis.

Graduation (Master's Degree in Writing)
Upon successful completion of the Foreign Language requirement, 33 hours of coursework (including the six hours of English 599, thesis), and approval of the thesis, the student will have completed all requirements for the Master's Degree in Writing.

Articulation between the M.A. and the Ph.D. Program

Important: Completion of a Master's degree in Literature or in Writing does not guarantee admission into the Ph.D. program. All students graduating from the UNM, Department of English M.A. program compete with students from outside the department for places in the Ph.D. program.

Students who have completed the Master's Degree in English at UNM may apply to the Ph.D. program. To qualify for the Ph.D., such students must have earned a 3.76 g.p.a. in all graduate coursework completed at UNM; must have received a grade of Pass or Pass with Distinction on their Master's examination and Portfolio; and must have three strong letters of recommendation from UNM faculty. Students in the Writing program who wish to proceed to the Ph.D. must take the GRE Subject test in time for their scores to reach the Graduate Office by the application deadline.

Students with the Master's Degree in English from the University of New Mexico must submit a complete application by the announced deadlines—November 1 for Spring semester, February 10 for Fall semester. Master's students who have successfully passed their Master's Examination but who have not yet submitted their portfolio may submit an application to the Ph.D. program. Such students may be admitted to the Ph.D. program on a provisional basis, formal admission contingent upon the students' portfolios being approved in the semester the application is filed. If the portfolio is not approved in the semester the application is filed, admission to the Ph.D. program will be withdrawn. There will be no exceptions to this policy.
To: English Department Faculty

Re: Examination Reading Lists

As you remember from the last faculty meeting, we must revise the M.A./Ph.D. examination reading lists in order to make them more uniform, more manageable, and more pedagogically sound. To encourage conformity of design and length, I am herewith setting out some guidelines, approved by the Graduate Committee, for each committee to follow when revising the examination lists.

I think it will help us to remember that these are our M.A./Ph.D. examination lists. To think of them as a set of texts within each sub-field that scholars generally agree are key to a basic understanding of the field may help you to limit your selections. Thus, these lists aim to be representative, not totally inclusive. The lists designate those texts upon which we intend to examine our students; thus, neither we nor the students should construe the lists as a limit to their reading. Indeed, the best examinations by the best students would no doubt mention works not necessarily on the examination lists, and if the students are doing their jobs well, they might even mention works—especially recent critical works—that we, the so-called "experts" in the field, may not have yet encountered, since our research tends to be more specialized.

In short, I urge you to not to think of these lists as the canon within your specialty, rather think of them in pedagogical and heuristic terms: what works will be most useful to the student in the development of expertise in a particular subfield; and what works will be most useful to us in evaluating the student's degree of mastery of the field.

Guidelines for the M.A./Ph.D. Reading Lists

1. All lists should consist roughly between 45 and 65 items (as defined below, 2).

2. a) "Item" designates a book-length work, such as a novel, play, or book of poems or essays. Examples of items: Sir Gawain and the Green Knight; King Lear; Paradise Lost; Lyrical Ballads; The Palm at the End of the Mind; Imitations; and so on.

b) When choosing selections of poems, the complete selection will be an "item." Because anthologies are changing and many of those on our old lists are no longer available, rather than use the shorthand of "selections in Norton," please name the poems you want on the list.

c) When choosing selections of short prose works—essays or short stories—three to five selections from the same author would constitute an item.

3. Lists should represent the diversity we now have within our literary canon(s), and so far as possible should include works upon which there is some consensus in the field. The M.A./Ph.D. reading list is not the place to list books that we ourselves wish we had read or hope to read some
day. My sense is that if you're the expert and haven't read it, the text doesn't belong on the list. It goes without saying that the lists should not present a collection of personal favorites.

4. Key critical works—comprehensive studies of the field, literary histories of the period—may be included in the M.A. lists, but should not exceed 5 "items"; critical works should be included in the Ph.D. lists, but should not exceed 10 "items." (Remember that Ph.D. students should be responsible for the current critical discussion in their fields without us having to list the constitutive texts.

Deadlines:
1. In order to implement the new reading lists in time for Fall semester, please complete your list and give it to me or to Ovella no later than April 15, 1997. I've assigned the following groups, but you may adjust your groups as needed or as makes sense to you. In addition, you may consider adjustments in the examination categories. In some cases, American Nature Writing, for example, the lists may be fine as they stand.

Writing Groups:
Damico, Gallacher:
   Early Middle Ages (Old English)
   Later Middle Ages

Fresch, Gaines, McPherson, Whidden:
   Early Renaissance
   Late Renaissance

Harrison, Thorson, Woodward:
   Restoration and Eighteenth-Century

Harrison, Houston, Melada:
   Early Nineteenth Century
   Late Nineteenth Century

Fleming, Gwin, Scharnhorst, White:
   Colonial American
   Nineteenth-century American

Bartlett, Gwin, Fleming, Jones, Marquez:
   Modern British and American (pre 1945)
   Contemporary British and American (post 1945)

Gwin, Harrison, Woodward:
   Criticism and Theory

Beene, Hogan, Johnson-Sheehan, Martin, Sanders, Torres:
   Language, Rhetoric and Composition

Genre:
Bartlett, Beene, Houston, Marquez, Woodward, Thorson:
   The Novel

Gaines, Jones, McPherson, Whidden:
   Drama
Hogan, Johnson-Sheehan, Paine, Shea:  
Creative Non-Fiction

Hogan, White:  
American Nature Writing

Owens, Smith:  
American Indian Literature

Espinosa, Fleming, Gwin:  
African American Literature

Espinosa, Mares, Marquez, Torres:  
Chicano/Chicana Literature
To: Robert Fleming, Interim Chair  
Department of English  

Scott Sanders, Chair Elect  
Department of English  

Fm: Gary Harrison, Director of Graduate Studies  
Department of English  

Re: Graduate Admissions in English  

May 5, 1997  

I want to call your attention to what I interpret as an urgent need to improve the compensation package for Teaching Assistants in English, as well as to find fellowship support and out-of-state tuition waivers for graduate students in English. These measures are needed to make the Dept. of English at UNM competitive in attracting top graduate students.  

The statistics first.  

General Admissions:  
Out of a total 124 applicants to the graduate program, we made offers of admission to 60 applicants, broken down as follows.  

<table>
<thead>
<tr>
<th></th>
<th>Applicants</th>
<th>Admits</th>
<th>Accepts</th>
<th>w/TA</th>
<th>w/out TA</th>
<th>Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>124</td>
<td>60</td>
<td>9</td>
<td>8</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>PhD</td>
<td>41</td>
<td>22</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>M.A. Literature</td>
<td>40</td>
<td>26</td>
<td>3</td>
<td>3</td>
<td>(3 defer)</td>
<td>3</td>
</tr>
<tr>
<td>M.A. Creative Writing</td>
<td>39</td>
<td>12</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>(fiction)</td>
<td>(28)</td>
<td>(5)</td>
<td>(0)</td>
<td>(3)</td>
<td>(2)</td>
<td></td>
</tr>
<tr>
<td>(poetry)</td>
<td>(11)</td>
<td>(7)</td>
<td>(2)</td>
<td>(1)</td>
<td>(2)</td>
<td></td>
</tr>
</tbody>
</table>

Out of 60 admits, we have so far been able to recruit only 17 students. The eleven students listed as "outstanding" still have not notified us of their decisions, though the deadline for doing so has now lapsed by five days. We can assume they are not enrolling in the Graduate program in English at UNM. Thus, our overall acceptance rate this year amounts to 28 per-cent.  

By means of comparison, last year we offered admission to a total of 62 applicants (25 PhD, 21 MA Lit, and 16 MACW); 24 accepted our offers, for an acceptance rate of 38%.
Teaching Assistantships

In addition, Wanda Martin, Director of Freshman English, and I initially offered Teaching Assistantships to 5 Ph.D., 3 M.A. Lit, and 2 M.A. CW applicants. Of the five PhDs, two accepted our offer; of the five MA Lit, none accepted our offer; of the two MACW, none accepted our offer. Given these rejections, we extended our offers down the alternate lists, while the total number of offers extended to external TA applicants grew from 10 to 12. We came up with the following results.

<table>
<thead>
<tr>
<th></th>
<th>TAs offered</th>
<th>Declined</th>
<th>Accepted</th>
<th>Outstanding</th>
<th>Defer</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD</td>
<td>15</td>
<td>9</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>MA Lit</td>
<td>10</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>MACW</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Out of 30 offers for a Teaching Assistantship, we have received only nine (9) acceptances. The acceptance rate is only 30%, then, for those candidates to whom we can offer our only means of support.

Again to compare with last year, for Fall 1996 admissions we offered a total of 13 Teaching Assistantships; 8 accepted, for a percentage of 61%.

Explanation

Concerned about our low percentage of acceptances, particularly at the M.A. level, I began asking applicants why they chose other programs. The answers were nearly unanimous: better pay, fewer classes to teach, and health insurance at the competing institutions. Not a single student suggested that they preferred the curriculum of another school.

Who are our competitors? Outside of some premier state institutions such as the University of Illinois, University of California, Davis and Indiana University, we have lost students to regional state universities including Washington State University, Arizona State University, and in one case even New Mexico State University. We even lost one T.A. to a UNM staff position, for she could earn $9500.00 working 20 hours a week at her job, take her staff tuition waiver, and come out ahead of teaching!

Remember that our T.A.s with Bachelor's degrees receive $8100.00 a year plus a tuition waiver for teaching two classes each semester; those with Master's degrees receive $8900.00 plus a tuition waiver for the same. The Ph.D. student we lost to Washington State University will receive 10,000.00 a year plus a tuition waiver to teach a 1-1 load; she also received a grant to help defray her moving costs to Pullman. The Ph.D. student we lost to Arizona State University will receive $10,800 to teach a 2-2 load, though she will pay about $1800.00 a year in "fees"; she'll come out about $100.00 ahead of UNM. The student we lost to New Mexico State University told me that she preferred teaching a 1-1 load, even though the total salary is lower. Probably the greatest shock was the student I mentioned above, who will do better to work part time at UNM than to hold a Teaching Assistantship.

If we cannot compete with state universities in the regions, no wonder we lose students to Univ. of Oregon, Univ. of Washington, Univ. of Illinois, Univ. of Kansas, and Univ. of California, Davis, to name only a few of the institutions with whom we were unable to compete this year.

In my view, we urgently need to look at all possible ways to increase our T.A. Compensation, which is presently my only leverage in recruiting top students from out of state. For in-state students we have two in-state tuition waivers available from the graduate
school, but these don't help me with out-of-state applicants, who are often our most desirable candidates.

In my view, installing the new M.A. program will begin to help our admissions within two or three years, provided we can advertise it adequately. But right now we need at least one out-of-state tuition waiver, a fellowship or two, and at least a $1,000.00 per annum salary increase. On top of these, we need to get Health Insurance with benefits extending to families for graduate students.

You saw last year my table comparing T.A. compensation at "peer" institutions. With the salary freeze this year, we've fallen even lower on the scale and we're going to be feeling this cut in our graduate course enrollments and in staffing for Freshman English courses.

I'll help. Let's do something now to resolve this situation.

xc: Wanda Martin, Director of Freshman English
To: Robert Fleming, Interim Chair, English
From: Cheryl Fresch, Undergraduate Director, English

The English Undergraduate Program graduated 127 students during the 1996-97 academic year.

The various undergraduate concentrations figured in that total as follows:

- Creative Writing
- English-Philosophy
- Liberal Arts
- Pre-Graduate
- Pre-Law
- Professional Writing

The following eight students were graduated with honors:

- **Summa cum laude:** Jared Aragona, Levi Walden
- **Magna cum laude:** Nancy Gilbertson, Johnnie Blunt, Daniel Keller, Tina Gardiner
- **Cum laude:** Elizabeth Goldfarb, Lela Sheridan

The UNM chapter of Sigma Tau Delta inducted eight new members in November, and continued throughout the course of the year to sell coffee and pastries in order to increase its treasury. The current balance on the STD account at Norwest Bank is $493.38. The following new officers were elected at the beginning of the Spring 1997 semester:

- **President:** Laura Jett
- **Vice President:** Roland Delyser
- **Treasurer:** James Shrenk
- **Secretary:** Julia Corcoran

Seven undergraduate students had papers accepted by the organizers of the national STD convention held in Savannah in March. Six undergraduate students attended the convention: Roland Delyser, Dennis Duran, Jared Aragona, Danielle Frandina, Tracy Wooten, and Laura Jett. The Undergraduate Director submitted a proposal to the College of Arts and Sciences for money to strengthen the Undergraduate Honors Program, and the $2000 grant awarded to the English Honors Program was divided among the honors students attending the Savannah convention.
Curricular changes: An English Honors Seminar is now required, rather than optional, for all students within the English Honors Program. The two honors seminars this academic year were Mythology (David Johnson), Fall 1996, and Dante (Patrick Gallacher), Spring 1997.

The Outcomes Assessment Project was instituted during the 1996-97 academic year. Goals for the English Undergraduate Program were established, and a portfolio evaluation program was implemented at the end of the Spring 1997 semester to evaluate the program’s success in attaining two of those goals: (1) Mastery of Grammar, and (2) Mastery of Organization in Writing. A draft copy of the Outcomes Assessment Report is attached to this Annual Report.

Two new undergraduate scholarships were established during the 1996-97 academic year: the Dale and Ivan Melada Scholarship in English and the Katherine Simons Scholarship in English. The Melada scholarship is to provide support for undergraduate English majors concentrating in professional writing, and the Simons scholarship is to acknowledge the academic excellence of an English major who has also demonstrated “superior understanding and appreciation for the works of William Shakespeare.” The Melada scholarship will be awarded annually, the Simons Scholarship every other year. These two new scholarships were presented at the May 1997 graduation to Pamela Hall (Melada) and Amanda Rogers Jones (Simons).

The Undergraduate Committee consisted of the following faculty: James Thorson, Minrose Gwin, Antonio Mares, Mary Power, Richard Johnson-Sheehan and Cheryl Fresch (Director).
July 29, 1997

TO: Bob Fleming

FROM: Wanda Martin

SUBJECT: Freshman English material for annual report, AY: 96-97

What we did:

Teaching Assistants taught 230 sections of 13 courses, including 80 sections of 101 and 104 sections of 102. Thus they worked with 4,632 undergraduate students and accounted for 13,900 student credit hours.

By assigning 2 Graduate Assistants to work with the Director, we increased the quantity and quality of training and supervision offered to new Teaching Assistants, as well as creating new opportunities for the GA's to gain experience with administration, which will improve their employability.

We adopted a new ICES questionnaire with questions more directly geared to the teaching of writing, which will give me more information about who's doing what how well and in turn enable me to offer more effective training.

We began a program of outcomes assessment for 101 and 102, analyzing the contents of 25 portfolios from each course in each semester to assess how well a random sample of students are achieving the course goals. Just now analyzing data, with no results to report yet. But this will be on-going, help us to refine what and how we teach in these courses, allow us to work more effectively with faculty in other disciplines.

We created a new textbook for 101, La Puerta: A Doorway into the Academy. Made up entirely of essays, articles, stories and poems written by members of the UNM community, this book will more effectively introduce students in 101 to the kinds of writing they will be called upon to do in college. Additionally, the project of compiling, editing, and producing this book provided 30 of our graduate students with valuable experience and an item for their vitae.

And we've begun the process of re-designing 102 to make it more accurately reflect the kinds of writing done in disciplines other than English. As part of that process, we're trying to establish new, additional pathways by which students can satisfy the Writing Proficiency Requirement.
Department of Foreign Languages & Literatures

July 1, 1996-June 30, 1997

Walter Putnam, Chair
The Department of Foreign Languages & Literatures completed its fifth year as a separate unit created out of the former Department of Modern & Classical Languages. The department offers a Ph.D. in Romance Languages with a concentration in French, M.A.'s in French, German and Comparative Literature & Cultural Studies and B.A.'s in six other fields. The department also contributes to programs around campus such as European Studies, Asian Studies, Russian Studies and Women's Studies by offering related courses and by sharing faculty resources and expertise. Courses were taught this year by thirteen faculty members, six instructors and sixteen TA's spread across the different language programs. The department enjoyed the presence of a visiting faculty member in German, Beatrix Muller-Kampel, a specialist in Austrian studies from the University of Graz.

Administratively, Walter Putnam completed his first year as Chair of the department. Besides specific language advisors, three administrative positions were filled in the department to handle major areas of responsibility: Director of Undergraduate Studies (Monica Cyrino), Director of Graduate Studies (Deborah Jenson) and Director of Comparative Literature and Cultural Studies (Diana Robin). Office operations were ably handled by the Department Administrator, Wilma Williams, and the two Administrative Assistants, Lisa Stewart and Patrick Hubenthal. The latter two, in addition to performing important duties for the department, are in charge of administrative matters for the Francophone and German Summer Schools, respectively. The initial year of working with a new team has now passed and there seems to be a good division of tasks within the department. We have also recruited and retained a very fine group of work-study students this past year. One of the main areas of focus has been budget management and this past year was especially important with new personnel in charge of monies. Even taking into account large items such as photocopies and computer purchase and repair, the decisions left us with a small balance and a good idea of how to allocate funds for this coming year. The major expense this past year was replacement or repair of several antiquated computers and printers for faculty.

Several faculty accomplishments should be noted: Lorna Brau, visiting Assistant Professor of Japanese, devised and taught courses on Japanese popular culture and language to a broad and appreciative audience; Pamela Cheek, a new appointee at the rank of Assistant Professor of French, directed the Francophone Summer School program to a receptive audience of graduate students from New Mexico and beyond; Monica Cyrino, Assistant Professor of Classics, continued to teach large introductory courses with exceptionally high student ratings that confirm her place as one of the best-appreciated faculty on campus; Deborah Jenson, Assistant Professor of French, oversaw
increasingly large numbers of graduate students and directed a significant number of dissertations, theses and exams; Natasha Kolchevska, Associate Professor of Russian, organized an exhibit of the works of a Siberian photographer while continuing her research on Russian women writers; Byron Lindsey, Associate Professor of Russian, received the Eugene Kayden National Translation award for his acclaimed translation of a volume of stories by Vladimir Makanin and he directed a UNM in Moscow summer program; Peter Pabisch, Professor of German, spent his fall sabbatical in Europe visiting the future European Union and directed the German Summer program in Taos for his last year; Lorraine Piroux, a new appointee at the rank of Assistant Professor of French, devised new culture and theory courses in both semesters and spent the summer participating in an NEH Summer Institute on Print Culture at Dartmouth College; Walter Putnam, Professor of French, conducted research in Paris for an edited volume of the correspondence of Conrad and Gide; Diana Robin, Professor of Classics, directed an exciting and well-attended colloquium series for the Cultural Studies program; Katrin Schroeter, Assistant Professor of German, taught a highly successful course on "Vampirism" as well as co-directing the German Summer School; Warren Smith, Professor of Classics, organized a visit of the Utah Classical Players who put on a production of classical drama on the UNM Mall.

The department as a whole had a successful year, especially in terms of the quantity of new and exciting ideas provided by the junior faculty who are now integrated into the cadre of professors. The general level of graduate study within the department also seems to be increasing; as new faculty become better-known and their courses, especially in the cultural studies field, become better-publicized, there should be increased interest in the department as a place where interesting work is being done. Finally, we hope that the hiring of a new language coordinator will result in greater retention rates within the French lower-division language courses.
B. REFEREED JOURNAL ARTICLES AND BOOK CHAPTERS


C. OUTSIDE PROFESSIONAL LECTURES AND PAPERS PRESENTED


Baackmann, Susanne. October 1996. "Convulsive Desires: Hans Bellmer's Iconography of the Female Body." International Conference on Despair and Desire, State University of West Georgia, Atlanta, GA.

Baackmann, Susanne. October 1996. "Discourses of Commemoration in Contemporary Literature by Women", The Uses of History in Fiction and Film. 21st Annual Colloquium on Literature and Film, West Virginia University, Morgantown, WV.


Cyrino, Monica, October 1996. “Pret-a-porter: Aphrodite and the Figure of the Accessorized Goddess.” Rocky Mountain Modern Language Association, Albuquerque, NM.


Piroux, Lorraine. November 1996. La Nouvelle Athlantide de Montaigne.” Midwest Modern Language Association, Minneapolis, MN.


1. SIGNIFICANT PLANS

1.1 FIVE-YEAR PLAN

During the Fall, 1993 semester, the department put together a *Five-Year Plan* that focuses the department's research and teaching orientation in two areas:

1. environmental analysis (physical geography and human/environment interaction);
   and

2. geographic information technologies - GIT (GIS, GPS and remote sensing).

Both of these specialties serve important societal needs and build on existing strengths within the university. When fully implemented, the plan will afford the department the opportunity to increase collaborative research and to serve the campus community with its newly completed GIT lab. It will also enable the department to attract graduate students of first quality and to raise the department's overall standing in the university and profession.

The two subfields selected for emphasis are well suited not only for the enhancement of geographical research but for integration into the missions of many other units of the university and the state. The development of geographic information technologies matches well with the developments at the major scientific laboratories, and promises to attract major grants and funding for the department. The demand for GIT training is not limited to the Department of Geography. Biologists, geologists, anthropologists, economists, and planners all use the technologies and are utilizing our teaching laboratory. There is also support from biologists and geologists for the environmental focus. The Department is focusing its energy in the environmental area at the interface between climate, biogeography, and water resources. Both GIT and the environmental...
focus are begging for interdisciplinary research efforts, which should attract significant new research funding to the department and university.

1.2 STATUS OF FIVE-YEAR PLAN

The primary goal of the Department of the Geography, as set forth in the *Five-Year Plan*, is to refocus and strengthen its curricula so that it will be in a position to initiate a Ph.D. program in the future. In order to achieve this goal, the department has restructured its curriculum and degree programs at the undergraduate level and will do the same for its graduate program this year. In addition, an infrastructure that can support the programs is being developed. Increasing its FTE faculty is an essential but unrealized portion of the department’s goals.

The *Five-Year Plan* is being implemented, and the Department of Geography is very different from the one that existed in 1993. The curriculum has been refocused on environmental analysis and GIT; a B.S. degree has been added; the personality of the department is changing and will continue to change as new hires occur; the infrastructure to support a Ph.D. program is being developed; a colloquium series is being institutionalized; and the new faculty are beginning to actively pursue extramural funding.

2. STAFF APPOINTMENTS AND SEPARATIONS

2.1 FACULTY REPLACEMENTS AND NEW HIRES

The faculty was composed of 4.5 salaried members in the Fall, 1993. Three of the faculty members were professors and two were associate professors. During the 1993-94 AY the department searched for two additional faculty members and successfully hired one, Dr. Louis Scuderi, who joined the faculty in the Fall of 1994. Dr. Scuderi received his Ph.D. in 1984 from
the University of California, Los Angeles. His research and teaching interests are in climatology and climate change, geographic information systems, and remote sensing. Dr. Scuderi has designed, developed and obtained funding for our geographic information system/image processing laboratory. He is an excellent addition to the department and received his tenure and promotion to Associate Professor last year. Additional faculty joined the department in 1995. Dr. David Gutzler had a split appointment with Geography and Earth and Planetary Sciences for two years and is now full time in Earth and Planetary Sciences. Also, Dr. Paul Matthews joined the department in the Fall, 1995, as department chair. Dr. Matthews has a background in water resources, natural resource policy, public lands, and mineral resources. In the fall of 1996 Dr. Theresa Mullhern joined the department but resigned at the end of her first year. In addition to the loses in faculty, the department had a job search suspended in January.

The department currently has 5 faculty members. During this next year the department will be searching for a replacement position with a specialization in GIS and environmental geography (water resources preference). Hopefully, the department will be allowed to reopen the frozen search the year after.

3. OTHER SIGNIFICANT DEVELOPMENTS

3.1 SPATIAL DATA ANALYSIS LABORATORY

The Spatial Data Analysis Laboratory was successfully funded under NSF DUE-9551046: "Instrumentation for an Undergraduate Spatial Data Analysis Laboratory." Equipment for the lab was purchased during the past year, and it was used for the first class in the spring semester 1996. Demand for the courses which use the lab was high in the spring, so additional sections were added last year.
The Spatial Data Analysis Laboratory (SDAL) is a state-of-the-art facility designed to provide undergraduate and graduate students with hands-on experience in Geographic Information Technologies (Geographic Information Systems, Image Processing, and Global Positioning Systems) and to support faculty research in these areas. Laboratory computer facilities are designed around twin SUN SparcStation 712 units networked to 10 SUN X-terminals. In addition, the SDAL has 5 Pentium based IBM clones which can be used as stand-alone machines or, through the use of X-terminal software, networked to the SUN workstations to provide additional workstation access. The SDAL has, in addition to its main computing units, peripheral devices that allow for rapid input and output of raw data, maps and imagery. These include tape-drives, CD-ROM units, a full size digitizing table, individual digitizing tablets, a scanner, black and white as well as color printers, and a full size A-E color plotter. Besides storage on individual machines, the SDAL has a RAID storage unit with 12 GB of storage (expandable to 60 GB). Like the RAID unit, all SDAL equipment was chosen so it could be easily and cheaply upgraded. The laboratory has access to GIS, Image Processing, and Statistics software products, including: ARC/INFO (GIS), MapInfo (GIS), S+ (statistical software link to ARC/INFO), and ER-Mapper (Image Processing).

Through pricing discounts, special educational purchase agreements, and cooperative deals, the $140,000 allocated for SDAL development has been used to purchase ~$250,000 in hardware and software.

3.2 EARTH DATA ANALYSIS CENTER (EDAC)

EDAC has been made part of the department and will be co-located with us this fall. EDAC is engaged in remote sensing and geographic information systems (GIS) development and serves as a focal point for graduate and undergraduate student employment. In 1996-97, over a dozen graduate undergraduate students were so employed.
4. PUBLICATIONS AND PROFESSIONAL ACTIVITIES

4.1 PUBLICATIONS AND PRESENTATIONS


5


Morain, Stanley A. (co-author). Chapter 1 (Drs. Estes and Foresman, co-authors) and Chapter 4 (Ms. Budge, co-author) in Raster Imagery in Geographic Information Systems (Shirley López Baros, co-editor). Santa Fe: OnWord Press. 495 pgs.


4.2 OUTSIDE PROFESSIONAL ACTIVITIES

Dr. Cullen currently holds the position of National Counselor (Board of Directors) for the Association of American Geographers; Associate Editor, The Social Science Journal, 1994-present; Associate Editor Southwestern Association of American Geographers Journal; Coordinator, Applied Geography Conference, Albuquerque (1997); and Joint organizer and chair of a session on “Regional Economic Development,” Applied Geography Conference, 1990-1997.

Dr. Matthews served and continues to serve on several professional boards including: Advisory Board, Interamerican Dialog on Water Management; Vice chair, Policy Committee, Universities Council on Water Resources; Associate Editor, Water Resources Bulletin; Shared Use of Transboundary Water Resources Task Committee, American Society of Civil Engineers; and Water Regulatory Standards Committee, American Society of Civil Engineers.

Dr. Stan Morain’s outside professional activities include: Editor-in-Chief Photogrammetric Engineering and Remote Sensing; Professional Conduct Committee, American Society for Photogrammetry and Remote Sensing (ASPRS); Nominating Committee (ASPRS); Committee on Data Preservation and Archiving (ASPRS); ASPRS liaison to American Academy of Sciences; Editorial Board, International Journal of Remote Sensing; Editorial Board, GeoCarto International: An International Journal of Remote Sensing; and reviewer of numerous journal manuscripts.
Dr. Louis Scuderi is Administrative and Technical Heads of the National Center for Resource Innovations (NCRI) Southwest. He is currently reviewing articles that appear in the following journals: Arctic and Alpine Research (multiple papers); Quaternary Research; The Annals of the Association of American Geographers; and Radiocarbon. Dr. Scuderi is also a reviewer for NSF proposals in: Solar Terrestrial; Climate Dynamics; Geography and Regional Science; and Polar Programs.

Dr. Williams organized and operated the Thirteenth annual Southwest Institute, hosted in 1997 by the New Mexico Museum of Natural History. Graduate and undergraduate credits in Geography were offered by this department. In conjunction with the two field courses a collection of readings and reference material was organized and edited. A field Guide was also created for each course. Future plans include developing a series of guidebooks on the Southwest.

4.3 OUTSIDE SPONSORED RESEARCH

Scuderi, L. A., Assessing the Climate Change on Corn And Wheat Production in the United States,” National Science Foundation, $19,251.

5. GOALS FOR 1997-1998

Our main goals for next year include: Adjusting to EDAC, being part of Geography, recovering from our office move and remolding, hiring a qualified Geographer for our replacement position, revising our graduate program to put in an MS degree, integrating our computer lab more directly into the Department and University. Other goals include increasing faculty research productivity and increasing the number of majors.

With the addition of EDAC to Geography, we will have some severe growing pains during the next year. This will most clearly manifest itself in cramped space and administrative
restructuring. The move has meant the Geography Administrative space was nonfunctional for over three months during the summer and was able to provide only marginal service to students, because of remolding, during August, September, and probably October. Once this transition is completed both EDAC and Geography should benefit.

During the next year, the department will be hiring one new faculty member. The position is a geographer with a specialization GIS and Environmental Geography. This position is extremely important if the department is to develop the critical mass required for implementing a Ph.D. program. The department will work hard to develop a suitable applicant pool in order to find the best possible candidates to achieve this goal.

The undergraduate program was substantially revised last year, and this year we will begin revising our graduate curriculum. This is a two-year process. Many courses have been revised to reflect the recent faculty additions and the department’s new areas of interest, but the process cannot be completed until the new faculty replacements have been hired.

The Spatial Data Analysis Laboratory was made operational last year allowing the department to offer courses in GIT. This has increased the department’s visibility on campus and the demand for courses has been substantial. As a result, the department will seek additional funds to expand the lab facility. In addition, the new lab will provide an excellent location for conducting GIT short courses. We have recently been made a “Center of Excellence” for GPS one of the GIT technologies and will begin offering short courses in that technology. Making the lab run efficiently is a time-consuming task, and the department will soon need a technician to help in its management. Possible funding sources for this position will be explored during the next year.

In order to be in a position to offer a Ph.D. program in the future, the department needs to increase its research productivity. One goal is to increase the number of outside grants submitted by department members. Another is to increase the number of referred publications.
The department will also try and increase the number of graduate and undergraduate students in the program. Most undergraduates become majors after taking a course in geography. For that reason, the department will strive to offer the highest quality undergraduate courses possible. The department will also continue to develop its colloquium series.
I. Significant Developments during 1996-97

Like all units of the University, the Department of History was adversely affected by UNM's budgetary crisis caused by declining enrollments and insufficient support from the State Legislature. History was hit particularly hard because a number of vacancies had opened in its ranks. Professor John Kessell had retired at the end of June 1996, and Professors Enrique Semo and David Maciel left the University at the end of December, 1996.

Normally retirements and resignations, however lamentable, can give a department the opportunity to revitalize itself by bringing in a new generation of scholars to fill the vacancies that have been created. The History Department was already engaged in a national search for a replacement for Dr. Kessell and was contemplating how to deal with the departures of Professors Semo and Maciel. But the fiscal crisis of the University abruptly altered the situation. Hiring in the College of Arts and Sciences came to a virtual halt; the search for Kessell's replacement was "frozen," and expectations for rapid filling of the other two slots were sharply reduced.

These blows have not been the only ones. In the spring, the department was saddened when Professor Robert Kern, our historian of Spain and Portugal, and a pillar of both the European and Latin American sections, announced that ill-health would compel him to retire in December 1997. At the end of the summer, Professor Donald Sullivan, our longest-serving member, a mainstay of the department and a virtually indispensable figure in the Medieval Studies and Religious Studies Programs, informed us that he was expecting to retire at the end of the present academic year. Most recently, Professor Charles McClelland, one of the nation's leading specialists on the history of Germany and Central Europe, decided that he would take advantage of the Retirement Incentive Program and step down in December of the current year.

Obviously, these developments seriously threaten the Department's programs in virtually all areas. Our capacity to teach the history of New Mexico and of the Southwest and its peoples is seriously diminished, as is our ability to cover Latin America. The European history section is perhaps most threatened of all, because Professors Kern, McClelland and Sullivan are scholar-teachers of tremendous range, who are active participants in our Western Civilization program, present upper division courses which cover enormous time-spans, and carry a heavy load of graduate instruction. The loss of these outstanding colleagues, in combination with our continued inability to acquire a British historian to replace Jan Roebuck will produce a situation of near crisis proportions.

Thankfully, not all the news was bad. In January, David Farber arrived bringing additional energy to our already energetic U.S. history section. Professor Farber, a distinguished scholar who specializes in the history of the twentieth century, quickly established himself as a strong presence in both undergraduate and graduate teaching. Our faculty as a whole continues to be highly productive in terms of its publications (see section V) and active in
a wide variety of professional organizations (see section VI). The department is proud of the
3 Ph.D.s, 9 M.A.s and 66 B.A.s it graduated this year.

II. Significant Plans and Recommendations

One word -- staffing. History is among the strongest departments in A&S, and its
strengths were recognized and praised at the time of our last Unit Review. But this may
soon change if we are not allowed to fill the vacancies which have opened and threaten to
open.

Of course, the Department recognizes that it is a part of a larger community and that the
fiscal crisis of UNM affects the institution as a whole. Its plans, therefore, include a
thorough examination of departmental programs and course offerings. We will be looking
at various approaches to organizing our teaching so as to maximize our coverage with a
smaller staff. We will also examine ways to refocus instruction particularly in some areas
of graduate study. But these measures should be seen as temporary expedients, not
permanent solutions.

In conjunction with UNM's fiscal crisis and in keeping with suggestions made by our unit
reviewers in 1995, the Department will continue to review graduate admissions with a eye
to keeping the numbers of in-coming graduate students from rising too high. This will be
necessary to reduce the burden on present staff and also to respond to the current job
situation in academe. We hope to focus greater attention on improving our undergraduate
program, paying particular attention to our honors students, giving them closer monitoring
and better mentoring. We also intend to look at ways to increase all students' understanding of historical method, especially the techniques of documentary analysis.

III. Appointments to faculty/staff

David Farber, Professor, U.S. History. January 1, 1997

During the year, the following were appointed part-time faculty:
   Bart Barbour, Visiting Lecturer, U.S. History
   Fritz Cocron, Visiting Lecturer, Western Civilization
   Jeff Cowie, Visiting Lecturer, History of Labor in Latin America
   Aurora Morcillo, Visiting Lecturer, Western Civilization

The following History Department Graduate students served as Teaching Associates:
   Kathleen Chamberlain, History of New Mexico
   Yvonne Darcy, U.S. History
   Thomas Gentry, History of New Mexico
   Carlos Herrera, La Raza
   Andrew Kirk, U.S. History
   William Rector, Latin American History

IV. Separations from faculty/staff

David Maciel, December 31, 1996
Enrique Semo, December 31, 1996
V. Publications of the Division

During the past year, members of the History Department published 8 books and 64 book chapters, journal articles and encyclopedia entries. Among these many publications two were given extraordinary notice: Richard Etulain's book Re-imagining the Modern American West: A Century of History, Fiction and Art won the Western Heritage Award as the best non-fiction book on the American West for 1996 and the Western Historical Association's John Caughey Award for the Best Book in Western History for 1996; Jonathan Porter's book Macau: The Imaginary City, Culture and Society, 1557-Present was selected by the journal Choice for its list of Outstanding Academic Books of 1996.

VI. Outside Professional Activities of Staff Members

Members of the Department gave 21 conference papers or comments at professional meetings. Of particular note: Paul Hutton's continuing service as Executive Director of the Western History Association and his selection as Winthrop Rockefeller Distinguished Lecturer in History at the University of Arkansas; Virginia Scharff's hard work as co-chair of the Program Committee of the WHA; Linda Hall's outstanding efforts in organizing the scholarly conference "The Virgin and the Devil in the New World" which brought many leading Latin American specialists to UNM; Robert Kern's organization of the historical exhibit at the Albuquerque Museum, "Shouts from the Wall," which presented pictures and posters of the Spanish Civil War.

VII. Outside Sponsored Research

Judy Bieber: NEH Summer Stipend for Research in Brazil. $4,000.
Margaret Connell-Szasz: Summer Research Fellowship of $800 to the D'Arcy McNickle Center for American Indian History, Newberry Library, Chicago. (Due to eye surgery, Professor Connell-Szasz was unable to use her fellowship. She will avail herself of these funds next year).
Elizabeth Jameson: Designated a "Hoover Scholar" by the Herbert Hoover Presidential Library Association. Received $1150 for travel and photo-copying; also received a grant from the Minnesota Historical Society for $1450 for travel and research. Both grants were for work on women's narratives and pioneer narratives of the upper mid-West. In addition, she received $3000 from the Women of the west Museum for graduate student stipends and $2000 for personal research involved in creating an exhibit on western women and activism.

VIII. Work of Department Office Staff

No report of the History Department would be complete without reference to the fine work of the Office Staff. The able leadership of our Department Administrator, Yolanda Martinez is indispensable to the efficient flow of business, as well as the proper order and good humor of all concerned. Helen Furgeson has done a fine job as Graduate Secretary, and Loretta Hayoz has been an effective and helpful Receptionist. Cindy Tyson's part-time assistance has been invaluable.

Signed: Richard C. Robbins, Chairman

Date: 9/12/97
1. Significant developments during 1996-97

Unit Review

The Department was visited in September 1996 by the Unit Review team consisting of Professors Karen Emmorey (Salk Institute), Leanne Hinton (University of California-Berkeley), and Keren Rice (University of Toronto), with George Luger (Computer Science) as the internal team member. The team conducted a very thorough examination of the Department’s Self-Study Report and other materials; gathered extensive on-site information in interviews with faculty, students, and administrators; and produced a thoughtful and incisive set of recommendations. The following paragraphs summarize 23 specific recommendations of the team’s written report and briefly note 1996-97 developments related to those recommendations.

The report recommends immediate addition of two faculty positions, one in theoretical linguistics and another in the Signed Language Interpreting (SLI) program. The department established the former as the higher priority and has been authorized to search for a specialist in phonetics or phonology for Fall 1998. Budgetary constraints have not enabled us to follow up on the SLI need or the other two faculty additions suggested in the report: another specialist in Native American linguistics and a part-time instructor in Navajo.

The team recommended that graduate student support be increased and specifically suggested an additional TAship earmarked for the introductory SLI courses. The Department continues to seek, without success, additional assistantships.

It also was recommended that faculty in the SLI program be given the opportunity to teach graduate linguistics courses. Given an SLI course relief through use of our part-time funds, Sherman Wilcox offered a seminar on cognitive-functional approaches to American Sign Language (ASL) linguistics in Spring 1997. He also will be teaching graduate-level general linguistics courses in the coming year, and plans are being made for William Isham and Phyllis Wilcox to contribute to graduate instruction in subsequent years.

An upgrade to full-time of the half-time department secretary position was recommended. Following the resignation in October of the Department’s staff secretary, the Dean authorized an upgraded appointment at .80 FTE, and this position finally was filled in March 1997.

The Department’s severely limited space was strongly criticized in the report. Happily, our proposal for housing the Sign Language Interpreting program in the existing Honors Center space was accepted by the University’s space allocation committee. At some point in the future the General Honors Program will vacate that space and the Department’s space problem will be resolved. In the meantime, we continue in extremely cramped quarters.

Recommendations regarding the curriculum of the SLI program, including specifically the addition of an ASL IV course, are in process of being implemented.
Several recommendations related to the development of the Native American linguistics program in the Department are being pursued. We have contacted other successful programs for ideas, made preliminary contact with representatives of Native American communities regarding perceived needs, and stressed in a variety of University fora the need for the University to more vigorously pursue hiring of Native American faculty. No tangible results have accrued.

The review team’s other, more general, suggestions for development of the programs in general linguistics and in southwestern sociolinguistics have not as yet been addressed with specific measures except in a couple of minor cases.

The report also included a number of important recommendations and suggestions concerning the inter-college doctoral program in Educational Linguistics. Those recommendations have been reviewed by that concentration’s coordinating committee, but that body’s lack of authority and resources prevent any easy implementation of changes.

The review team recommended a modest increase in library funding for journals in linguistics. In March, the General Library mandated a $900 cut in linguistics journals.

Staff
Following the resignation of the Department’s staff secretary in October 1996, the College of Arts and Sciences was able to permit us to upgrade that position from half-time to .80 FTE.

The restructuring under UNMPact during Spring 1997 resulted in changes in staff positions as follows:
- Barbara van Buskirk, Department Administrator I, from Grade 8 to Grade 10.
- Suzanne Lee, from Professional General, Grade 999, to Staff Interpreter/Deaf Services, Grade 11.
- M. Leeanae Griego, from Staff Secretary, Grade 4, to Administrative Assistant I, Grade 5.

SLI Lab
Arrangements continue to be elaborated for construction of the Signed Language Interpreting Laboratory, a state-of-the-art interactive video-audio lab for teaching and learning in the SLI training program. We as yet have been unable to secure sufficient materials and construction funds to supplement the 1996 equipment allocation of $39,151 from the College of Arts and Sciences. However, a $15,000 commitment from the state Department of Education has been obtained, space in the Language Learning Center in Ortega Hall has been committed, and plans have been made to purchase the Apple Computer equipment by October 1997 with the A&S allocation.

2. Significant plans and recommendations for the near future

Faculty
As previously mentioned, the Department will be conducting a search to fill a tenure-track assistant professor position. This new position in phonetics/phonology will begin in August 1998. We will continue to seek permission to hire other faculty as recommended in the Unit
Review as well as a replacement for Professor John Oller, who retired unexpectedly at the very end of the year.

**Space**

The Department’s limited office space continues to be one of the principal obstacles to effective functioning of the Department. The resignation of Professor Oller frees up one office; which will serve as Professor Morford’s lab during 1997-98, thereby fulfilling (at least temporarily!) our commitment to her when she was hired in 1996 to provide her with lab space for her research. Otherwise, the Department personnel are confined in close quarters until the Honors Center space on the first floor of the Humanities Building becomes available.

3. Appointments to staff

Assistant professor Jill Morford joined the faculty in August 1996, filling the psycholinguistics vacancy created by the resignation of Jean Newman.

Lecturer Leslie Greer also joined the faculty in August 1996, filling a new position in the Sign Language Interpreting program.

Suzanne Lee joined the department in August 1996 with a full-time appointment as interpreter/secretary for the coordinator of the SLI.

M. Leeanae Griego joined the Department in March 1997 to fill the upgraded administrative assistant position at .80 FTE.

Holding part-time teaching positions in the Department during the 1996-97 academic year were Dr. William Bradford (Linguistics), Dr. Ferdinand de Haan (Linguistics), Dr. Kathleen Houlihan (Linguistics), Dr. Joan Manes (Linguistics), and Mary Schultz (SLI).

Given a visiting scholar appointment in the Department of Linguistics for the Spring 1997 semester was Karl Diller of the University of New Hampshire. Professor Diller carried out research on the implications of theoretical linguistics for language teaching, participated in several seminar classes, and gave a talk in the Department’s Colloquium Series.

4. Separations from staff

Professor John Oller took advantage of the incentive retirement program and resigned from the University in June 1997 in order to accept a faculty position as head of Communicative Disorders at the University of Southwestern Louisiana.

Glenda Baxter, who served seven years as the department’s half-time staff secretary, resigned from that position in October 1996. She retains her half-time position in the Department of Philosophy.

Celia McCrossen-Klaus, secretary/interpreter for the SLI program, resigned in August 1996 in order to accept a position with Albuquerque Public Schools.
5. Faculty activities

Outside sponsored research

Our records indicate that the following outside grants were administered through the Department of Linguistics during the period covered by this annual report:

Phyllis Wilcox, “RSA Region IV interpreter training project”, funded by the University of Arkansas, $2,500, 1 October 1995 to 30 September 1996.

Phyllis Wilcox, “RSA Region IV interpreter training project”, funded by the University of Arkansas, $2,500, 1 October 1996 to 30 September 1997.


In addition, Jill Morford is co-principal investigator (with two others) for a project administered through McGill University:

Jill Morford and others, “Patterns of relative clause propositions using an augmentative and alternative system”, funded by the Social Sciences and Humanities Research Council of Canada, $50,000, April 1997 to April 2000.

Four UNM-internal grants were held by Department faculty this year. Three were Research Allocations Committee awards: Melissa Axelrod, “Status of an endangered language: Mescalero Apache” ($2,873); Jill Morford “Maturational effects on phoneme perception” ($2,870); and Phyllis Wilcox, “Grammaticization of the motion verb GIVE in American Sign Language: Historical development from Old French Sign Language” ($2,989). The fourth was a Teaching Allocations (TAS) award: Eduardo Hernández Chávez and Larry Gorbet, “An American Sign Language unit for Linguistics 101 / Anthropology 110” ($2,500).

Publications

A complete accounting of faculty publications and other scholarly productivity is provided in the annual supplements to the biographical record. There is no need to duplicate such information here.

Roseann Willink’s research with Paul Zolbrod on Navajo weaving and oral tradition resulted in a 1996 book, Weaving a world: Textiles and the Navajo way of seeing, and an exhibition of “Listen to the rugs: The faces and voice of Navajo weaving” at the Museum of Indian Arts and Culture in Santa Fe from October 1996 through September 1997.

Awards and honors

Joan Bybee received the singular honor of being invited to participate as a fellow at the Center for Advanced Study in the Behavioral Sciences in Stanford, California. She tentatively plans to accept the fellowship for the 1999-2000 academic year. Professor Bybee continues her three-year appointment (1996-99) as Regents’ Professor in recognition of her high level of achievement as a scholar and teacher.

Eduardo Hernández Chávez was appointed interim director of the Chicano Studies Program effective 1 January 1997. This appointment is at .6 FTE and will continue through the 1997-98 academic year.
Emeritus Professor Robert Young and his long-time co-investigator William Morgan Sr. were honored in a public ceremony by the Navajo Nation Council in Window Rock, Arizona, on 17 July 1996, at which they were robed with traditional Pendleton Chieftain’s robes and presented jewelled plaques. The Council recognized Young and Morgan “for their lifelong work with the Navajo language” and their furtherance of Navajo language development and literacy.

Other activities
Sherman Wilcox continued as editor of the new international journal, *Evolution of Communication*.
Eduardo Hernández Chávez continued as interim editor of the *Southwest Journal of Linguistics*.
Garland Bills continued as executive director of the Linguistic Association of the Southwest (LASSO).
Roseann Willink served on the organizing committee for the tenth annual Navajo Studies Conference held on the UNM campus 16-19 April 1997.
Jill Morford served as co-organizer of the Fifth International Conference on Theoretical Issues in Sign Language Research held in Montreal, Canada, 19-21 September 1996.
Leslie C. Greer continued as a member of the Board of the American Sign Language Teachers Association.

6. Student activities

Degrees awarded
The following degrees offered through the Department of Linguistics were awarded to the listed students during the report period:
B.A. in Linguistics: Sam Melada, Douglas Simms (both Spring 1997).
M.A. in Linguistics: Soo-Shin Lee (Summer 1996).

LGSO
The Linguistics Graduate Student Organization (LGSO) continued to actively represent master’s and doctoral candidates in Linguistics as well as doctoral candidates in Educational Linguistics. Officers for 1996-97 were Terry Janzen (president), Barbara Shaffer (vice president), Dawn Nordquist (treasurer), Jordan Lachler (representative to Linguistics faculty meetings), Amy Hazelrigg (representative to Educational Linguistics faculty meetings), and Cecilia Flood and Karen Naughton (GPSA representatives). The faculty advisor to LGSO was Jill Morford.
Awards and honors

Awarded regular departmental assistantships for 1996-97 were Nathan Bush (.50 TA Spring), Paromita Chakraborti (.50 TA), Terry Janzen (.25 GA), Karen Naughton (.25 GA), Barbara O'Dea (.50 TA Fall), and Joanne Scheibman (.50 TA). Special assistantships were awarded to Cecilia Flood (.75 TA Spring), Terry Janzen (.25 RA Summer 1996), Dawn Nordquist (.50 TA), Barbara O'Dea (.25 RA Summer 1996), and Holly Wilson (.50 TA).

A Graduate Tuition Fellowship for 1996-97 was awarded to Sherry Zmuda.

The following graduate students in Linguistics were awarded RPT grants from the Office of Graduate Studies during 1996-97: Jordan Lachler, $950 for research on “Tense and aspect in Mingo narrative”; Karen Naughton, $942 for presentation of a paper at the Workshop on Integration of Gesture, Language, and Speech at the University of Delaware; and Joanne Scheibman, $1,000 for presentation of a paper at the Constituency in Discourse Symposium at the University of California-Santa Barbara.

SLI graduating senior Yoshiko (“Koko”) Chino was awarded $1,431 from the College of Arts and Sciences to support travel to Washington, D.C., to carry out her honors thesis research on initialized signs in ASL and French Sign Language at Gallaudet University and the Library of Congress. She has submitted papers on this research to Sign Language Studies and the International Journal of Sign Language Linguistics. At the Vision Day performance in May, Chino also was awarded the 1997 Signed Language Interpreting Program Undergraduate Research and Publication Award of $100.

Terence Janzen (Linguistics Ph.D. candidate) was in the third year of a three-year doctoral fellowship awarded by the Social Sciences and Humanities Research Council of Canada. He received word that he was awarded a fourth year of the fellowship to enable him to complete his doctorate during the 1997-98 academic year.

Presentations and Publications

Ysaura Bernal-Enríquez, Educational Linguistics doctoral candidate, presented a paper titled “Spanish language loss in la Nuevo México” at the annual meeting of the National Association for Chicano Studies in Sacramento, California, in March and another paper, “Cuando la enseñanza del español acelera su pérdida” at the Tercer Seminario Internacional de la Lengua Española en Estados Unidos in San Juan, Puerto Rico, in April.

Terence Janzen, Linguistics doctoral candidate, had his article on “Pragmatic and syntactic features of topics in American Sign Language” accepted for publication in the Canadian journal on translation, Meta. Janzen and co-authors Barbara O’Dea and Barbara Shaffer (both Educational Linguistics doctoral candidates presented a paper on “Passive constructions in American Sign Language” at the 23rd annual meeting of the Berkeley Linguistics Society in February 1997; the article will be published in the conference proceedings.

Dagmar Jung, Linguistics doctoral candidate, presented a paper on “Pronominal affixes and the structure of the Athabaskan verb” at the 1997 Athabaskan Languages Conference in Eugene, Oregon, in May.

Jordan Lachler, Linguistics doctoral candidate, presented a paper on “Navajo verb stem inflection: A conjugation class approach” at the Mid-American Linguistics Conference in Lawrence, Kansas, in October 1996, and another paper on “Navajo verb stem schemas” at the
Athabaskan Languages Conference held in Eugene, Oregon, in May 1997.
Joanne Scheibman, Linguistics doctoral candidate, presented a paper “The effect of usage on degrees of constituency: The reduction of don’t in English” (with Joan Bybee) at the Constituency in Discourse Symposium in Santa Barbara, California, in May.

**Employment**
Dagmar Jung, who is currently preparing her doctoral dissertation in Linguistics, was appointed to a regular lecturer position in linguistics at the University of Cologne in Germany beginning in Fall 1996.

### 6. Other professional activities
The Department sponsored a strong set of scholarly presentations during 1996-97 in its Colloquium Series and Brown Bag Lunch Series. The presentations included the following speakers (those in the Brown Bag Series are marked with an asterisk):

- **Stuart Davis** (Indiana University), “Optimality theory and output configurations in phonology: The case of vowel insertion and deletion in Cairene Arabic” (September 6).
- **Jordan Lachler** (Linguistics Ph.D. candidate, UNM), “Navajo verb stem inflection: A conjugation class approach” (October 25).
- **Shana Poplack** (University of Ottawa), “Variation, grammaticization, and future time marking: Gonna in five varieties of English” (November 1).
- **Ferdinand de Haan** (Corrales, NM), “The category of evidentiality” (November 22).
- **Bill Isham** (Linguistics, UNM), “Working memory in interpreters of signed and spoken languages: Evidence from the immediate recall of narrative prose” (February 14).
- **Karl Diller** (University of New Hampshire), “Where are the rules of grammar? Rethinking Chomsky’s position that language is an individual phenomenon: Language as artificial life” (February 28).
- **John Oller** (Linguistics, UNM), “The theory of true narratives as an approach to language acquisition” (March 5).
- **Uli Frauenfelder** (Laboratoire de Psycholinguistique Experimentale, Switzerland), “On spoken word recognition: Recent theories and data” (March 6).
- **Elizabeth Bakewell** (Brown University), “Aur-Och: The origins of speech and gesture” (March 18).
Joan Bybee (Linguistics, UNM), "Lexical diffusion of sound change: Evidence for words and phrases in the lexicon" (March 28).


*Paromita Chakraborti (Linguistic Ph.D. candidate, UNM), “Functions of the discourse marker mane in Bengali film narratives” (April 23).

*Joan Bybee (Linguistics UNM) and Joanne Scheibman (Linguistics Ph.D. candidate, UNM), “The effect of usage on degrees of constituency: The reduction of don’t in English” (April 30).

Clayton Valli (Somerville, Massachusetts), “The poetics of ASL poetry” (May 2).

On May 3, the Signed Language Interpreting program sponsored its fourth annual Vision Day, with a performance at the Del Norte High School theater featuring a presentation on “Poetry in American Sign Language” by Clayton Valli, nationally known ASL poet. This activity attracted a very large audience from the University and from the community.

The Department hosted an appearance by Professor Takaji Tanaka of Tokai University in Japan on February 26 to talk informally with faculty and students interested in TESOL and second language acquisition and teaching.
The Department of Mathematics and Statistics continued to meet the demands of its broadly defined missions in education, research, and service during the 1996-1997 academic year despite the budget crisis engendered by declining student enrollments at UNM. The number of tenure stream faculty is now 33, a decrease of 7 from the 40 faculty on our roster six years ago. In spite of these losses, our programs remain strong in the face of concerns for the future.

1. Significant Developments during the academic year, 1996-97

- Ronald M. Schrader was elected as our new chairman. His 3 year term commences with the Fall 1997 semester.

- New research funding obtained by Professors Aceves, Bedrick, Buium, Christensen, Efromovich, Hagstrom, Huzurbazar, Koltchinskii, Lorenz, Loring, Steinberg, and Sulsky. Professors Boyer, Galicki, Gibson, Kucharz, Mann, and Wofsy have support through current grants. Total research funding is approximately $1,000,000.

- Enrollments in undergraduate courses dropped to 5153 students in Fall 1996 from a total of 5567 in Fall 1995, a decrease of approximately 7.5%. Enrollments in calculus went down by 18%. Our statistics courses, Math 145, 245, and 345, enrollments increased from 780 to 809, or approximately 4%. Similar increases were observed in other statistics courses.

- A post-tenure review, and mandatory annual review process for all faculty was implemented in Spring 1997.

- A Student Outcomes Assessment plan is under development.

- Professor Edward Bedrick was appointed to a Regents Lectureship for 1997-2000.

- A total of 10 MA degrees and 14 BS degrees were awarded in 1996-97. No PhD degrees were awarded during the same period.

- Funding for a UNM/LANL Distinguished Lecture Series was obtained for a 3 year period in the amount of $7,000 per year (56% from APR, 30% from A&S, and 14% from the department).
• The department was listed in Group III of the American Mathematical Society rankings. These national rankings are made approximately every 10 years and are based on NRC rankings. Currently there are 25 departments listed in Group I, 56 departments in Group II, and 72 departments in Group III. AMS acknowledges that we should have been at least in Group II, but were not because of the failure of UNM to submit survey information to the NRC.

• Efroymson Foundation Funds were used to support a graduate student for a Research Semester. An award of $5,000 went to Nuria Joglar-Prieto for the Spring Semester, 1997.

• The mandatory use of graphing calculators in our Calculus sequence, Math 162-163-264 was discontinued.

• The Math Annex, which was used for office space for our part-time faculty, has been torn down to make way for a new classroom building. New office space was obtained in Hokona Hall for part-time faculty.

• Graduate student enrollments declined from 275 in Fall 1995 to 259 in Fall 1996, a decrease of nearly 6%, with most of the decline in pure and applied mathematics courses. Statistics courses enrollments have increased.

2. Significant Plans and Recommendations for the Near Future

• A comprehensive review of our undergraduate and graduate programs will be undertaken. Professor Embid will chair our graduate committee, while Professor Coutsias will chair the undergraduate committee.

• A major priority is the hiring of new faculty to maintain existing strength in our research areas. The table below gives some data on the total number of faculty (includes instructors), TA's, and part-time instructors for the past eleven years. While the number of faculty has decreased somewhat, the number of TA's has nearly doubled in this period. The number of part-time instructors has remained fairly stable. The interpretation of the data is unclear, but the main arguments for additional faculty are maintaining research strength and maintaining the ability to meet our instructional missions in graduate and undergraduate education.
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<tr>
<td>1996/97</td>
<td>37</td>
<td>42</td>
<td>20</td>
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</table>

- The Air Force Maui High Performance Computing initiative, led by Frank Gilfeather, Brain Smith (Computer Science) and John Sobolewski (CIRT) has expanded UNM's role in developing research projects utilizing the Maui faculty. This project continues to provide funding for graduate research assistants and postdoctoral appointments. The hire of additional faculty with interests in scientific computing remains a goal.
- The Graduate Committee remains concerned with a number of issues, including the recruitment and retention of students from underrepresented groups. Advisement and examination procedures will continue to be studied. Beginning in AY 1994/95, applicants were required to take the general GRE.
- The undergraduate committee will continue to study issues which include:
  - Evaluation of instruction (possible alternatives to ICES)
  - Evaluation of calculus reform measures
  - Recruitment and retention of math majors
  - Articulation of courses among New Mexico schools
  - Revising and updating course syllabi
  - Text book selection
We plan to continue to offer courses so that it will be possible for many students to satisfy major and minor requirements by taking courses in the evening or weekends. The plan operates on a 3 year repeating cycle of offerings. The department will support creative innovation in undergraduate and graduate education. A great deal of attention is now being focused on improving programs of teaching in our public schools. There is a strong national commitment to realize the benefits of new technologies and we must become willing to participate in this trend.

3. Appointments to Faculty/Staff

Visiting Faculty: Sundaram Thangavelu, Visiting Assoc. Professor in AY 1996-97

4. Separations

None.

5. Publications (for calendar year 1996)

Aceves, Alejandro B.


Bedrick, Edward J.


Boyer, Charles P.


Buium, Alexandru


Christensen, Ronald


Coutsias, Evangelos


Efromovich, Sam


Ellison, James A.


Embied, Pedro F.


Epperson, Jay B.


Galicki, Krzysztof


Gonzales, Nancy


Hagstrom, Thomas M.


Hahn, Liang-shin


Huzurbazar, A. V.


Kapitula, Todd


Koltchinskii, Vladimir I.

Kucharz, Wojciech


“Algebraic equivalence and homology classes of real algebraic cycles, Mathematische Nachrichten 180 (1996), 135-140.

“A characterization of the complex affine line, Manuscripta Mathematica 91 (1996), 145-149.


Loring, Terry A.

“Lifting Solutions to Perturbing Problems Fields Institute Monograph Series,” Volume 8, American Mathematical Society, Providence.


Mann, Benjamin M.


Pereyra, M. Cristina


Steinberg, Stanly L.


Stone, Alexander P.


Sulsky, Deborah L.


Wofsy, Carla

"Why is it so hard to dissociate multivalent antigens from cell surface antibodies?" *Immunology Today* 17: 77-80. Coauthor: B. Goldstein.

Zimmer, William J.


6. Outside Professional Activities

Alejandro Aceves

He attended the Southwest Dynamics Conference in Denton, Texas, April 11-13, 1997, and gave an invited talk.

Edward Bedrick

He visited Pasadena February 19-22, 1997 to attend the Second International Congress on Statistical Computing. He was an invited panel member in a session on algorithms for sparse categorical data.
Charles Boyer
He was in Oberwolfach, Germany, during the week of September 8, 1996 and gave a talk entitled "Topological Stability for Spaces of Rational Curves". He visited Texas A&M University on November 11, 1996 and gave the talk "A construction of Einstein Manifolds of Positive Scalar Curvature". He attended a conference in Montreal, January 9-11, 1997 on Algebraic Methods and Theoretical Physics and gave a paper entitled "Symmetries and Einstein Manifolds". He visited the Institute for Mathematics and its Applications at the University of Minnesota, April 18-20, 1997, where he participated in the Future Directions in Mathematical Sciences Conference. He was a plenary speaker, giving the talk "Two Applications of Symmetry Methods to Geometry and Topology".

Alexandru Buium
He visited the University of Illinois at Chicago, October 21-27, 1996 and gave a colloquium "Diophantine Geometry, Differential Algebra and Model Theory". He also participated in their Chicago, Los Angeles and Salt Lake Algebraic Geometry Conference. He visited Harvard University, March 19-21, 1997 and spoke in the joint Harvard-MIT colloquium series. He visited Montreal, April 9-13, 1997 to give seminar talks at the University of Montreal and at McGill University.

Laura Cameron
She attended the state articulation meeting in Farmington in August and gave a talk at the NYMATIC. She gave a seminar on "The use of pattern blocks in the concept of fractions as a portion of the whole". She attended the National Council of Teachers of Mathematics Western Regional Conference in November and gave a presentation, "Using Pattern Blocks to understand Fractions - a Hands-on Experience. She attended the 1997 MAA Southwest Section meeting at the NMSU branch campus at grants on April 4-5, 1997, where she gave the talk "Using Attribute Blocks to Teach Logic". She was also on a panel to discuss "Teaching Mathematics to Preservice Teachers."
Ronald Christensen

He served on the National Science Foundation panel to review all proposal in statistics and probability, during the academic year 1996/97.
He organized the meeting with the president of the American Statistical Association, Lynne Billard, when she visited Albuquerque on October 14, 1996.
He visited Kansas State University and the University of Missouri Columbia and University of Missouri, Rolla, all in the third week of March, giving a colloquium in all three places.

Sam Efromovich

He attended the IMS-ASA-NSF meeting on Models Selection in South Hadley, in August 1996, where he gave a talk.

James Ellison

He spent the summer at the HERA accelerator at the Deutsches Elektronen-Synchrotron (DESY) in Hamburg.
He attended a Workshop in September 1996 on Nonlinear and Collective Effects in Beam Physics in Archidossi, Italy where he presented two talks on deterministic and stochastic perturbations of 2 and 4D symplectic maps.

Pedro Embid

He attended the workshop on Stratified and Rotating Turbulence, held at the National Center for Atmospheric Research in Boulder, Colorado, July 30 - August 2, 1996.
He visited the Courant Institute in New York from September 14-20, 1996 to conduct joint research and give a colloquium, entitled “Low Froude number limiting dynamics for stably stratified flows with fixed or small Rossby Numbers.”
He attended the Southwest Dynamics Conference in Denton, Texas, April 11-13, 1997, where he gave an invited talk.
He gave an invited lecture at the American Mathematical Society sectional meeting at Oregon State University at Corvallis, April 19-20, 1997.

Krzysztof Galicki

He visited the University of California, Riverside on November 14, 1996 and gave a colloquium entitled “Making Einstein manifolds out of spheres.”
Nancy Gonzales
She gave a presentation entitled “Creativity and Problem Posing” at the National Council of Teachers of Mathematics Western Regional Conference in November 1996.

Cathy Gosler
She attended the Western Regional NCTM Conference in November 1996 and gave a session on Math Art.

Thomas Hagstrom
He was an organizer of a mini-symposium on Eigenvalues at the SIAM Annual meeting in Kansas City, July 22-26, 1996.

Philip Herlan
He attended a short course “Enhancing College Mathematics with Graphing Calculators” at Orange County College, California, January 6-10, 1997.

Todd Kapitula
He visited Oberwolfach, Germany, in March 1997, where he gave the talk “Tracking Eigenvalues with the Evans’s function” at an ODE conference.
He visited New Mexico State University in early April 1997, giving the talk “Bifurcating bright and dark solitary waves for the Perturbed Cubic-quintic Nonlinear Schrödinger equation”.

Jens Lorenz
He gave two colloquia on July 1st and 2nd, 1996 at Seoul National University in Korea. He attended the SIAM Annual meeting in Kansas City, July 22-26, 1996 and gave the lecture “Eigenvalues and stability for systems of mixed type”. He was an organizer of a mini-symposium.
He gave a talk on September 13, 1996 “Mathematical Analysis of Slightly Compressible Flows” in the Computational and Applied Mathematics Seminar at the University of Texas in Austin.
He visited the Colorado School of Mines on September 27, 1996 and gave the colloquium “Invariant tori and Lyapunov exponents”.
He visited the IMA Institute in Minneapolis from October 15-20, 1996 to conduct joint research and give a colloquium.
Terry Loring

He was in Tempe in July 1996 as a principal speaker at the Great Plains Operator Theory Symposium.

He was chair of the scientific committee for the AMS conference on “Classification Problems in C*-algebras and Dynamical Systems” in August 1996.

He also served on the selection committee for AMS Centennial Fellowships.

He attended the AMS Annual Meeting in San Diego in January 1997 and presented a paper in a special session on recent advances in Operator Algebra.

Cristina Pereyra

She worked in July and August 1996 with Chun Li and Alan McIntosh in Australia. She conducted joint research with Jim Wright and Byron Walden of New South Wales University.

She gave talks at MacQuarrie and New South Wales University in the month of August 1996.

She visited Rice University on October 3, 1996 and gave a colloquium entitled “Haar multipliers and paraproducts”.

She gave a seminar entitled “The two-weights problem for the Hilbert Transform” at the Universidad Central de Venezuela on January 10, 1997.

Stanly Steinberg

He attended the IMACS Applied Computer Algebra conference in Linz, Austria in July 1996 giving three papers.

He gave a talk “Interfacing Computer Algebra and Numerical Modeling” at the International Symposium on Symbolic and Algebraic Computation in Zurich in July 1996.

He attended the First International Symposium on Finite Volumes for Complex Applications of Computer Algebra in Rouen, France in August 1996 and gave the paper “Problems with Heterogeneous and Non-Isotropic Media or Distorted Grids”.

He presented a talk at Bell Laboratories on February 24, 1997 on “A Problem Solving Environment for Numerical Partial Differential Equations, based on a paper written in collaboration with Akers, Baffes, Kant, Randall and Young.”
Alexander Stone
He presented a paper at the Progress in Electromagnetics Research Symposium (PIERS), MIT, July 7-11, 1997.
He also presented a paper at the High Power Microwave Generation and Pulse Shortening Workshop, Edinburgh, Scotland, June 10-12, 1997.

Deborah Sulsky
She served on an NSF review panel for NSF for proposals to the Division of Mathematical Sciences on Mechanics and Materials, in early January 1997.
She visited the Alcoa Technical Center in Pittsburgh where she gave a talk “Overview of PIC for Continuum Mechanics”.

William Zimmer
He visited the Department of Industrial and Systems Engineering at Arizona State University on February 27, 1997 and gave a colloquium.

7. Outside Sponsored Research
See the table on the following page.
### Mathematics and Statistics Contract and Grants Awards FY 1996/97

<table>
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<th>Name</th>
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<th>Purpose</th>
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<td>Air Force</td>
<td>Mathematical Modeling of Novel Optical Fiber Devices</td>
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<td>Evaluating Independence in Linear and Generalized Linear Models</td>
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<td>Pedro Embid</td>
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<td>Nonlinear Problems in Geophysical and Relative Flows</td>
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<td>Archie Gibson</td>
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<td>Nonrelative Multichannel Quantum Scattering Theory</td>
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<td>Computational Analysis of Wave Propagation in the Presence of Multiple Scales</td>
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<td>Numerical Analysis of Complex Physical Processes in Reaction Dynamics</td>
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<td>Flowgraph and Saddlepoint Methods for Statistics</td>
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<td>Conference on New Researchers in Statistics and Probability</td>
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<td>Sandia National Laboratories</td>
<td>Empirical Processes Tools in Multivariate Data Analysis</td>
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<td>Computation and Analysis of Invariable Manifolds and their Bifurcations</td>
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<td>Numerical and Asymptotic Studies of Complex Flow Dynamics</td>
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<td>Stable Relations and their Loci in Operator Algebra Variables</td>
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<td>Programming of Finite Difference Schemes</td>
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<td>Deborah Sulsky</td>
<td>Alcoa Foundation</td>
<td>Unrestricted Research</td>
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1. Significant developments during the academic year 1996-97

Professor Sergio Tenenbaum (Ph.D., Pittsburgh, 1995) began his tenure as an Assistant Professor of Philosophy at UNM during the Fall Semester, 1996. He is an outstanding young philosopher with a degree from perhaps the best philosophy graduate program in the country who was hired last year after an exhaustive search. Professor Tenenbaum teaches and writes about ethics, moral psychology and early modern philosophy. The Department was also very fortunate to hire Professor Rebecca Kukla (Ph.D., Pittsburgh, 1996) away from the University of Oregon as a ‘special hire.’ She will begin teaching in Fall, 97/98. Professor Kukla is interested especially in political and social philosophy, an area in which this department has not been strong in recent years. She is hard at work on a book on Rousseau. Because of the hiring ‘freeze’ imposed at the end of 1996 the Department was not able to fill the empty position left with the retirement of Howard Tuttle at the end of the 95/96 academic year. This was unfortunate because after an extensive search and several days of interviews at the American Philosophical Association Eastern Division convention in Atlanta, we had identified and were negotiating with an exceptional young philosopher at the University of Washington, St. Louis who works in the ‘overlap’ between philosophy and cognitive science.

The Department spent much of the 96/97 academic year rethinking and rewriting our Ph.D. program. This involved dropping our old (pre-dissertation) system of required seminars and corresponding comprehensive exams in ethical theory and metaphysics/epistemology in favor of a first-year ‘proseminar’ required of all new graduate students, a first-year preliminary examination in the history of philosophy over a short list of texts, an extensive course distribution requirement, and a single, oral, comprehensive examination. An important feature of the new program is our departmental commitment to admit to our Ph.D. program only students for whom we can provide a full financial aid package (i.e. typically a teaching-assistantship for five years). This will mean both a significant reduction in the number of students admitted and, in a few years, a sharp increase in the number of students who actually complete the Ph.D. It should also have the effect of raising the quality of applicants to our Ph.D. program since it makes us more competitive with other serious programs. All these changes were approved by the Department during 96/97, though a few details of the wording remains to be worked out.
Since the College of Arts and Sciences and the Office of Graduate Studies withdrew their support for a dissertation fellowship in philosophy, the Department was able to fund only a somewhat reduced fellowship this year, using funds from our Gwendolyn Barrett Fund. This Fellowship was awarded for 97/98 to Kevin Boileau.

At the instigation of the Provost’s Office the Department developed and administered an outcomes assessment of our graduating undergraduate majors. The information received from this exercise was rather skimpy but what we learned from this first effort will allow us to refine this process for 97/98.

As in previous years, the Department sponsored an extensive list of lecturers during 96/97, including a number of distinguished philosophers from other universities, these included:

Alexander Nehamas, Princeton, O’NEIL MEMORIAL LECTURES IN THE HISTORY OF PHILOSOPHY: “Socratic Irony” and “A Reason for Socrates’ Face: Nietzsche on the ‘Problem of Socrates’”

Elliott Sober, U. of Wisconsin: “Morgan’s Canon: The Mind and Evolution”

John Carriero, UCLA: “Locke, Berkeley and the Veil of Perception”

David Owen, U. of Arizona: “Hume and the Irrelevance of Warrant”

Stanley Fish, Duke, “Mission Impossible: Setting the Just Bounds Between Church and State,” and “The False Lure of Procedural Justice: Principles and Hate Speech”

Keith Butler, Washington, St. Lewis: “Are Computational Theories in Psychology Anti-Individualist?”

Arielar Lazar, Stanford: “Deceiving Oneself or Self-Deceived: On the Formation of Belief Under the Influence”

Richard Shusterman, Temple: “The Urban Aesthetics of Absence”

Jennifer Nagel, Pittsburgh: “Quine on the Normative Value of Causation”

Roger Wertheimer, Cal State, Longbeach: “Conceptualizing Condemning”

Roger Lamb, U. of Queensland: “Love and Rationality”


Hans Lottenbach, Pittsburgh: “Rousseau’s Critique of Empiricism”

James Doyle, Kansas State: Socrates and the Oracle”

In addition to these speakers from other universities, faculty members John Taber, Barbara Hannan. Russell Goodman, Sergio Tenenbaum and Amy Schmitter from this Department gave papers in this series (Hannan twice), as did five of our graduate students: Dan Wolne, Ruth Meredith, David O’Donaghue, Pete Boghossian and Bryan Benham. David Dinwoodie, of the UNM Anthropology Dept. also spoke in this series.
2. Significant Plans and Recommendations for the Near Future

The Department plans to continue to work on the 'upgrading' of our graduate program at the PhD level, described above. Since an essential feature of this upgrading involves competing successfully for high quality graduate students, it would be very helpful if the partial support for our single dissertation fellowship previously provided by A&S and the Office of Graduate Studies were restored. We are competing for students with philosophy departments that standardly supply all admitted students with a year or two of fellowship support before asking them to serve as teaching assistants.

We also plan to focus more of our time on rethinking our undergraduate offerings, especially 'pre-major' courses at the 100 level. This process was begun in 95/96 with Professor Aladdin Yaqub's complete and very successful reworking of Phil 156 (Reasoning and Critical Thinking) into a genuine critical thinking course given by our TA's under his careful supervision. There are several other 100 level courses, including Phil 101 (Intro. to Philosophy), Phil 111 (Humanities), as well as some 200 level courses such as Phil. 255 (Contemporary Ethical Issues) which we plan to rethink both to make them more useful to non-majors and, in some cases, better 'lead-ins' to the philosophy major.

It is extremely important that the Department be able to replace Howard Tuttle. Independently of the problems created by having to cover some courses with part-time faculty (or regular faculty better qualified to teach other things), the structure of our graduate offerings especially is now partly organized around the courses in metaphysics and epistemology that we intend the person hired for this position to offer. There is thus a 'hole' in this program as long as this position remains empty.

3 Appointments to faculty.

Rebecca Kukla, August, 1997.

4. Separations of faculty/staff.

None.

5. Publications


G. F. Schueler: “Why Modesty Is a Virtue” (ETHICS, 107, no. 3 (April, 1997), 467-485), and “How Can Reason Be Practical?” (CRITICA, 84, 41-60), review in ETHICS (Jan. 1997).


Sergio Tenenbaum: “Realists Without a Cause: Deflationary Theories of Truth and Ethical Realism” (CANADIAN JOURNAL OF PHILOSOPHY 26, no. 4, 561-590).
Aladdin Yaqub: critical study of Marian David: CORRESPONDENCE AND DISQUOTATION: AN ESSAY ON THE NATURE OF TRUTH (NOTRE DAME JOURNAL OF FORMAL LOGIC, forthcoming)

6. Outside Professional Activities of Faculty

Andrew Burgess: read a paper at the Rocky Mt. Regional Convention of the American Association of Religion, Salt Lake City, 2-3 May; responded to two papers at the International Kierkegaard Conference, Northfield, MN, 7-11 June.

John Bussanich: Co-editor of ANCIENT PHILOSOPHY


G. F. Schueler: member of the Program Committee, Am. Phil. Assoc., Pacific Div., served as Chair of a session at the Pacific Div. meeting of the Am. Phil. Assoc. meeting in Seattle, March, 1996.


John Taber: read "On Nagarjuna's So-Called Fallacies" at the Society for Comparative Philosophy, April, 1996.

Aladdin Yaqub: member of the Editorial Board of EVOLUTION AND COMMUNICATION.

7. Outside Sponsored Research

Ha!
"Physics is a profession of and for idealists. We are reasonably paid; we are given instruments, laboratories, complicated and expensive machines, and we are asked not to make money with these tools, like most people, but rather to spend money. Furthermore we are supposed to do what we find most interesting, and we account for what we spend to the money givers - the federal authorities and, in the last analysis, the taxpayer. We believe deeply that the pursuit of science by the physicist is important and should be supported by the public......We are participating in a most exhilarating enterprise right at the center of our culture. What we do is essential in shaping our physical and mental environment. ... We are all working for a common and well-defined aim: to get more insight into the workings of nature. This is a constructive endeavor, where we build upon the achievements of the past; we improve but never destroy the ideas of our predecessors."

adapted from V.F. Weisskopf

"The Privilege of Being a Physicist"

Victor Weisskopf is the greatest elder statesman of our profession. I have used his quote before in an Annual report. I am impressed that he could survive into his eighties without losing his idealism (and he did administrative work no less - as Director General of CERN, a highly political position). As this is my last report as Chairman, I am pleased that I have not lost all of my idealism either. My ideals and hopes for my science, for my department, for my colleagues, and especially for my (all) students is undiminished. I will include as Appendices to this Report many of the accomplishments of our community in both research and teaching. We have done a great deal this year. While I may be the only one to think of this year as one of positive virtues and accomplishments, I am truly proud of the fine work done here.

My idealism and my hopes for the University as a whole have, however, changed. In this arena I have become much more cynical and that (plus boredom) is the reason I wish to return to a position as a professor.

I have always believed that a University occupied a special and unusual place in our increasingly post-modern culture. Almost all of our institutions have ultra-short goals. Politicians look only to the next election, business people to the quarterly bottom line, etc. There is less and less interest in corporate or governmental research. But, the university, in all its ivory-tower splendor, is (supposedly) dedicated to the long-term improvement of our society. We invest in the minds of the young - the greatest of all resources and the only one which seems unlimited. It is here that I believe UNM is failing to live up to its potential. What a pity!
It is clear that a department chairperson cannot see all of the big picture and there are likely things and ideas propagating at UNM of which I have no idea. Yet I am not completely ignorant nor naive and I see no such long-range planning. I see no risk taking but rather a fiduciary outlook and aspect that would make any CEO proud.

There are many examples I could cite, especially those I see as opportunities which have been completely missed or overlooked. However, I shall limit my comments to things of which I have direct knowledge - viz., things that have occurred in this department. These examples are generally fiscal in nature.

In 1991, when I assumed the position as Chairman, there was an unknown quantity of money in our overhead return account. Because of an archaic system of accounting within the University (I believe this is reasonably well acknowledged at all levels) it took four years to determine that the amount was about $95,000. Again, because the University was not able to survey research accounts adequately we had at least one professor considerably overspend his start-up funds. Since he was denied a contract at his Code III Review the Department was forced to “swallow” the over-expenditure. A reasonably accurate accounting procedure would have prevented him from spending money once the account was empty. This experience taught me that the department needed its own accountant. The drama of working with Human Resources needs no telling here but I am sure that anyone who has tried to fill a position has many such stories. After several false starts we were able to hire such a person. It was only then we learned the extent of the problems.

The Department’s overhead return money is the result of the combined efforts and talents of the individual faculty members who strive so hard to get these monies. What is one to do with it?? Obviously the best use is the improvement of the Department! But how to do this is where the problems arise. Because of a serious lack of state support, the Department has been obliged to hire extra people on the overhead money just in order to fulfill the regular duties to our students and faculty. This has been responsible for 1/3 to 1/2 of all such funds returned. With departures and retirements, the Department was faced with a shrinking faculty. In order to keep the numbers at least constant and, with good fortune, to grow a bit an investment was, and still is, needed. A conscious decision was made to invest in areas which made the most sense for our area - viz. optics, materials, and astronomy. Hires were made in this area and money was “fronted” to ensure growth. There have been several results from these investments. The one most obvious is that I overspent the overhead account by about $100,000 during six years (if the numbers I have are correct). This is clearly not a good thing to do. The other results are a $32,000,000 LodeStar grant, a DYNAMX project worth nearly $30,000,000 of which some $5 - 8 million will come to UNM, and a vibrant group of young faculty. The overall overhead generated for UNM during the next five years will be more than $2,000,000 from these two projects alone. A return of 20 to 1 seems worth the investment to me. It is only the very short-term viewpoint, the (in my opinion) penny wise but pound foolish attitude which seems prevalent throughout UNM that I find depressing.

A certain tedium in the position due to dealing eternally with the same problems, as well as the frustration cited above, are the reasons for my resignation this past year. Despite all of this, I am happy to have taken the Chairmanship, feel that I have done my civic duty, particularly to student and colleagues throughout the faculty and staff, and am more than pleased to return to the position of an ordinary professor. I will miss my interactions with many people that I grew to know during the past six years but will be more than compensated by my interactions with the
Center for Advanced Studies

The Center for Advanced Studies continues under the direction of Professor V. M. Kenkre. During his first full year as director he has instituted a number of programs that not only increase the visibility of the Center and its members, but also contribute favorably to the reputation of the University. Among the most noticeable achievements were the organization of four workshops by Center personnel:


2. *Quantum Control of Atomic Motion*, March 1997, organized by Assistant Professor Ivan Deutsch.


All of these workshops were supported by funds from the Center which also sponsored an educational outreach program in which 30 high school students were invited to the Physics Department to learn about theoretical physics from Center members.

In addition to these new activities, the Center popular seminar series continued as did the program to sponsor long-term visits by selected scientists. This year we were fortunate to have eminent scientists from Poland, India, Russia, and Missouri visit the Department. One of these visits resulted from the new collaboration between the Center and ARC. Finally, the Center broadened its membership base to include scientists from outside the Department of Physics and Astronomy. The new members added during 1996-1997 include Professor E. Coustias, Mathematics and Statistics, Professor D. Evans, Chemistry, and Dr. Alsing, ARC.

The DYNAMX Project

This major experiment will be flown in space by NASA. It is a joint Jet Propulsion Laboratory/UNM project to measure critical phenomena in liquid helium. It is sufficiently sensitive that the effects of gravity on earth are too great. Hence, only the microgravity of space will suffice.

There were several major events this year, probably the largest of which was a change from a Space Shuttle mission to a Space Station mission. This means a delay of one to two years
in the performance of the experiments, but the change to the Space Station will give Prof. Duncan and his group approximately six months of data-taking time rather than the original ten-day mission planned for the Shuttle. Thus, the disappointment of a postponement is assuaged by the prospect of a huge extra amount of data.

The apparatus continues to collect data in ground-based experiments. These has led to the publication of results in Physical Review Letters, the most significant journal in our field. Invited presentations have also been given at national and international meetings.

The project underwent a major NASA review, known as a Requirements Definition Review. This led to many positive statements but also a requirement for a further review which will take place in the Spring of 1998. This should be the final major hurdle before flight approval.

The LodeStar Project

LodeStar made significant progress in its development during Fiscal Year 1997. Watershed events include completing the subcontracts with the New Mexico Institute of Mining and Technology (NM Tech), initiating a positive relationship with the New Mexico Museum of Natural History & Science (NM Museum), and selecting the design and engineering teams for Enchanted Skies Park.

The Board of Trustees of the New Mexico Museum of Natural History & Science unanimously approved the concept of LodeStar developing its urban-based, astronomy-oriented science center at the Museum. The vote was a de facto Memo of Understanding and LodeStar and Museum representatives are drafting a joint Powers Agreement (JPA). The JPA will be completed this fall.

LodeStar continued its development of Enchanted Skies Park on Horace Mesa near Grants with several requests for proposals (RFPs) submitted and contractors approved. The RFP for the Environmental Assessment (EA) of the Horace Mesa site was awarded to Tetra Tech for the Air Force Center for Environmental Excellence. The EA should be completed this fall.

LodeStar also selected the architectural and engineering firms for the Park. These firms began the site assessment and design process this summer. The joint venture of Mahlman & Miles-Bohannan Houston were selected as the site assessment and master planning team. Design Collaborative Southwest (DCSW) was selected for technical design and construction management. DCSW is the architectural firm of record for LodeStar.

At the NM Tech site, LodeStar drafted a Memo of Understanding and Statement of Work for the remote-controlled 30-inch Kueller Telescope and the teacher-training center. The documents are now awaiting signatures.

LodeStar staff, faculty and graduate assistants have been developing the prototype of the World Wide Web-based control system which will operate the Kueller Telescope. The Capilla Peak telescope is being used as the test instrument. (Tests this month have shown the system to be viable.)

LodeStar selected Stephen M. Pompea, Ph.D., as the project's non-formal science education program consultant. Dr. Pompea began his work this summer at the direction of the LodeStar Executive Council. His work will lead to the educational programming and exhibits at
Highlights of Faculty Activities

Professor Colston Chandler noted that during the past academic year every course he taught was one that he had not taught for a very long time, if ever. The highlight, in his view, was a seminar on quantum physics that he developed for the General Honors Program. In it the sixteen liberal arts students enrolled studied books written by physicists for physicists, texts by Pais and by Feynman. Professor Chandler, and he believes also the students, were well pleased by the understanding achieved of this undiluted professional-level quantum physics.

Also during the past year Professor A. G. Gibson, Department of Mathematics and Statistics at UNM, and Professor Chandler wrote a paper that completes a two decades long research project on how to obtain mathematically well-founded, yet numerically practical, solutions to the Schrödinger equation for problems that are presently just outside the capabilities of present day computers. At the invitation of a prominent journal in the field, Professors Chandler and Gibson are presently writing a paper that reviews their results for numerical practitioners.

For the 1996-1997 academic year Professor Chandler was vice chairman of the Few Body Topical Group of the American Physical Society, the first year of an elected three year term of office that will culminate in the chairmanship.

Professor Stephen Gregory taught Astronomy 421 and 422 for the second consecutive year. However, he made a number of important changes. He formalized the course notes into a handout consisting of seven new chapters including: basic mechanics and the 2-body problem, orbits in astrophysics, special relativity, particle physics, stellar physics, radiation physics, and cosmology.

These chapters were included in the new 4th edition of *Introductory Astronomy and Astrophysics* by Professor Michael Zeilik and Professor Gregory. This textbook for advanced level astrophysics courses is published by Saunders. The whole thrust of the new materials used in both the lectures and the new book edition was to bring a higher level of physics into the Department’s astrophysics program.
Professors


Beckel, Charles L., Ph.D., Johns Hopkins University, 1954 (Emeritus)

Brueck, Steven R. J., Ph.D., MIT, 1971.

Bryant, Howard C., Ph.D., Michigan, 1960.

Cahill, Kevin, Ph.D., Harvard, 1967.


Chandler, Colston, Ph.D., California, Berkeley, 1967.


Dieterle, Byron D., Ph.D., California, Berkeley, 1967.

Finley, Daniel, Ph.D., California, Berkeley, 1968.

Jain, Ravinder K., Ph.D., California, Berkeley, 1974.

Kelsey, Charles A., Ph.D., Notre Dame, 1962.


McIver, John K., Ph.D., Rochester, 1978.

Panitz, John A., Ph.D., Pennsylvania University, 1969.

Price, R. Marcus, Ph.D., Australian National University, 1966.


Associate Professors

Duncan, Robert V., Ph.D., California, Santa Barbara, 1988.
Duric, Nebojsa, Ph.D., Toronto, 1984.
Ostanski, Marek, Ph.D., Polish Academy of Sciences, 1979
Prasad, Sudhakar, Ph.D., Harvard University, 1983.

Assistant Professors

Deutsch, Ivan H., Ph.D., California, Berkeley, 1992.
Gold, Michael S., Ph.D., California, Berkeley, 1986.
Henning, Patricia A., Ph.D., Maryland, 1990.
Johnson, Brad L., Ph.D., University of Colorado, 1991.
Seidel, Sally C., Ph.D., Michigan, 1987.

University Professor

Gell-Mann, Murray, Ph.D., Massachusetts Institute of Technology, 1951.
Lecturer
Caffo, John A., M.S., AFIT

Research Professors
Emin, David, Ph.D., Pittsburgh, 1968.
Lowe, James, Ph.D., Birmingham, 1959.
Wodkiewicz, Krzysztof, Ph.D., Rochester, 1977.

Research Associate Professor
Moore, Gerald, Ph.D., Brandeis, 1969.

Research Assistant Professors
Field, Douglas, Ph.D., Indiana University, 1991.
Zhao, Xin Miao, Ph.D., New Mexico, 1993.
DEPARTMENT OF PHYSICS AND ASTRONOMY
1996-1997
David M. Wolfe, Chair

APPOINTMENTS TO FACULTY/STAFF

Faculty:
Brad L. Johnson, Assistant Professor, August 19, 1996
Richard J. Rand, Assistant Professor, August 19, 1996
James R. Place, Lecturer III, August 26, 1996

Staff:
Marla F. Wonn, Department Administrator, October 21, 1996
Ruth Martin, Staff Assistant, December 2, 1996

FACULTY/STAFF SEPARATIONS

Faculty:
Brad L. Johnson, Assistant Professor, May 15, 1997
James R. Place, Lecturer III, May 15, 1997

Staff:
Herman Holiday, Administrative Assistant, February 21, 1997
James M. Hontas, Model Shop Supervisor, August 1, 1996
Christopher J. Hopper, Staff Assistant, December 13, 1996
Ruth Martin, Staff Assistant, February 21, 1997
Alan Noyes, Department Administrator, December 31, 1996
Charles E. Williams, Laboratory Supervisor, September 30, 1996
Barbara Woods, Staff Assistant, July 31, 1996
Ahluwalia, Harjit S.


A Methodology for Computing Cosmic Ray Transverse Gradients. *Third SOLTIP Symposium,*
Chinese Academy of Sciences, Beijing, v. 1, p. 9, 1996.


Bassalleck, Bern


Beckel, Charles L.


Bryant, Howard C.


Cahill, Kevin

Noncompact, Gauge-invariant Simulations of U(1), SU(2), and SU(3), with G. Herling,


Caves, Carlton M.


Chandler, Colston


Deutsch, Ivan H.


**Diels, Jean-Claude**

1. Invited publications


2. Conference papers (refereed)


3. Refereed publications


   Frequency Locking and Unlocking in a Femtosecond Ring Laser with the Application to Intracavity Phase Measurements, with Scott Diddams and Briggs Atherton, *Applied Physics B* 63, 473-480,
(1996).


Dieterle, Byron D.

Evidence for anti-$\nu_{\mu}$ — anti-$\nu_e$ Oscillations from the LSND Experiment at LAMPF, Physical Review Letters, 77, 3082, (1996).


The Liquid Scintillator Neutrino Detector and LAMPF Neutrino Source, LA-UR-96-1327 preprint, accepted for publication by Nuclear Instruments and Methods.

Duncan, Robert V.


Dunlap, David H.


Charge-Dipole Model for the Universal Field Dependence of Mobilities in Molecularly Doped Polymers.


**Duric, Nebojsa**


**Emin, David**


**Finley, Daniel**

15


Gold, Michael S.


Measurement of $\sigma_B(W^\pm \rightarrow e\nu)$ and $\sigma_B(Z \rightarrow e^+e^-)$ in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, with the CDF Collaboration, F. Abe et al., *Phys. Rev. Lett.*, 76, 3070-3075, (1996).


Search for the Rare Decay $W^\pm \rightarrow \pi^\pm \gamma$, with the CDF Collaboration, F. Abe et al., *Phys. Rev. Lett.*, 76, 2852-2857, (1996).

Search for Chargino - Neutralino Production in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, with the CDF Collaboration, F. Abe et al., *Phys. Rev. Lett.*, 76, 4307-4311, (1996).

Measurement of the $B^0$ and $\bar{B}^0$ Meson Lifetimes Using Semileptonic Decays, with the CDF Collaboration, F. Abe et al., *Phys. Rev. Lett.*, 76, 4462-4467, (1996).

Search for Flavor Changing Neutral Current $B$ Meson Decays in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, with the CDF Collaboration, F. Abe et al., *Phys. Rev. Lett.*, 76, 4475-4680, (1996).

Measurement of Correlated $\mu \rightarrow \bar{\nu} b$ Cross-sections in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, with the CDF Collaboration, F. Abe et al., *Phys. Rev. Lett. D* 53, 1051-1065, (1996).

Gregory, Stephen A.


**Henning, Patricia A.**


**Kenkre, V. M.**


Lowe, James


Matthews, John A. J.


Measurement of $\sigma B(W \rightarrow ev)$ and $\sigma B(Z \rightarrow e^+e^-)$ in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, with the CDF Collaboration, F. Abe et al., *Phys. Rev. Lett.*, 76, 3070-3075, (1996).


Search for the Rare Decay $W^\pm \rightarrow \pi^\pm \gamma$, F. Abe et al., CDF Collaboration, *Phys. Rev. Lett.*, 76, 2852-2857, (1996).


Measurement of the $B^0$ and $\bar{B}^0$ Meson Lifetimes Using Semileptonic Decays, with the CDF Collaboration, F. Abe et al., *Phys. Rev. Lett.*, 76, 4462-4467, (1996).


Measurement of the $\gamma + D^{**}$ Cross-Section in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, with the CDF Collaboration, F. Abe, et al., *Phys. Rev. Lett.*, 77, 5005-5010, (1996).


McIver, John K.


Moore, Gerald T.


Prasad, Sudhakar


Rand, Richard J.


Modeling the HI Supershell in the Edge-on Galaxy NGC 4631 as an Energetic HVC Impact, with


**Rudolph, Wolfgang G.**


**Seidel, Sally C.**


Measurement of the $\Lambda_b^0$ Lifetime Using $\Lambda^0_b \rightarrow \Lambda^+ \bar{\nu}$, F. Abe et al., CDF Collaboration, *Phys. Rev. Lett.*, 77, 1439-1443, (1996).


Measurement of the $B$ and $B^0$ Meson Lifetimes Using Semileptonic Decays, F. Abe et al., CDF


Measurement of $\sigma x B(W^{-} e^{+})$ and $\sigma x B(Z^{0} \rightarrow e^{+} e^{-})$ in $p-\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, F. Abe et al., CDF Collaboration, *Phys. Rev. Lett.*, 76, 3070-3075, (1996).


Sheik-Bahae, Mansoor


Wodkiewicz, Krzysztof


Wolfe, David M.


Rare K decays in Flight, with S. Pislak et al., Frascati Physics Series, vol. XXX. 1996.
SPONSORED RESEARCH AWARDS
DEPARTMENT OF PHYSICS AND ASTRONOMY
1996-1997
David M. Wolfe, Chair

AWARDS TOTAL: $3,455,181

Bernd Bassalleck, Department of Energy, 11/21/96, $263,000
Strange Particles and Heavy Ion Physics
Co-PI: David M. Wolfe

Bernd Bassalleck, Brookhaven National Laboratory, 12/20/96, $103,000
Station 1 PHENIX Muon Tracker

Bernd Bassalleck, Department of Energy, 4/21/97, $63,000
Strange Particles and Heavy Ion Physics
Co-PI: David M. Wolfe

Stephen Boyd, National Aeronautics and Space Administration, 10/22/96, $88,000
New Phenomena in Strongly Counterflowing He-II Near $T_\lambda$

Howard Bryant, Department of Energy, 3/14/97, $102,000,
$H$ Spectroscopy

Kevin Cahill, Department of Energy, 3/4/97, $27,000
Dynamics of Particles and Fields

Belva Campbell, NM Commission on Higher Education, 12/26/96, $35,000
Enhanced Pre-Service Teacher Education in the Sciences

Carlton Caves, Office of Naval Research, 10/7/96, $70,000
Limitations on High-Precision Optical Measurements/High-Precision Measurements and Quantum Informative Theory

Carlton Caves, Office of Naval Research, 3/14/97, $15,500
Limitations on High-Precision Optical Measurements/High-Precision Measurements and Quantum Informative Theory

Jean-Claude Diels, National Science Foundation, 7/30/96, $10,000
REU: Non-Reciprocal Response in Femtosecond Ring Lasers

Jean-Claude Diels, Electric Power Research Institute, 10/18/96, $38,800
Discharge of Lightning with Ultrashort Pulses
Co-PI: Xin Zhao

Jean-Claude Diels, Electric Power Research Institute, 12/11/96, $29,046
Lightning Diversion

Byron Dieterle, Department of Energy, 11/21/96, $188,000
Nuclear Physics at Intermediate Energies

Kathryn Dimiduk, San Diego State University Foundation, 1/28/97, $4,000
Preparation for Teacher Workshops Using CPU Program Materials
Co-PI: Cynthia Riedel

Robert Duncan, Jet Propulsion Lab, 3/31/97, $180,000
Critical Dynamics in Microgravity (DYNAMX)

Robert Duncan, Jet Propulsion Lab, 6/24/97, $79,949
Critical Dynamics in Microgravity (DYNAMX)

David Dunlap, National Science Foundation, 4/25/97, $50,000
REU Summer Program in Physics Research
Co-PI: David M. Wolfe

Michael Gold, Fermi Laboratory, 10/15/96, $26,000
Design and Prototyping of the CDF SVXII Silicon Detector Power Supply System

Stephen Gregory, Phillips Laboratory, 10/29/96, $26,498
IPA for Stephen Gregory

Stephen Gregory, Phillips Laboratory, 11/18/96, $408
IPA for Stephen Gregory

Patricia Henning, National Science Foundation, 6/6/97, $35,320
The Distribution of Optically Obscured Galaxies and Asymmetric Isolated Galaxies

Brad Johnson, Sandia National Laboratories, 5/30/97, $25,635
Quantum Transport in Coupled Double Quantum Wells

Vasudev Kenkre, Sandia National Laboratories, 10/8/96, $50,000
Statistical Approaches to the Compaction Problem

Vasudev Kenkre, National Science Foundation, 2/11/97, $183,000
Theory of Charge Transport in Molecularly Doped Solids
Co-PI: David Dunlap
John Matthews, Department of Energy, 3/4/97, $275,000
New Mexico Center for Particle Physics: Studies of Fundamental Interactions
Co-PIs: Michael Gold and Sally Seidel

Tillman McCarson, Jet Propulsion Lab, 6/23/97, $79,949
Experimental Manager, DYNAMX Program

John McIver, Phillips Laboratory, 7/5/96, $21,326
LBAR Call Order 9: Diode-Pumped Solid State Laser Development

John McIver, Phillips Laboratory, 7/8/96, $7,387
LBAR Call Order 23: Adaptive Options for Array Imaging

John McIver, Phillips Laboratory, 7/8/96, $19,985
LBAR Call Order 22: Azide Chemical Kinetics Studies

John McIver, Phillips Laboratory, 7/25/96, $34,000
LBAR Call Order 10: BRDF Studies of Materials Used in Laser Resonance

John McIver, Phillips Laboratory, 7/25/96 $31,000
LBAR Call Order 21: Project for Sr. Scientist N. Tenorio

John McIver, Phillips Laboratory, 10/10/96, $8,162
LBAR Call Order 21: Project for Sr. Scientist N. Tenorio

John McIver, Phillips Laboratory, 12/19/96, $6,925
LBAR Call Order 23: Adaptive Options for Array Imaging

John McIver, USAF European Office of Aerospace Research & Dev., 2/12/97, $22,092
Year Two IPA/EOARD

John McIver, Phillips Laboratory, 3/17/97, $16,621
LBAR Call Order 23: Adaptive Options for Array Imaging

John McIver, Phillips Laboratory, 6/30/97, $20,751
LBAR Call Order 22: Azide Chemical Kinetics Studies

Isabelle Percheron, Phillips Laboratory, 3/31/97, $16,334
Year Three IPA No 129 for Isabelle Percheron

Sudhakar Prasad, Phillips Laboratory, 11/26/96, $657
The Role of Optical Fibers in Array Interferometers

Sudhakar Prasad, Air Force Office of Scientific Research, 2/19/97, $61,469
Information Dynamics in Image Deconvolution
Wolfgang Rudolph, National Science Foundation, 8/30/96, $266,470
*Development of an Ultrafast High-Power IR-UV Laser Source*
Co-PIs: Jean-Claude Diels and Mansoor Sheik-Bahae

Wolfgang Rudolph, Air Force Office of Scientific Research 2/5/97, $24,982
*Radar Waves with Optical Carriers*
Co-PI: Jeffrey Nicholson

Sally Seidel, Fermi Laboratory, 5/7/97, $10,000
*Testing and Documentation of Silicon Detectors for SVXII*

Mohinder Pau Sharma, Phillips Laboratory, 2/12/97, $44,777
*Nonlinear Optics Investigations for Infrared Detection*

Mohinder Pau Sharma, Phillips Laboratory, 6/26/97, $15,818
*Nonlinear Optics Investigations for Infrared Detection*

Thomas Stepetic, Bolling Air Force Base, 6/23/97, $296,141
*Lodestar/Cosmic Explora*

David Wolfe, Phillips Laboratory, 7/8/96, $9,993
*LBAR Call Order 28: Telescope Beacon Development*

David Wolfe, Sandia National Laboratories, 7/23/96, $10,668
*Contract AT-5846--Brad Johnson*

David Wolfe, Phillips Laboratory, 7/25/96, $54,350
*IPA for Gordon Love*

David Wolfe, Advanced Optical Equipment & Systems Corporation, 9/28/96, $24,745
*Ultrafast Laser Semi-Conductor Interactions*

David Wolfe, Sandia National Laboratories, 12/2/96, $1,137
*Very Low Temperature Measurement of the Seebeck Coefficients and Electrical Conductivities in a High Magnetic Field of Samples*

David Wolfe, Phillips Laboratory, 12/4/96, $99,018
*IPA for John Telle*

David Wolfe, Phillips Laboratory, 12/20/96, $59,991
*IPA for Thomas Henshaw 1/97-11/97*

David Wolfe, Phillips Laboratory, 2/24/97, $97,823
*IPA No. 102 for James Welch*
David Wolfe, Phillips Laboratory, 2/26/97, $69,586  
*IPA No. 74 for Samuel Howells*

David Wolfe, Sandia National Laboratories, 5/1/97, $90,834  
*Transport in Unconventional Solids*  
Co-PI: David Emin

David Wolfe, Sandia National Laboratories, 6/4/97, $80,000  
*The BRAHMS Proposal*  
Co-PI: Robert Duncan

David Wolfe, Phillips Laboratory, 6/30/97, $105,932  
*IPA No. 161 for Theodore Turner*
SPONSORED RESEARCH FUNDING PROPOSALS
DEPARTMENT OF PHYSICS AND ASTRONOMY
1996-1997
David M. Wolfe, Chair

Howard Bryant, Economic Development Administration, 9/1/96-8/31/97, $296,606
Retraining for Defense Adjustments
Co-PI: Phyllis Hersh

Nebojsa Duric, National Aeronautical and Space Administration, 6/1/97-5/31/02, $78,889
A Survey of Discrete X-Ray and FIR Processes in Nearby Galaxies

William Junor, National Aeronautical and Space Administration, 6/1/97-5/31/02, $106,182
Physical Processes Near the Event Horizon of M87
Co-PI: John McGraw

V. M. Kenkre, Los Alamos National Laboratory, 7/15/97-9/30/97, $20,000
Investigation into the Time Evolution of Certain Non-Linear Systems in Condensed Matter Physics

Wolfgang Rudolph, Phillips Laboratory, 3/1/97-12/31/97, $98,445
Ultrashort Light Pulses from Iodine Lasers

Wolfgang Rudolph, Phillips Laboratory, 6/10/97-12/31/97, $10,975
High-resolution Spectroscopy in Sub-Doppler Optical Frequency Stabilization

Mansoor Sheik-Bahae, Los Alamos National Laboratory, 8/15/97-8/15/98, $45,000
NUCOR Proposal: Optical Refrigeration in Semi-Conductors

Gerard J. Stephenson, National Science Foundation, 1/1/97-12/31/99, $7,884
Low Energy Physics of Quarks and Neutrinos
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<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
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<td>09/06/96</td>
<td>Dale A. Frail</td>
<td>NRAO, VLA</td>
<td>Astrophysics</td>
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<td>Roseanne Di Stefano</td>
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<td>Robert Duncan</td>
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<td>Peter Bolling</td>
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<td>Andrew Hime</td>
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<td>Xerox</td>
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<td>Michael Zeilik</td>
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<td>02/07/97</td>
<td>Laird Thompson</td>
<td>Univ. of Illinois</td>
<td>Astrophysics</td>
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<td>David Gutzler</td>
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<td>John Preskill</td>
<td>Cal Tech</td>
<td>Quantum Mech.</td>
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<td>Azi Genach</td>
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<td>Steve Lamoreaux</td>
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<td>James Stone</td>
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<td>Birmingham</td>
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<td>Murray Gell-Mann</td>
<td>UNM</td>
<td>Quantum Mech.</td>
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**COURSE AND STUDENT ENROLLMENT REPORT**

**DEPARTMENT OF PHYSICS AND ASTRONOMY**

1996-1997

David M. Wolfe, Chair

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**TOTAL 1996-1997 ENROLLMENT: 5,363**

**TOTAL 1996-1997 STUDENT CREDIT HOURS: 13,641**

### 1996 SUMMER SCHEDULE OF CLASSES

<table>
<thead>
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<th>COURSE</th>
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**TOTAL ENROLLMENT AND STUDENT CREDIT HOURS**

294 836

### 1996 FALL SEMESTER SCHEDULE OF CLASSES

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COURSE NAME

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DAY

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CREDIT NO.
HOURS ENR.

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A111L-008
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A272L-001
A421-001
A423-002
A455-001
A455-010
A537-001
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P102-002
P106-001
P112L-001
P112L-002
P112L-003
P116L-001
P116L-002
P116L-003
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P151-002
P152-001
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Astronomy Lab
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General Astronomy Lab
Concepts of Astrophysics
Radio Astronomy
Problems
Problems
T/Aslroph. & Space Phys.
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**TOTAL ENROLLMENT AND STUDENT CREDIT HOURS**

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TOTAL ENROLLMENT AND STUDENT CREDIT HOURS  

2,447  6,199
ANNUAL REPORT
of the
DEPARTMENT OF POLITICAL SCIENCE
July 1, 1996 through June 30, 1997
Neil J. Mitchell, Chair

I. SIGNIFICANT DEVELOPMENTS
A. UNDERGRADUATE PROGRAM
The department graduated 120 majors. The annual commencement ceremony was hosted in the Grand Ballroom of the Student Union Building. Over 500 students and parents attended. Maralyn S. Budke, former Chief of Staff to Governor Garrey Carruthers, gave the commencement address.

B. GRADUATE PROGRAM
The department awarded four (4) MA degrees and one (1) PhD degree this year. The number of graduate students, counting 1997 incoming students, is 27.

The department and Sandia National Laboratories continued its program for graduate and advanced undergraduate students to work part-time at Sandia. Six students in the externship program are involved in projects of mutual interest, principally in the areas of international conflict and international security.

C. INSTITUTE FOR PUBLIC POLICY
The Institute for Public Policy had another very successful year, in which both new and continuing research efforts were undertaken with collaboration among IPP staff, UNM faculty, and students. Overall external support for IPP research received in FY 1997 exceeded $1 million. Among IPP research projects were:

• The development of an initiative to undertake comparative measurement of the attitudes of Israelis, Palestinians, Jordanians, and Americans toward the peace process in the Middle East. Headed by the UNM IPP, this initiative includes collaboration with scholars from all of the involved regions.

• The design and implementation of "Citizen Conferences" as an innovative mechanism for direct citizen involvement in complex policy decisions. In this case, random samples of New Mexico citizens participated in a series of one-day sessions in which experts provided technical support for citizen deliberation and decision about future transportation policies for the New Mexico Highway and Transportation Department.

• The conduct of a series of studies of social valuation of environmental goods (in collaboration with faculty in the UNM Economics Department), with a focus on the protection of river systems and endangered aquatic species.

• The study of the ways in which US state legislators, scientists and lay citizens make trade-offs between perceived domestic and international risks in national security policy. This on-going project is the third in a series of such measurements.

Other on-going IPP research gained national prominence, when the PBS Frontline program featured the results of studies of risk perceptions and attitudes regarding nuclear energy and nuclear waste in April, 1997. Based in part on this line of research, IPP Director Hank Jenkins-Smith has been appointed to a National Academy Committee to evaluate technologies and approaches for destruction of US chemical weapons that meet with public approval.

The IPP continued its Distinguished Policy Speaker Series, hosting open presentations by Professors Linda and Peter deLeon of the University of Colorado, and Professor Robert O'Conner from Pennsylvania State University.

The 1996-97 year was the first in which IPP Public Policy Fellowships were awarded to UNM
graduate students by the IPP. Graduate students were invited to submit proposals, written in collaboration with UNM faculty, for research leading to a paper publishable in a peer-reviewed academic journal. Eight students were awarded $1,000 fellowships. Of those eight, the paper co-authored by graduate students Amelia Rouse and Rob Wright, in collaboration with Professor Richard Waterman, won a "Best Policy Paper Award" consisting of an additional $500 for the students and the co-authoring faculty member. The IPP plans to continue the Public Policy Fellowships annually, funds permitting.

Staff Changes. The IPP has added a new full-time Research Scientist staff position. Dr. Kerry Herron was hired in November, 1996, to manage the IPP's research in the areas of national and international security. Dr. John Gastil, who has been on the IPP staff since 1994, will be resigning in January 1998 to take a faculty position in the Department of Communication at the University of Washington in Seattle.

D. SPEAKERS
The department continued its colloquium speaker series with talks given by the following faculty, graduate students, and visiting speakers: Shane Phelan, Associate Professor; Kenneth J. Meier, visiting Speaker; Barbara Geddes, visiting Speaker; Peo Hansen, visiting graduate student Speaker.

The Department of Political Science hosted a pre-election debate "Alternative Perspectives: Political Parties on the Issues" featuring representatives from various political parties and moderated by Professor F. Chris Garcia and co-sponsored a lecture by Stanley Fish, visiting Speaker.

E. INTERNSHIPS
In addition to the Sandia opportunities, fifteen undergraduate students were placed in internships with the New Mexico State Legislature working under the close supervision of Visiting Assistant Professor Gilbert K. St. Clair. Both students and legislature staff considered the internship a success. State Senators Manny Aragon and Phillip Maloof both wrote letters of appreciation for the help their interns provided during the session and to commend the program in general.

F. SCHOLARSHIPS
One graduate fellowship and six undergraduate scholarships were awarded this year.

II. SIGNIFICANT PLANS
A. RECRUITMENT
The department will initiate the recruitment of one new faculty member in the area of International Relations.

The department will implement its new undergraduate concentrations in Law, Government, and Society and Public Policy and Public Administration.

The department will continue its efforts to increase the pool of applicants to the graduate program.

The department will develop a proposal for a new Masters in Public Policy.

III. APPOINTMENTS TO FACULTY/STAFF
Joseph Stewart, Jr., Professor, effective July 1, 1996
Deborah McFarlane, Professor, effective September 18, 1996
Kerry Herron, Research Scientist, effective November 1, 1996
Larry Gordon, Adjunct Professor, effective January 21, 1997
Randall Partin, Assistant Professor, effective June 9, 1997
Keryn Tucker, Administrative Assistant, effective May 12, 1997

IV. SEPARATIONS FROM FACULTY/STAFF
David Soherr-Hadwiger, Assistant Professor, effective August 1, 1996
Lorie Chance, Department Administrator, effective November 18, 1996

V. PUBLICATIONS

Garcia, Chris

Gleason, Greg


Hansen, Wendy

Harris, Fred
"El Senado en los Estados Unidos de America," in El Senado, Camara de Representacion Territorial, Letrados de Parlamentos, Madrid, Spain, 1996.


Jenkins-Smith, Hank C.


McFarlane, Deborah


Mitchell, Neil


Phelan, Shane


Remmer, Karen

Roberts, Kenneth

Sierra, Christine

Stanley, William


Stewart, Joseph

"A Demand-Side Perspective on the Importance of Representative Bureaucracy: AIDS, Ethnicity, Sexual Orientation, and Gender," Public Administration Review, 56, March/April, 168-173. (Coauthored with Gregory S. Thielemann)

Waterman, Richard


VI. NOTEWORTHY OUTSIDE PROFESSIONAL ACTIVITIES OF FACULTY

Chris Garcia served on the editorial boards of Social Science Quarterly and the Political Research Quarterly. He also served on the Committee on Nominations for the American Political Science Association, the Steering Committee for the Organized Section on the Politics of Race and Ethnicity, and served as Chair of the Section Committee on Professional and Theoretical Development.

Greg Gleason gave a presentation at the First International Conference of Sociologists at Kazakhstan State University on "Inter-state Relations and Socio-economic Problems in Kazakhstan," He also presented "Inter-regional Cooperation in Central Asia" at the Institute for Strategic Studies in Tashkent, Uzbekistan and "The Path to Cooperation" at the conference Tajikistan in the New International Order in Dushanbe, Tajikistan.

Fred Harris served as a member of the editorial board for Civic Arts Review.

Hank Jenkins-Smith served on the editorial board of the American Journal of Political Science. He was President and 1997 Program Chair for the Public Policy Section of the American Political Science Association. He also received the Young Risk Analyst award from the Society for Risk Analysis.

Deborah McFarlane served as President of the Population Section of the American Public Health Association, and chaired the panel on the Politics of Health at the American Political Science Association annual meeting.

Shane Phelan served as consulting editor for Temple University Press's Queer Politics, Queer Theories series.

Karen Remmer served on the editorial board of the American Political Science Review, the Political Research Quarterly, and International Studies Quarterly. She was also the Chair of the Comparative Politics Program of the American Political Science Association and chaired the Social Science Research Council Selection Committee for Dissertation Fellowships in Latin America and the Caribbean.

Christine Sierra had an interview "Latinos in the 1996 Presidential Election," broadcast on National Public Radio's LATINO USA.

William Stanley was an invited participant in "Policing the New World Disorder: Peace Operations and the Public Security Function" at National Defense University in Washington, DC.

Joseph Stewart was a member of the editorial boards of the American Journal of Political Science, the American Review of Politics, and the National Political Science Review. He was also a member of the Executive Councils of the Midwest Political Science Association and the Western Political Science Association.

VII. OUTSIDE-SPONSORED RESEARCH

Hank Jenkins-Smith; Sandia National Laboratories- $28,000; Purpose: Quarterly Monitoring Surveys; 4/4/97

Hank Jenkins-Smith; Sandia National Laboratories- $100,000; Purpose: Public Perceptions of the Risks of Transporting Radioactive Materials and Acceptance of DOE
Transportation Policies; 12/20/96


Hank Jenkins-Smith; National Safety Council- $47,784; Purpose: National Safety Council's Waste Isolation Pilot Plant Program; 7/18/96

Hank Jenkins-Smith; NM Highway and Transportation Department- $70,000; Purpose: NM Highway and Transportation Department Long Range Planning Survey; 3/14/97

Hank Jenkins-Smith; NM Highway and Transportation Department- $20,000; Purpose: NM Highway and Transportation Department Long Range Planning Survey; 8/13/96

Hank Jenkins-Smith; Sandia National Laboratories- $200,000; Purpose: Establish a Directed Research Program for the Cooperative Monitoring Center (CMC) at Sandia National Laboratories; 10/10/96

Hank Jenkins-Smith; Sandia National Laboratories- $247,160; Purpose: National Security Survey; 1997; 10/17/96

Hank Jenkins-Smith; Los Ranchos de Albuquerque- $7,000; Purpose: Los Ranchos de Albuquerque Infrastructure Planning Survey; 10/28/96

Hank Jenkins-Smith; Kettering Foundation- $2,500; Purpose: Briefing Paper: The Potential for Integrating National Issues Forums with Current Approaches to Public Involvement; 11/14/96

Hank Jenkins-Smith; NM Highway and Transportation Department- $15,000; Purpose: Survey of the Special Transportation Needs of Mobility Impaired New Mexicans; 11/21/96

Karen Remmer, Moises Arce (co-PI); National Science Foundation- $7,200; Purpose: The Political Economy of Reform In Contemporary Peru; 6/9/97

Hank Jenkins-Smith; Sandia National Laboratories - $25,000; Purpose: Understanding Responses to Public Information About Nuclear Weapons Accidents; 12/19/96

John Gastil; NM Department of Education- $57,380; Purpose: 97 Survey of the Rehabilitation Needs of New Mexicans with Disabilities; 2/23/97
ANNUAL REPORT
1996-1997
DEPARTMENT OF PSYCHOLOGY
Michael J. Dougher, Ph.D.
Professor and Chair

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DEPARTMENT OF PSYCHOLOGY

STATEMENT OF MISSION

The Department of Psychology shares with other academic departments at the university its raison d'être: the discovery and dissemination of knowledge. It shares with other science departments a commitment to empirical research. 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.

The UNM Department of Psychology 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 a supportive environment in which faculty and students associated with the department are encouraged to achieve their maximum potential as scholars.

- Promote a scientific approach to psychology, emphasizing both experimental and correlational methodologies as historic traditions.

- Encourage respect for and openness to a variety of theoretical, philosophical, and empirical approaches, with the view that the study of psychology is enriched by the interaction of multiple perspectives.

- Value active research programs within the department and in collaboration with colleagues outside the department.

- Maintain excellence in clinical and experimental psychology and foster the growth of neuroscience approaches to the study of learning, memory, and cognition.

- Encourage and support effective teaching both in communicating psychology to undergraduates as an area of major study and a critical part of a liberal arts education, and in training graduate students at a professional level.
- Train graduate students in the application of general experimental psychology in clinical and other professional settings.

- Ensure that graduate students in all areas are well trained in methodology and ethics appropriate for their effective functioning as researchers and professionals.

- Enable students to understand the development and operation of psychology in the context of diversity within the larger culture, and its application in the culture of the Southwest in particular.

- Be actively involved in service to the university, the community, the state, and the profession.

- Evaluate, in an ongoing fashion, our performance as a department with respect to our mission, and revise this Statement of Mission to accommodate to changing situations.
I. Department Information and Achievements

A. Departmental Administration and Structure

Michael Dougher served the third year of his four-year term as Chair of the Department, and the Department continued with the administrative structure adopted in 1995. An organizational chart of this structure is presented on the following page.

With respect to the Department's major administrative committee, the Planning and Policy Committee, there were no changes in personnel. Harold Delaney and Ron Yeo continued in their roles as Associate Chairs for Undergraduate and Graduate Training, respectively. Paul Amrhein served as Area Head for the Cognitive/Learning area, John Gluck served as Area Head for the Developmental/Personality/Social (DPS) area, Jane Smith continued in her role as Director of Clinical Training, and Rob Sutherland continued to serve as the Area Head for the Behavioral Neuroscience area.

The major task faced by the Department this year was to begin to evaluate its undergraduate curriculum. In particular the Department began taking a hard look at its undergraduate course offerings with an eyes toward enhancing the coherence, breadth and quality of the undergraduate program. While a good deal of progress was made, the project was not fully completed and we are continuing our efforts this year.

As in past years, the governance of the Department relied heavily on a number of faculty who
served effectively on other Departmental committees. A listing of the committee memberships for the 1996-1997 academic year is given in Appendix A. Particularly noteworthy was the very important and time-consuming work of the Graduate Admissions Committee chaired by Steve Gangestad. This committee was faced with the task of selecting the very best applicants from a pool of almost 300 applications. The Department continued to redouble its efforts to recruit outstanding experimental students and to reduce substantially the number of students admitted to the clinical program. This year the faculty decided to admit thirteen new students, but to restrict the number of clinical students to five. Our efforts paid off. We were, in fact, able to recruit an impressive class of students and we achieved the proportion of clinical and experimental students that we wanted. Outstanding graduate students are the lifeblood of any good research department, and the Admissions Committee is to be commended for its excellent work.

The procedures developed last year by the Teaching Enhancement Committee were employed this year in an attempt to enhance the teaching effectiveness of our faculty and to recognize outstanding teaching. All of our junior faculty were observed in the classroom, and constructive comments for improving their skills were offered. These efforts appeared to have a positive impact, at least as measured by the teaching ratings these instructors received. It should be noted that Jane Smith won the University’s Outstanding Teacher of the Year Award.

The Department again benefitted this year from the Quad-L Trust, which was endowed through the UNM Foundation by University Professor Emeritus Frank Logan. The Quad-L Library supported by this Trust not only facilitated the study of the psychology of learning, but also constituted a meeting place for students’ defenses of their graduate degrees. This year the Quad-L Trust supported a visit of Nicholas Mackintosh, Professor of Psychology at Cambridge University,
who delivered the 10th annual Quad-L lecture. Rob Sutherland, who serves as faculty advisor to the Quad-L, coordinated the selection process for the Quad-L Lecture and arranged for Dr. Mackintosh’s visit.

The endowed trust established by the New Mexico Psychological Association and the Department to honor the memory of Professor Sidney Rosenblum sponsored the seventh annual Sidney Rosenblum Award. This year’s scholarship support went to Dina Hill and Jennifer Eldridge.

A third endowed trust at the UNM Foundation was established by the parents of Barbara Goldman Garland Award in her memory. The fifth annual Barbara Goldman Garland Award, which is awarded to a Psychology graduate student who is interested in working clinically with teenaged children, was presented to two students this year: Ella Nye and Kerri Repa.

The department hosted a commencement convocation for its graduating students for the seventh consecutive year. The commencement address, delivered by Professor Dennis Feeney, was entitled “A Quarter Century after my Baccalaureate: This is not what I expected”. This continued a tradition begun in 1989 of the commencement address being given by a senior faculty member in the department. Previous addresses have been delivered by Frank Logan, Bill Gordon, Sam Roll, John Gluck, Henry Ellis, Bill Miller, Kristina Ciesielski, and Mark McDaniel. Arrangements for the convocation were handled by Administrative Assistant Candace Blashak. Because of the very large number of graduates and the interest on the part of their families and friends, this has become a major departmental effort involving several hundred people and entailing expenses to the Department of over $3,000.

B. Undergraduate Education

Stated succinctly, the undergraduate education productivity of the Department’s faculty and
staff is enormous and unsurpassed. As of Spring 1997, the Department had 748 majors, which is 17.9% of the total number of students majoring in Arts & Sciences Departments. The Department offers a wide variety of courses, ranging from introductory psychology to human neuropsychology. Students are exposed not only to some of the best lecturers at the University, but also to advanced laboratory courses requiring creative experimental design development and "hands-on" contact with human and animal subjects.

Although the overall popularity of Psychology courses has remained very high and, in fact, has increased slightly over the last decade (total undergraduate enrollment in our classes in now roughly 10,000 students per year), our Department’s enrollment patterns have shifted rather dramatically in recent years. Whereas in 1986-87 our freshman-level introductory psychology offerings accounted for the majority of our total undergraduate enrollment, these courses now account for only about 20% of our total head count. While our overall undergraduate enrollment has grown by just 6%, this is the net effect of a 36% decline in freshman enrollments being more than offset by an increase of over 50% in our 200-level and above enrollment in the past seven years. Similarly, our graduating majors have more than doubled over this period. The fact that our FTE faculty is only 20 indicates the Department’s critical need for additional faculty. Appendix B presents summary statistics for the Department for the 1996-1997 academic year along with the same statistics for the preceding four years. Actual enrollment counts per course for each 1996-1997 semester are presented in Appendix C.

Despite the large number of courses offered by the Department, we were able to cut back significantly on the number of part-time and graduate student instructors in our undergraduate program over the past several years. To a large extent this was due to the willingness of the faculty
to teach more basic undergraduate courses we offer. Part-time instructors hired during the 1996-1997 year are listed in Appendix D. During the past year we had 26 courses (excluding labs) taught by non-regular faculty. The majority of these (21) were taught by our graduate students. Although this is a reduction in the number of courses taught by non-regular faculty, the percentage of courses taught by non-regular faculty (roughly 38%) is still too high. In an effort to decrease this percentage, we are continuing with our efforts to get more full-time faculty into our undergraduate courses, to maximize the enrollments in courses taught by full-time faculty, and to reduce the frequency with which we offer low-enrollment and specialty courses in an effort to increase the percentage of full-time faculty in our courses. This is one of the factors involved in our decision to revise our undergraduate curriculum.

The flagship for quality education in psychology remains our Psychology Honors Program, which has been in existence for over 25 years. This program, which culminates in the student completing a year-long research project, has been especially attractive to Psychology majors who go on to pursue graduate work in Psychology. Appendix E lists our 1996-1997 honors students along with the titles of their research theses, the names of their faculty supervisors, and the level of honors awarded to them by the department.

C. Graduate Education

The department this year experienced its fifth year with its modified core curriculum which was approved in 1991-1992. Basically, the faculty had decided to reduce the number of courses required of first-year graduate students and expand opportunities for research. The plan seems to be having the desired effect, in that graduate students are proposing and defending their master’s theses more promptly than in the past.
During this 1996-1997 academic year, the Department awarded 9 Ph.D. degrees. The names of these degree recipients, along with the titles of their dissertations and the names of their faculty advisors can be found in Appendix F. This brings the total of Ph.D. degrees awarded by the Department to 244.

In addition to Ph.D. degrees the Department awarded 6 Master of Science degrees this year. Inasmuch as the Department offers no terminal master's degrees, it can be anticipated that these latter students (listed specifically in Appendix G, along with the titles of their theses and faculty advisors) will achieve their Ph.D.'s in the next two to three years.

Our graduate students continued to distinguish themselves in their research and teaching. Space permits mention of only selected award recipients. One student, Michael Weisend, was selected during the 1995-96 year to received the department's highest graduate student award in recognition of his outstanding research. He delivered the 1997 Benjamin Franklin Haught lecture on April 8, 1997. In terms of teaching, Gina Adam and Rich Ogle received Departmental awards for Outstanding Teaching Associate.

Three years ago we made the decision to try to financially support all of our students who request aid and are in satisfactory progress toward their degrees. Happily, we were able to do that again this year. What this entails, however, is that we adjust the number of admissions to our graduate program in line with the financial support available to us. Largely due to the amount of extramural support in the Department, we were still able to admit thirteen graduate students out of an applicant pool of 280 to our Ph.D. program for Fall 1997 (see Appendix H for a listing of these students and their advisors). It is still the case, however, that our GA/TA stipends are lower than those of our peer institutions, and this hampers our efforts to recruit the very best graduate students.
Although we were awarded an additional GA/TA line last year, the number of stipends we are able to offer is still too low and results in a heavier work load per student than is desirable. We are in dire need of at least three more GA/TA positions.

The Department continues to receive nearly one-third of all graduate applicants to the College and to have an acceptance rate which is markedly below the average acceptance rate for the College. This result is that admission to the Department of Psychology Doctoral Program is highly competitive and results in our being able to select students who are not only highly qualified but who represent good matches to the research interests of our faculty.

D. Faculty

At the beginning of the academic year the Department had 25 voting faculty (20 FTE), including Bill Gordon who is now serving as Provost, and Britt Ruebush, who is Director of the Child Guidance Center. Bill Miller was again supported by Research Scientist Award from NIMH. Paul Amrhein (Spring) was on sabbatical leave during the 1996-97 year.

We were very fortunate in that we were able to hire Akaysha Tang as a new assistant professor in the area of computational neuroscience. Dr. Tang obtained her Ph.D. from Harvard University in 1995 before taking a two year post-doc position at the Salk Institute. Dr. Tang adds to our strength in the behavioral neuroscience and cognitive/learning areas, and brings an unusual expertise in computational modeling to our Department.

The Department lost a very valuable faculty member this year when Peder Johnson chose to retire. Peder has played a very important role in our Department as a full professor and scholar in the area of cognitive psychology. Peder will be greatly missed, and the entire Department wishes him the very best in his retirement.
Appendix B shows that the size of our Department has remained constant over the past five years despite our continuing need for more faculty. Although we were able to hire Akaysha Tang, Peder Johnson's retirement leaves us with the same number of FTE faculty. Given the high student demand for our courses, the heavy workload of the faculty, and the need to maintain excellence in research and scholarly productivity, it is imperative that we be able to hire three full-time graduate faculty as soon as possible. We must be able to replace Peder Johnson to maintain strength in the cognitive-learning area. Moreover, our Developmental and Social areas are in desperate need of new faculty. Both areas attract large numbers of students to their classes, and a Department simply must have adequate representation in these areas if it is to remain viable. We are in desperate need to hire in those areas.

Professional Appointments

In addition to the part-time faculty who served the department this year (listed in Appendix D), there were a number of other people within UNM and the professional community of Albuquerque who made major contributions to our teaching, training and research missions. Based on their service to the department, these individuals were awarded Professional Titles in Psychology. The 1995-1996 list of professional appointments is included as Appendix J. The department is grateful to these individuals for their unselfish support and productive assistance.

A number of psychologists from other universities and the private sector further enriched our educational programs by presenting research colloquia to our faculty and research students. Appendix K presents a record of this colloquium series. Special thanks go to the Colloquium Committee, Rob Sutherland and Mark McDaniel, for their efforts in arranging for an outstanding colloquium series.
The research activities of the faculty are summarized in Appendix B. It is particularly noteworthy that our extramural support, exceeded $2 million ($2,277,254) this year. Nearly $2 million in extramural funding for five years running is certainly an outstanding accomplishment. No detailed commentary regarding faculty research will be presented here since these data have been given in detail in each faculty member's Annual Biographical Supplement. It should be pointed out, however, that our faculty continue to excel in their research activities and to be productive in terms of publishing and presenting their work at professional meetings. A listing of the faculty and their research interests presented in Appendix I.

Indeed, by whatever metric one might wish to apply, the faculty of the Department of Psychology is very good. A persistent threat to this excellence is the salary structure in the Department, which for some faculty falls as much as 20% below national and regional norms. The situation was exacerbated by the lack of faculty raises this year. While this problem is fully acknowledged by the College and while the Dean has made several recent efforts to enhance the salary of our faculty, much more remains to be done in order to insure the stability of the current faculty. There should be no doubt that the highest priority for the Department is to see faculty salaries increased in the immediate future to the level of regional norms and in the near future to the level of national norms. Only by doing this will the excellence of our Department be preserved.

E. Department Clinic

A separate Annual Report of the Department of Psychology Clinic is presented in Appendix L. Once again this year the Clinic met its primary goals of providing quality training to our Clinical graduate students and affordable, high quality psychological services to the community. The report
shows that the Clinic provided over 1300 hours of therapy and intakes, and involved approximately 50 graduate students in the provision of those services.

In addition, for the sixth consecutive year, the Clinic was able to operate within its allocated budget. This is a tribute to the able and caring leadership of Dan Matthews and the support of his excellent staff.

F. Staff

The Department of Psychology continues to benefit from an extremely competent support staff. This staff numbered 13 during the 1996-1997 academic year. So as to better inform those who may not be familiar with the important duties of the staff in our department, Appendix M presents a brief job description of each administrative, instructional, research, and clinical support staff member. It should be mentioned that this staff is not rigidly bound by these formal descriptions, and willingly share and take on new responsibilities in an effort to serve the needs of the Department.

There were several changes in our administrative staff this year. Robyn Santillanes, Terri Nicholson, and Lois Kennedy all resigned from the Department to take positions in other departments. We were very fortunate to be able to replace them with excellent people. Candace Blashak was promoted to the rank of Department Administrator, Stan Bennett was hired as our Accounting Tech, Louis Carrillo was hired as our Administrative Assistant, and Jennifer Lesh was hired as our Academic Advisor. These are terrific additions to our Department, and when combined with the outstanding service provided by our Editorial Assistant, Nancy Chavez, these individuals comprise what surely must be one of the best administrative staffs in the University.

Dee Ann Quintana completed her fifth year as Project Coordinator for Grants, and was very ably assisted by Delilah Yao. Unfortunately, Brenda Carreon is no longer with this group, and we
are seeking her replacement.

The recent successes of the Psychology Clinic are due in large measure to the administrative skills of Dan Matthews, who completed his seventh year as Clinic Staff Director this spring. Dan continues to be effectively assisted in his duties by Wanda Sharts, the Clinic Administrative Assistant.

Our research support staff again included Patrick Sharp, who was promoted to the position of Research Engineer; Ector Estrada and Gilbert Borunda, Laboratory Animal Technicians; DeLaine King, Laboratory Animal Technician 2; and our Veterinarian Linda Contos, DVM. Linda Contos was hired to replace our previous veterinarian, Michael Richard, who left the Department to take a position at the Rio Grande Zoo. We were very fortunate to replace him with Linda Contos whose experience and skills make her a very welcome addition to our Department. The outstanding efforts of these individuals clearly facilitated a wide range of research activities in our department.

It is impossible to overestimate the contributions made by the staff. For this reason, the entire Department continues to deplore the low salaries paid to our staff personnel.

G. Space

As has been highlighted in the Department’s Annual Report for the past ten years, our department is not well accommodated by its current space allocation. We need a new building. Currently, we have insufficient staff space in order to function optimally and are unable to house all of our faculty in faculty offices. Furthermore, during the past few years we have had to continue to convert graduate student offices into faculty research space. Even at this, we do not have sufficient, suitable research space in the building to accommodate the high level of faculty research activity that has been attained in recent years. Although our need for additional faculty is well documented and
while our extramural funding and research output is rising dramatically, the size of our current building places severe limitations on our ability to grow and to reach our full potential as a department.

The Department's request for a new building is now acknowledged on the University's Capital Projects list. However, there is little indication that funds will become available to initiate this project in the foreseeable future.

The Department continues to need financial support in order to initiate a furniture replacement program that would replace 50% of its classroom and laboratory furnishings per year over the next five years. The majority of our current furnishings came with the original building more than 20 years ago. It has become increasingly worn and has fallen into disrepair.

II. Future Plans and Comments

The names and faces in the Department have changed over the years, but what has remained constant is the Department's commitment to excellence and its outstanding faculty. The recent additions to our faculty make me confident that this tradition of excellence will continue. But we need to move forward, and for that to happen we will need the contributions of all of our faculty and the support of the university administration. At the departmental level, we need to work together to capitalize on our existing strengths and to make wise decisions about the directions we should take as we strive to be even better. At the administrative level, we need a tangible commitment to enhance the quality of what is clearly among the very best departments on campus. Quite simply, we need the resources to hire three additional faculty. The administration has been vocal in its desire to enhance the academic reputation of the university. One easy way to do that is to invest wisely in its existing areas of strength. By any measure this Department is an area of strength.
There were relatively few divisive and difficult issues this year, and that has allowed for some healing of scars from previous battles and painful decisions. There appears to be a greater sense of trust and collegiality in the Department, and a willingness to work toward the common good. I continue to be impressed with the intelligence, thoughtfulness and generosity of so many individuals on this faculty. The bleak salary situation, however, is palpably demoralizing, and a source of great personal concern. Despite this, the faculty continue to do creative and interesting research, to participate in professional organizations, to serve the Department, College and University and to provide a first-rate education to our students in the classroom. These efforts symbolize the faculty’s great dedication to the academic profession.

I very much appreciate the commitment of all the faculty and staff who were willing to devote their time and talent on behalf of the Department. There are always those who go way beyond the call of duty and deserve special thanks. They are: Harold Delaney, Steve Gangestad, John Gluck, Jane Smith, Rob Sutherland, and Ron Yeo. Thanks to all those who served so well on critical Department committees, especially the members of the Planning and Policy Committee and the Admissions Committee. The staff have just been excellent. I really do doubt whether there is a better group of staff on campus. Thanks also to the Dean of Arts and Sciences, Michael Fischer. He has taken over a very difficult job at a very difficult time, and he has done very well. The Department has certainly benefited from his efforts. Finally, I am especially grateful for the advice and support of my colleagues and friends in this Department.
APPENDIX A

COMMITTEE ASSIGNMENTS AY 1996-1997

Admissions: Gangestad, Ciesielski, Goldsmith, McDaniel, Roll, Waldron, Yeo
Animal Facilities and Use: Contos, Feeney, Gluck, Hodge, Sutherland
Behavioral Neuroscience: Sutherland, Ciesielski, Egly, Feeney, Hodge, Stansbury, Yeo
Clinical: Smith, Arroyo, Blanchard, Ciesielski, Dougher, Gangestad, Gluck, Miller, Padilla, Roll, Ruebush, Waldron
Cognitive/Learning: Amrhein, Delaney, Dougher, Egly, Goldsmith, Johnson, McDaniel
Computer Use: Goldsmith, Amrhein, Delaney, Harris
Developmental, Personality and Social: Gluck, Cofer, Gangestad, Harris, Stansbury
Financial Aid: Hodge, Blanchard, Feeney
Honors: Delaney, Amrhein, Gluck
Human Subjects: Harris, Egly, Stansbury
Policy and Planning: Dougher, Delaney, Gluck, Smith, Sutherland, Yeo, Amrhein
Quantitative: Delaney, Amrhein, Gangestad, Goldsmith, Harris
Teaching Enhancement: Hodge, Delaney, Gluck, Stansbury
Undergraduate Curriculum: Delaney, Gluck, Hodge, Yeo
PSI CHI: Stansbury
Psych Club: Hodge
# APPENDIX B

## Part 1

## DEPARTMENT OF PSYCHOLOGY SUMMARY STATISTICS

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APPENDIX B, Part 1 (continued)

Research Activities

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General Information

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*Extramural funds budgeted for expenditure during a single AY.
APPENDIX B
- Part 2 -

DEPARTMENT OF PSYCHOLOGY CURRENT OUTSIDE-SPONSORED RESEARCH AMOUNTS FUNDED FOR THE CURRENT GRANT YEAR 1996 - 1997

William Miller - Principal Investigator

Modeling & Modifying Motivation for Change, NIDA; $313,459 - 9/1/96-6/30/97 (Co-PI, Paul Amrhein)

NIH Research Scientist Award, NIAAA; $87,497 - 8/1/96-7/31/97

Alcohol/Drug Faculty Development Program, NIAAA; $55,765 - 9/1/96-8/31/97 (Drs. Waldron, Smith, Arroyo & Padilla)

Alcohol & Drug Abuse Prevention and Treatment Evaluation, NIAAA, Predoctoral National Research Service Award (NRSA); $116,792 - 7/1/96-6/30/97

Strategies for Matching Clients to Treatments, NIAAA, $121,215 - 9/1/96-8/31/97

Unilateral Family Intervention for Drug Problems, NIDA; $356,749 - 9/1/96-8/31/97

Clinical Trial of Interventions with Significant Others, NIAAA, $410,792 - 2/1/96-1/31/97

Tim Goldsmith - Principal Investigator

Analysis and Training of Cognitive Skills in a Line-Oriented Flight Training Program, FAA; $200,000 - 10/1/96-9/30/97

Holly B. Waldron - Principal Investigator

Families of Alcohol Abusing Adolescents, NIAAA; $134,324 - 8/1/96-7/31/97

Drug Abuse Treatments for Adolescents, NIDA; $244,092 - 8/1/96-6/30/97

Mark McDaniel - Principal Investigator

A Componential Analysis of Prospective Memory & Aging, NIA, Furman University; $71,071 - 4/96-3/97

Michael J. Dougher - Principal Investigator
Assessment & Evaluation of Court Clinic Cases, Second Judicial District Court; $52,000 - 8/96-7/97

APPENDIX B, Part 2 (continued)

Jack Blanchard - Principal Investigator

Anhedonia & Emotion in Schizophrenia, NIMH; $113,498 - 5/1/96-4/30/97
## APPENDIX C

### DEPARTMENT OF PSYCHOLOGY COURSE OFFERINGS

**AY 1996-1997**

### SUMMER 1996

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## APPENDIX D

**PART-TIME FACULTY HIRED DURING AY 1996 - 1997**

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<tr>
<td>Karen Griffie, Ph.D.</td>
<td>Psychology 337-001</td>
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<tr>
<td>Ronald Smith, Ph.D.</td>
<td>Psychology 450/650-007</td>
<td>Sports Psychology</td>
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<tr>
<td>Elena Bettoli-Vaughan, Ph.D.</td>
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<td>Teddy Warner, Ph.D.</td>
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<td>Peter DiVasto, Ph.D.</td>
<td>Psychology 450-007</td>
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# APPENDIX E

## SENIOR HONOR THESES

**DEPARTMENT OF PSYCHOLOGY**  
**AY 1996 - 1997**

<table>
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<tr>
<td>Daniel D. Squires</td>
<td><em>Social Anhedonia and Magical Ideation as Predictors of Substance Abuse: An Examination of the Mediating Effects of Traits and Coping</em></td>
<td>Jack J. Blanchard, Ph.D.</td>
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<tr>
<td>Heather Herzog</td>
<td><em>An Examination of Successful Place Learning Using a Shrinking Platform: The Incredible Shrinking Hippocampal Lesion Effect</em></td>
<td>Robert Sutherland, Ph.D.</td>
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<tr>
<td>Stefanie K. Meza</td>
<td><em>Analysis of Differential Responses by Police Officers and Civilians to Multiple-Cue Situational Descriptions</em></td>
<td>Michael J. Dougher, Ph.D.</td>
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<td>Jennifer Jolene Garcia</td>
<td><em>Stimulus Equivalence and the Transfer of Function: The Effects of Altering Class Membership on the Transfer of an Avoidant Function</em></td>
<td>Michael J. Dougher, Ph.D.</td>
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<td>Michael J. Carpenter</td>
<td><em>A Question of Folk Expertise</em></td>
<td>Timothy Goldsmith, Ph.D.</td>
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<td>Kaili Elrick</td>
<td><em>Relations Among Emotion Regulation Stress and Somatic Complaints</em></td>
<td>Kathy Stansbury, Ph.D.</td>
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<tr>
<td>Deanna (DeDe) Lynn Brown</td>
<td><em>Assortive Mating: Selecting for Similarity in Physical Appearance as an Effect of Personality Attributes</em></td>
<td>Steven Gangestad, Ph.D.</td>
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### APPENDIX E (continued)

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<td>Michael L. Paffett</td>
<td>The Effects of d-Amphetamine on the Recovery of Cognitive Function Following Traumatic Brain Injury in Rats</td>
<td>Robert J. Sutherland, Ph.D.</td>
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<tr>
<td>Mary E. Adams</td>
<td>Enactment and Imagery Encoding of Action Events</td>
<td>Mark A. McDaniel, Ph.D.</td>
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<td>Hilda Newberry</td>
<td>Will Focusing on Cognitive Processes Reduce False Memory?</td>
<td>Mark A. McDaniel, Ph.D.</td>
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<tr>
<td>Jane Bardal</td>
<td>The Effects of Moods on the Allocation of Resources</td>
<td>Richard Harris, Ph.D.</td>
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<td>Karen Griffee</td>
<td>The Roles of Stimulus Generalization and Stimulus Equivalence in Hierarchical Categorization</td>
<td>Michael Dougher, Ph.D.</td>
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<td>Stephen Hahn-Smith</td>
<td>Effects of Normative Information and Depression on Self-Awareness Processes And Task Performance</td>
<td>Richard Harris, Ph.D.</td>
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<td>Janice M. Hoesing</td>
<td>An Evaluation of Sex Differences in Visual Processing of Feature and Location Information</td>
<td>Ron Yeo, Ph.D.</td>
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<td>Cecilia McNamara</td>
<td>Developmental Instability and Alzheimer’s Disease</td>
<td>Ron Yeo, Ph.D.</td>
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<td>Scott Ottaway</td>
<td>A Parametric Comparison Implicit and Explicit Learning of Rule-Based Associations</td>
<td>Henry Ellis, Ph.D.</td>
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<td>Lisa Sethre-Hofstad</td>
<td>Physiological Correlates of Emotion Regulation in Mothers and Children</td>
<td>Kathy Stansbury, Ph.D.</td>
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<tr>
<td>Natasha Slesnick</td>
<td>Interpersonal Problem-Solving Interactions of Depressed Adolescents and Their Parents</td>
<td>Holly Waldron, Ph.D.</td>
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<tr>
<td>Lawrence Varner</td>
<td>Physiological Arousal, Thought Listening and Memory for Prose</td>
<td>Henry Ellis, Ph.D.</td>
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## APPENDIX G

**MASTER'S DEGREES AWARDED**  
**DEPARTMENT OF PSYCHOLOGY**  
**AY 1996-97**

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<tr>
<td>Natalie Armijo</td>
<td><em>Risk Seeking and Risk Aversion in a Medical Decision Task</em></td>
<td>John Gluck, Ph.D.</td>
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<tr>
<td>Donna Atkinson-Rana</td>
<td><em>Comparison of Hispanic Versus Anglo American Families’ Management of Conflict</em></td>
<td>Judith Arroyo, Ph.D.</td>
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<tr>
<td>Rex Jung</td>
<td><em>Developmental Instability, Caffeine, and Memory</em></td>
<td>Ron Yeo, Ph.D.</td>
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<td>Amy Koerner</td>
<td><em>An Evaluation of the Role of the Hippocampus in a Conditional Discrimination Involving Time-of-Day</em></td>
<td>Rob Sutherland, Ph.D</td>
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<td>Denise Laframboise</td>
<td><em>Obesity and Fear of Intimacy</em></td>
<td>Jane Smith, Ph.D.</td>
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<td>Thomas R. Peterson</td>
<td><em>A Sequential Analysis of Client and Therapist Behavior During Motivational Enhancement Therapy for Problem Drinking</em></td>
<td>Holly Waldron, Ph.D.</td>
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### APPENDIX H

**GRADUATE STUDENTS ACCEPTED FOR AY 1996-97**

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<td>Tim Apodaca</td>
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<td>Personality</td>
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<td>Kevin Bennett</td>
<td>Steve Gangestad, Ph.D.</td>
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<td>Sharon Flicker</td>
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<td>Amanda Price</td>
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<td>Chris Radi</td>
<td>Lynette Cofer, Ph.D.</td>
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<td>Laura Rowland</td>
<td>Kristina Ciesielski, Ph.D.</td>
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<td>Andrea Sherwood</td>
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<td>Scott Walters</td>
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<td>Christopher Woodruff</td>
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32
APPENDIX H (continued)

Ying Wu  
China  

Akaysha Tang, Ph.D.  

Behavioral Neuroscience
APPENDIX I

THE FACULTY
DEPARTMENT OF PSYCHOLOGY
UNIVERSITY OF NEW MEXICO

AMRHEIN, PAUL C.
Cognitive psychology: psycholinguistics; picture-word processing; aging, cognition and motor control. Current language research concerns the representation and function of pragmatic, semantic and syntactic information in discourse. Ongoing picture-word processing research concerns the development of 'hybrid' models that account for cognitive processes involved in episodic and semantic memory-production tasks (i.e., drawing, writing, speaking) in monolinguals and bilinguals. Current aging research concerns age- and dementia-based changes in cognitive processes that pertain to the preparation and execution of movements, and picture-word processing.

ARROYO, JUDITH A.
Assistant Professor. Ph.D. University of California, Los Angeles, 1989.
Clinical psychology. Primary interests are in Hispanic ethnic identity. Current research involves measurement of ethnic identification with orthogonal models of adaptation to Mexican and non-Hispanic white cultures; and the mental health implications of ethnic identity for alcohol and substance use.

BLANCHARD, JACK J.
Assistant Professor of Psychology and Psychiatry. Ph.D. State University of New York at Stony Brook, 1991.
Clinical Psychology. Research interests are in adult psychopathology with an emphasis on schizophrenia. Current NIMH funded research is directed at determining the role of emotion in schizophrenia and how emotion is related to the social and neurocognitive dysfunction characteristic of this disorder. The potential neuropathological mechanisms underlying emotional and social disturbances in schizophrenia are also being examined in collaborative projects employing Magnetoencephalography (MEG) and Magnetic Resonance Imaging (MRI). Finally, research is being conducted to examine etiological models of comorbid substance abuse in schizophrenia and bipolar disorder.
CIESIELSKI, KRISTINA T.
Associate Professor. Ph.D. Polish Science Academy (Nencki Institute of Experimental Biology), 1978.
Cognitive and clinical neuropsychology; brain event-related potentials; MRI and brain morphometry; development of normal and disordered human brain. Experimental approach is based on information-processing models and neuropsychological models of cognition, and integrates neurobehavioral, electrophysiological, neuroimaging and modeling techniques. A major goal is to describe the normal and pathological development of the frontal-cerebellar subsystem in humans with a particular focus on changes in mechanisms of selective inhibition.

COFER, LYNETTE FRIEDRICH
Professor. Ph.D. Cornell University, 1965.
Developmental psychology, human circadian rhythmicity as a mediator of personality development and cognitive performance, social development and gender differences, mediation of television effects, analyses of theoretical and empirical approaches to applied developmental research and family public policy. Current research includes analyses of Swedish longitudinal data base and new data collection in Sweden on individual differences in circadian rhythmicity and personality development and school performance.

DELANEY, HAROLD D.
Methodology, quantitative. Current research is in statistical methods, particularly those that are useful in investigations involving individual difference variables. Issues in experimental design and philosophy of science are also of interest. Interests in substantive areas include the psychology of religion, and individual differences in values and in cognition.

DOUGHER, MICHAEL J.
Professor and Department Chair. Ph.D. University of Illinois at Chicago, 1980.
Experimental and clinical behavior analysis. Primary research focuses on the experimental analysis of complex human behavior including stimulus equivalence and rule-governed behavior. Other interests include contextualistic methods of psychotherapy and psychotherapy research, and integrative psychotherapies.
EGLY, ROBERT
Assistant Professor. Ph.D. Arizona State University, 1990.
Cognitive neuroscience. My research focus is on understanding the cognitive processes and neural systems of visual attention and perception. A major component of my research program is the use of neurological patients (e.g., stroke, tumor, trauma) to identify the brain structures that control attending and perceiving in normal cognition, and to examine how various neuropathologies affect attending and perceiving.

FEENEY, DENNIS M.
Professor (and Professor of Physiology). Ph.D. University of California, Los Angeles, 1968.
Behavioral neuroscience, brain injury, recovery of function and epilepsy. In my laboratory we are conducting interdisciplinary studies of experimental brain injury in animals using a variety of methods, including electrophysiology, liquid chromatography, pharmacology, histological and behavioral measurements. Our goal is to understand and enhance behavioral recovery after brain damage in humans, and determine what commonly prescribed drugs may slow behavioral recovery.

GANGESTAD, STEVEN W.
Associate Professor. Ph.D. University of Minnesota, 1986.
Evolutionary psychology; social/personality psychology. General interests concern the ways in which humans' current psychological design is a product of evolutionary selection. Current research generally concerns this issue in regard to phenomena that occur within close relationships such as sexual relationships, friendships, and familial relationships. Other research concerns the developmental expressions of adaptations. Additional interests include individual differences, behavior genetics, psychometric theory, and philosophy of science.

GOLDSMITH, TIMOTHY E.
Assistant Professor. Ph.D. New Mexico State University, 1984.
Applied cognitive psychology, human factors, and statistics. My present research is focused on developing and validating methods for assessing and representing knowledge and skill. Under a grant from the FAA, I am currently attempting to improve the training and assessment of commercial airline pilots. Other research interests of mine include: psychological scaling, similarity, computer modeling, and human decision making.
GLUCK, JOHN P.
Clinical psychology, general experimental psychology. Interests include value changes during psychotherapy and the effects of early experience on development. In addition, I am very interested in the general area of bioethics, particularly professional clinical conduct and the ethics of human and animal research.

HAALAND, KATHLEEN Y.
Associate Professor. Ph.D. University of Rochester, 1972.
Clinical and experimental neuropsychology. Motor deficits are a common outcome of brain damage (e.g., stroke, Parkinson's disease, Huntington's disease). My research program focuses upon understanding the different cognitive processes (e.g., motor programming; encoding, storage and retrieval of motor programs; scheduling movements) which produce complex motor deficits after damage to cortical and subcortical areas of the brain. We have emphasized the dominance of the left hemisphere for controlling movements in both hands. We study the changes in motor processes in (1) stroke patients with focal damage to different parts of the left hemisphere, basal, ganglia and cerebellum, using structural imaging to relate area of brain damage and behavior; (2) Parkinson's disease; and (3) Alzheimer's disease. In our laboratory strong emphasis is placed on the integration of cognitive and neuropsychological approaches.

HARRIS, RICHARD
Professor. Ph.D. Stanford University, 1968.
Experimental social psychology, game theory, equity theory. Primarily interested in relatively formal (mathematical and computer simulation) models of social psychological phenomena, with emphasis so far on post-decision dissonance reduction, experimental games, and equity theory. A secondary interest is in the development of multivariate statistical techniques.

HODGE, GORDON K.
Presidential Teaching Fellow, Associate Professor, and Associate Chair for Undergraduate Education. Ph.D. University of California, Los Angeles, 1977.
Psychopharmacology, behavioral neuroscience, and teaching technologies. Current research is directed toward developing multimedia technologies for teaching in general and for the teaching of psychology in particular. This includes development and authoring of CD-ROM disks for use by both faculty in the classroom and students studying independently, as well as publishing on the World Wide Web.
JOHNSON, PEDER J.
Professor and Associate Chair of Experimental Training. Ph.D. University of Colorado, 1965.
Cognitive processes, knowledge representation, human performance, attention, and encoding processes. Current research includes knowledge elicitation and representation, implicit learning, units of visual encoding, sensitivity to contextual information, and mechanisms of priming.

MC DANIEL, MARK A.
Cognitive. Major research interests center on how encoding and retrieval processes influence learning and memory. Current projects are focused on 1) text processing and memory; 2) recall processes; 3) investigating prospective memory processes in younger and older adults and neuropsychological underpinnings; 4) understanding how people learn functional relations between stimulus and response variables; and 5) investigating causal concept learning in multivariate environments.

MILLER, WILLIAM R.
Regents Professor (and Professor of Psychiatry) and UNM Center on Alcoholism, Substance Abuse, and Addictions. Ph.D. University of Oregon, 1976.
Treatment, prevention, and assessment of addictive behaviors; program evaluation research; cognitive-behavior therapies; motivation and self-regulation; psychology and spirituality.

PADILLA, ELIGIO R.
Associate Professor (and Associate Professor of Psychiatry). Ph.D. University of Washington, 1974.
Clinical, cross-cultural and community. Current work focuses on higher educational policy and practice and the validity of traditional instruments for the assessment of intelligence among minority populations.

ROLL, SAMUEL
Professor (and Professor of Psychiatry). Ph.D., ABPP, ABFP. Pennsylvania State University, 1968.
Clinical psychology, developmental psychology, forensic psychology. Using a psychoanalytic framework as a base, I am exploring cultural influences on the development of personality and cognition. This involves work in the area of dreams, early memories, cognitive assessment, personality assessment and psychotherapy. My research involves Anglo, Chicano, American Indian and South American subjects.
RUEBUSH, BRITTON
(Primary appointment is outside the psychology department).
Professor (and Professor of Psychiatry). Ph.D. Yale University, 1960.
Clinical, child development, family therapy. Research interests include
evaluation of clinical programs and services; the effects of child-rearing methods
and other family variables on child and family behavior; and the relationship
between personality variables such as anxiety and defensiveness, and cognitive,
learning and physical functions.

SMITH, JANE E.
Associate Professor and Director of Clinical Training Program. Ph.D. State
Clinical psychology. Research interests: psychophysiological assessment,
assessment and treatment of eating disorders (bulimia, obesity and anorexia),
alcoholic homeless individuals, dual diagnosis (substance abuse and chronic
mental illness) and implosive (flooding) therapy.

STANSBURY, KATHY
Assistant Professor. Ph.D. University of California, Los Angeles, 1990.
Developmental psychology and behavioral neuroscience; emotional and
neurohormonal development. My work focuses on developmental competencies,
and individual differences in social, emotional, and neurohormonal domains in
preschool age children. More specifically, how do children learn to regulate their
emotional states and what impact does this process have on later developing
skills? In creating and testing a model of these developmental processes, I have
made use of several different paradigms, such as children’s entry into new peer
and social situations, and commonly occurring frustration situations, and studied a
variety of systems that may be contributing to this development, including
caregiver relationships, temperamental differences, psychophysiological factors
(primarily hypothalamic-pituitary-adrenocortical hormones), behavioral-risk
contexts, and differences in linguistic skills. I am also interested in prenatal
influences on brain development and later behavior, depression and
neurohormones in mothers and children, and developmental
psychoneuroimmunology, as well as in basic theoretical questions in the area of
emotion in humans.
SUTHERLAND, ROBERT J.
Professor of Psychology and Neuroscience. Ph.D. Dalhousie University, 1980.
Cognitive and behavioral neuroscience, neuropsychology, learning and memory.
Primarily interested in exploring the anatomical and functional organization of
memory and related cognitive processes. The research includes combinations of
behavioral analyses, electrophysiological recording, neurotoxins, and
neuropharmacological techniques. Other goals are to understand in detail the
function of the hippocampal formation, the nature of amnesic symptoms in
Alzheimer’s disease, Korsakoff’s syndrome, epilepsy, cerebral trauma, and other
disorders. We also explore factors related to cognitive recovery after brain
damage.

WALDRON, HOLLY B.
Clinical psychology. Research interests focus on family interaction theories of
psychopathology, family therapy process and outcome, and developing and
evaluating effective assessment and treatment strategies for adolescent substance
abuse and related behavior problems. Current research projects include evaluating
cognitive-behavioral and family-based interventions for disturbed adolescents and
examining family communication behaviors and cross-cultural variations in
families of disturbed and nondisturbed adolescents.

YEO, RONALD A.
Associate Professor and Associate Chair for Graduate Education. Ph.D.
University of Texas, Austin, 1983.
Clinical and experimental neuropsychology. Research interests include individual
differences in brain organization, neuroimaging, cerebral lateralization, genetic
and environmental factors influencing brain development, and the
neuropsychological bases of neurodevelopmental disorders.
APPENDIX J

PERSONS HOLDING PROFESSIONAL TITLES IN PSYCHOLOGY
1995 - 1996

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<thead>
<tr>
<th>Name and Address</th>
<th>Phone</th>
<th>Professional Title</th>
</tr>
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<tbody>
<tr>
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<td>Charles Cofer, Ph.D.</td>
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<tr>
<td>Clara Farah, Ph.D. 715 Grande NE Albuquerque, NM 87102</td>
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<td>Adjunct Assistant Professor</td>
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<td>255-9494</td>
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<td>Therese Goetz 1925 Juan Tabo NE, Suite B Albuquerque, NM 87112</td>
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<td>Kathleen Haaland, Ph.D. Psychology Services Veterans Administration Medical Center 2100 Ridgecrest Drive SE Albuquerque, NM 87108</td>
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<td>Associate Professor (Secondary, nonprobationary appointment)</td>
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<tr>
<td>Nancy Handmaker, Ph.D. P. O. Box 1013 Corrales, NM 87048</td>
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<td>Research Assistant Professor</td>
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<td>Deborah Harrington, Ph.D. Veterans Administration Medical Center 2100 Ridgecrest Drive SE Albuquerque, NM 87108</td>
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<td>Mary Harris, Ph.D. Education Foundations University of New Mexico Albuquerque, NM 87131</td>
<td>277-2925</td>
<td>Professor (Secondary appointment)</td>
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<td>Reid Hester, Ph.D.</td>
<td>884-3002</td>
<td>Clinical Associate</td>
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<td>Bobby Holstead, Ph.D.</td>
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<td>Ben Klein, Ph.D.</td>
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<td>Psychology Program Director</td>
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<td>St. Joseph Rehabilitation Center</td>
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<td>Frances Koenig, Ph.D.</td>
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<td>P. W. Kodituwakku, Ph.D.</td>
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<td>Marcia Landau, Ph.D.</td>
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<td>Milton Lasoski, Ph.D.</td>
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<td>A. Lane Leckman, M.D.</td>
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<td>11000 Candelaria NE, Suite 110 West</td>
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<td>Jeffrey Lewine, Ph.D.</td>
<td>256-5744</td>
<td>Research Assistant</td>
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<td>Magnetic Source Imaging Facility, Bldg. 49</td>
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<td>George Luger, Ph.D.</td>
<td>277-3204</td>
<td>Professor</td>
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<tr>
<td>Department of Computer Science</td>
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<tr>
<td>Edward Maclin, Ph.D.</td>
<td>268-7043</td>
<td>Research Assistant</td>
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<tr>
<td>727 Morningside Drive NE</td>
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<tr>
<td>Ron McGowan, Ph.D.</td>
<td>842-1995</td>
<td>Associate</td>
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<td>801 Encino Place NE</td>
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<tr>
<td>Charlene McIver, Ph.D.</td>
<td>265-8800</td>
<td>Clinical Associate</td>
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<td>4600-A Montgomery NE, 102</td>
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<tr>
<td>Theresa Moyers, Ph.D.</td>
<td>265-1711</td>
<td>Adjunct Clinical</td>
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<tr>
<td>Psychology Service</td>
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<tr>
<td>Ruth Shore Mondlick, Ph.D.</td>
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<tr>
<td>Summit Office Building, Suite 205</td>
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APPENDIX J (continued)

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<tr>
<td>Jean Newman, Ph.D.</td>
<td>277-7414</td>
<td>Associate Professor (Secondary appointment)</td>
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<td>Associate Professor of Linguistics</td>
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<td>Humanities 526</td>
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<td>Stephen R. Perls, D.Ed.</td>
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<td>Associate Professor (Secondary appointment)</td>
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<td>Department of Psychiatry</td>
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<td>Bruce Porch, Ph.D.</td>
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<tr>
<td>Richard Reed, Ph.D.</td>
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<td>Clinical Associate</td>
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<tr>
<td>Michael Richard, D.V.M.</td>
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<td>Department of Psychology</td>
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<td>Steve Rokicki, Ph.D.</td>
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<td>Karen Ruebush, Ph. D.</td>
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<td>Elizabeth Roll, Ph.D.</td>
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<tr>
<td>Doris Sahd, Ph.D.</td>
<td>298-7551</td>
<td>Clinical Associate</td>
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<td>Rene Silleroy, Ph.D.</td>
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<td>Edward W. Snyder, Ph.D.</td>
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<td>Psychology Service</td>
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<td>Veterans Administration Medical Center</td>
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<td>2100 Ridgecrest Drive SE</td>
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<tr>
<td>Frank Spring, Ph.D.</td>
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<td>708 Marquette Avenue NW</td>
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<td>Tim Strongin, Ph.D.</td>
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<tr>
<td>5816 Nugget NE</td>
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<td>Professor</td>
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<tr>
<td>Jerry Sue Thompson, Ph.D.</td>
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<td>Associate</td>
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<td>1301 Manzano NE</td>
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<tr>
<td>Maryann Thompson, Ph.D.</td>
<td>292-3776</td>
<td>Clinical Associate</td>
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<tr>
<td>8100 Constitution Place NE</td>
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<tr>
<td>Scott Tonigan, Ph.D.</td>
<td>768-0266</td>
<td>Research Assistant</td>
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<tr>
<td>4800 Royene NE</td>
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<td>Professor</td>
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<td>Albuquerque, NM 87110</td>
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## APPENDIX J (continued)

<table>
<thead>
<tr>
<th>Name and Address</th>
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<tbody>
<tr>
<td>Albert V. Vogel, M.D.</td>
<td>277-4763</td>
<td>Associate Professor (Secondary appointment)</td>
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<tr>
<td>Department of Psychiatry</td>
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<td>University of New Mexico</td>
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<tr>
<td>Carolina Yahne, Ph.D.</td>
<td>242-6705</td>
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<tr>
<td>Dr. Akaysha Tang</td>
<td>&quot;The Role of Neuromodulation in Cognitive Functions&quot;</td>
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<tr>
<td>Assistant Professor of Psychology</td>
<td>August 5, 1996</td>
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<tr>
<td>The Salk Institute, Computational</td>
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<tr>
<td>Neurobiology Lab, La Jolla, CA</td>
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<td>Dr. Melvyn A. Goodale</td>
<td>&quot;An Experimental Analysis of Visual Processing for Knowledge and Action&quot;</td>
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<tr>
<td>Professor of Psychology</td>
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<td>University of Western Ontario</td>
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<tr>
<td>Dr. Margo Wilson</td>
<td>&quot;The Truth about Cinderella&quot;</td>
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<tr>
<td>Dr. Martin Daly</td>
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<tr>
<td>Professor of Biology</td>
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<td>Dr. Nicholas J. Mackintosh</td>
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<td>Professor of Psychology</td>
<td>&quot;An Elementary Theory of Generalisation, Discrimination and Categorisation by</td>
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<tr>
<td>University of Cambridge</td>
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<td>Dr. Bryan C. Jones</td>
<td>&quot;Pharmacogenetics of Alcohol and Cocaine&quot;</td>
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<tr>
<td>Professor of Psychology</td>
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<td>The Pennsylvania State University</td>
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<td>Dr. Margo Wilson</td>
<td>&quot;Violence Against Wives: Risk Factors in Evolutionary Psychological Perspective&quot;</td>
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<td>Professor of Psychology</td>
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<tr>
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<tr>
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<td>McMaster University</td>
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<tr>
<td>Michael Weisend, M.S.</td>
<td><em>Benjamin Franklin Haught Memorial Research Lecture</em></td>
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<tr>
<td>Department of Psychology</td>
<td>&quot;A Comparison of Retrograde and Anteograde after Hippocampal Damage&quot;</td>
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<td>University of New Mexico</td>
<td>April 18, 1997</td>
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APPENDIX K (continued)

Dr. Lynn Nadel
Professor of Psychology
University of Arizona

Dr. Denny C. LeCompte
Professor of Psychology
Louisiana State University

“Hippocampus: Spatial Memory, Consolidation and Dissociation”
April 21, 1997

“SSHHH! I Can’t Hear Myself Think: The Effect of Irrelevant Speech on Memory”
April 25, 1997

COLLOQUIA COSPONSORED BY CASAA

COLLOQUIUM PRESENTED BY

Dr. Sheldon D. Rose
University of Wisconsin

Dr. Kenneth J. Sher
University of Missouri-Columbia

Dr. Richard L. Gorsuch
Fuller Theological Seminary
Pasadena, CA

Antoinette Harmer
Australian National University
ACT, Australia

Dr. Kim T. Mueser
Dartmouth Medical School

Dr. Susan J. Curry
University of Washington

COLLOQUIUM TITLE

“Investigating Damaging Group Experiences: A Qualitative Interview Study”
September 5, 1996

“The Course of Alcohol Use Disorders in College Students: Findings from a Prospective High-Risk Study”
September 11, 1996

“Spirituality and Addictions: How Are They Related?”
September 20, 1996

“Childhood Experiences and Current Psychological Functioning of Mothers in Recovery and the Behavioral Adjustment of Their Children”
September 30, 1996

“Research on Integrated Treatments for Dual Diagnosis”
February 5, 1997

“Public Health Approaches to Addictive Behaviors: A Primary-Care Based Intervention with At-Risk Drinkers”
February 20, 1997
APPENDIX K (continued)

Dr. Rita Monteiro
VA Medical Center, San Diego

Dr. Robert K. Brooner
John Hopkins University
School of Medicine

Dr. Constance M. Weisner
Western Consortium for Public Health
Berkeley, CA

Dr. Jesse B. Milby
University of Alabama-Birmingham

Dr. Helene Raskin White
Center for Alcohol Studies
Rutgers University

"Family Therapy for Substance Abuse"
March 11, 1997

"Behaviorally Contingent Pharmacotherapy In Opioid Abusers: Enhanced Counseling Improves Treatment Outcome"
March 19, 1997

"Where Have All the Substance Abusers Gone? Expanding our Perspectives on Services Research"
April 7, 1997

"Contingency Management in Effective Treatment for Dually Diagnosed, Cocaine Abusing Homeless Persons"
April 15, 1997

"Adolescents, Alcohol, and Aggression"
April 24, 1997
APPENDIX L
ANNUAL REPORT
DEPARTMENT OF PSYCHOLOGY CLINIC
AY 1996-1997

The Department of Psychology Clinic continues to be a valuable and challenging part of the Psychology Department’s educational environment. On the one hand, it is a fully functioning outpatient mental health clinic, providing quality therapeutic and assessment services to the Albuquerque community. At the same time, it is a training facility where graduate students in clinical psychology receive practical experience in this area. The challenge is to keep both missions functioning at a high level of excellence; neither training nor services can be seen as secondary if the Clinic is to fulfill its function.

The nature of the challenge may be seen in the fact that the combined services provided at the Clinic would provide a reasonable workload for about three full-time clinicians. Here, however, those services are provided by 47 student-clinicians at various stages of training and performing different functions. All of them must follow ethical and professional standards of practice of psychology. The reason this is possible is the academic preparation provided by the Department’s faculty, especially the clinical faculty, and the on-going supervision donated by supervisors from the professional community. Each student-clinician, carrying a caseload of two or more cases, receives at least one hour of face-to-face supervision per week, usually individually and sometimes in small groups. Because of bright and responsible graduate students, competent educational preparation, and dedicated faculty and outside supervisors, the Clinic is a place where both of its missions can be carried out without contradiction.

SERVICES

Individual adult therapy remains the primary service of the Clinic, with a client population that is varied in terms of age, ethnicity, employment status, education and presenting problems. Generally the severity of referral issues is from mild to moderate. There is a frequent misperception that we serve primarily a University population; in fact, our referrals come from other agencies and practitioners, the Court, and self-referrals provide a cross-section of the community. Because of a sliding fee scale ($10 to $60 per hour), we do have a selection factor toward low-income individuals, but even this is not universal. Increasingly in recent years, the Clinic has had more involvement in family, child and couples therapy. This has been due to the influences of faculty members Dr. Jane Smith, Dr. Holly Waldron, and Dr. Britton Ruebush, who have increased the number of students who are knowledgeable in child and family dynamics and treatment.

The closing of outpatient therapy services by the New Mexico Hospital Mental Health Center in
1990 has produced an apparently permanent waiting list of referrals, changing our intake procedures and, to some extent, affecting our services. This presents a challenge to our existing commitment to long-term therapy as a valuable service and training modality. In response to the waiting list and also because of the demands of treatment in the current health care environment, we have attended to issues of shorter-term treatment, time-limited models and the empirical foundations of various approaches in clinical meetings, supervisory discussions and more formally in Dr. Jack Blanchard’s cognitive-behavioral treatment seminar. At the same time, the value of depth approaches has been explored in Dr. Gluck’s existential psychotherapy seminar and Dr. Roll’s ego analytic seminars. The tension among models, rationales and methods to which students are exposed is an educational value within the department and will prepare students for the difficult challenges now facing the profession of clinical psychology. Quite properly, for our research-based discipline, issues of empirical support and measurement of outcomes are expected to be increasingly emphasized in the years ahead at the Clinic.

In addition to the therapy and assessment services carried out at the Clinic, several programs have been implemented under contract or with close involvement of Clinic personnel. Three of these are court-attached or correctional programs: a contract with the Metropolitan Court Probation Department for dispositional evaluations, the sixth year of Second Judicial District Family Court Clinic’s domestic violence assessment and treatment program, and a short-term individual therapy for boys in a temporary treatment facility in Grants, New Mexico. These services, carried out by students under the supervision of licensed psychologists have provided valuable assessment and treatment experiences with populations not usually seen at the Clinic, while providing valuable services to the city and state.

PERSONNEL

The staff of the Clinic has consisted of Dr. Dan Matthews, Director (since Fall 1988); Wanda Sharts, Office Manager (who moved from the Department in June 1991); Yvette Obregon, work-study student; and Ella Nye, evaluator for the Metropolitan Court Probation Division. Added this year, have been staff to provide treatment to the boys in the Grants correctional facility and education diagnostic services provided under Clinic administration. In all, seven graduate students have traveled to Grants one or two days a week to serve the Grants facility. Lynn Farmer has coordinated these services and Dr. Melanie Bennett has provided primary clinical supervision. This unexpected service opportunity, providing high quality and caring treatment to boys who were moved on an emergency basis due to overcrowding in other facilities, would not have been possible without the efforts of Ms. Farmer and Dr. Bennett. I believe Dr. Bennett would join me in praising Ms. Farmer’s administrative skills in getting the program underway with short notice and maintaining it from February to the present.

The second addition to our staff is Melissa Behrens-Blake, a very fortunate serendipity of our move to a new facility. Ms. Blake is an educational diagnostician specializing in the assessment of adult learning disabilities and the educational portion of ADD/ADHD evaluations. We became aware that she was in need of new offices and she became administratively attached to
the Clinic when we moved to our new building in late February. This has quickly become much more than an administrative arrangement. Ms. Behrens-Blake has knowledge and skills that complement and enhance the services and training we have traditionally provided. She has a strong interest in the neurological bases of the conditions she assesses and has provided consultation for our students and with our clients. An exciting new project, which she brought to our attention and which is under development, is a coordinated ADD/ADHD assessment program which will be jointly carried out by her and our students with supervision by faculty and adjunct faculty.

Wanda’s reorganization of the Clinic continues to provide a steady foundation for our work here. She has provided not only an increase in the efficient operation of the Clinic, but also a calm and quieting presence that facilitates all our efforts in a sometimes stressful work environment. She is currently developing a computerized system of case tracking which will improve our ability to coordinate supervision and manage the waiting list.

I (Dan Matthews) am close to completing my ninth year as Clinic Director and have passed the halfway point in my term as President of the New Mexico Psychological Association. The latter role has kept me involved with the changing status of psychology under movement to managed health care and with legislative and regulatory issues affecting our profession. I continue to enjoy the Interviewing and Case Formulation practica for first year students, Introduction to Therapy for second year students, and group as well as individual supervision of student-clinicians. My own clinical work is entirely through the Clinic, where I provide therapy and mediation. I am increasingly involved in work with other agencies and organizations through contracts such as those with Metropolitan Probation, the Court Clinic and the Grants facility and community contacts such as NMPA and coalitions with other professional and consumer groups.

This is the time each year that we experience the loss of our “senior staff” - those who graduate or go on internship. Tracy Simpson, Tom Dominguez, Luci Hackbert, Dina Hill, Lisa Arciniega, Sara DeVault and Birgitta Gabel have terminated or transferred their Clinic work and left for internship. Their work in the Clinic, their support for other students and the regular contacts in conversation and supervision are sorely missed.

Finally, the quality of our services depends critically on the efforts of our clinical faculty and adjunct faculty who supervise cases and support the knowledge, professional development and personal growth of the student therapists. These individuals deserve special thanks (they are listed elsewhere in this report, and need not be individually named here).

**PHYSICAL SETTING**

On March 1, construction began on a new classroom building which will occupy the entire block on which the building housing the Clinic formerly stood. The move necessitated by this construction has resulted in more space and in some respects a better facility for the services we provide. Located at 1716 Las Lomas NE in a converted residence, the present building has
offices for our three full-time staff, five therapy rooms, a waiting area and a student work space. Three therapy rooms are equipped for videotaping and live supervision is possible through remote video. A large converted garage is available for future use as classroom/research/group-therapy space, and has received some use for research and training. Clinic funds allowed the purchase of new furniture throughout the building and the remodeling of the building for our use, though minimal, made it into livable and workable space. Like our previous location, the homelike setting presents an inviting and comfortable environment for our clients and our work.

The building is also a work-in-progress. It lacks the observation room of our previous building and videotape equipment is currently awkwardly placed within two of the rooms rather than in remote locations. One therapy room is quite small (necessitated by the remodeling of the building) and would be improved with a borrowed light window and translucent glass door. We have not been given a firm commitment by the University as to the permanence of our stay in this location, and remodeling is anticipated if our residence here is of sufficient duration to warrant it. We have been assured of another excellent location should we have to move again, and this year's move indicates the University's interest in and commitment to our program.

RESEARCH

Almost continuously over the past six years, students and faculty are using the Clinic facilities for their research. Dr. Jane Smith's body image research, involving assessment and group treatment, has taken place in the Clinic as has research by Luci Hackbert, Bob Thoma, and David Ley. It is anticipated that with more space and with technical improvements such as an observation room and better video setups, the Clinic will continue to be a comfortable and efficient environment for clinical research efforts.

SUMMARY

The Department of Psychology Clinic continues to be a pleasant and supportive environment for providing psychological services to the Albuquerque community. Each year, some of our services remain the same and we take on new projects while completing others. The Clinic is a congenial setting to develop the experience and skill of being a therapist and psychological evaluator. Through the efforts of faculty, student-clinicians, supervisors and staff, an atmosphere is maintained that is supportive of this sometimes stressful work. It is a good place to work, learn and grow.

Prepared by

Dan Matthews, Ph.D. Clinic Director
and his assistant
Wanda Sharts
APPENDIX M

SUPPORT STAFF
DEPARTMENT OF PSYCHOLOGY
AY 1995 - 1996

ADMINISTRATIVE SUPPORT STAFF

Department Administrator, III: Candace Blashak
Assists the Department Chair; administers all personnel and budgetary decisions necessary to execute University policies and policies set by the Department Chair and faculty; oversees all budgetary activities in the Department; hiring and supervision of all staff; assists in hiring students, and technical personnel; coordinates with various University administrators on a variety of complex matters, including faculty contracts, student financial aid, staff compensation, and other matters; drafts policies, procedures, correspondence for the Chair; takes minutes at faculty meetings. Office management, preparation of a variety of administrative and instructional documents, faculty recruitment, tenure and promotion files, coordination of the department convocation activities, departmental receptions, and other special events. Bookholder and Paymaster.

Accounting Tech: Stan Bennett
Maintains records of fiscal and budgetary controls, ledgers, and other transactions for the Department. Processes routine financial documents and accounting transactions. Reconciles accounting records and analyzes routing accounting data. Serves as department bookholder. Assists in the development and coordinates the maintenance of area budgets. Processes part-time and full-time faculty contracts, GA and TA contracts. Building key coordinator. Responsible for the monthly tagging of department inventory and maintains inventory control.
APPENDIX M (continued)

Academic Advisor: Lois Kennedy
Serves as department’s graduate admissions coordinator; primary liaison with public and prospective graduate and undergraduate students; responsible for administering student degree checks, counsels and advises graduate and undergraduate students in Psychology program regarding policies, requirements, academic standing, and related matters; maintains all graduate student files and records; coordinates comprehensive examinations and thesis and dissertation defenses; interfaces with Graduate Studies Office in policy areas; coordinates with Scheduling Office, Continuing Education Office, regarding department class schedules; assists top administration with hiring part-time faculty; is official liaison between department and visiting faculty; coordinates with Graduate Studies Office, College of Arts and Sciences, Curriculum Change Committee, and Office of Scheduling regarding revisions for University catalogs; prepares reports for outside agencies such as the American Psychological Association as requested. Performs other duties as requested by the department chair.

Editorial Assistant: Nancy Chavez
Edits and word processes complex manuscripts and grant proposals; provides word processing for department faculty prepares department annual report; writes and edits department quarterly newsletter; prepares information for “Faculty Publications and Creative Works”; serves as department representative for the United Way drive; is a bookholder with back-up duties for department administrator, Program Specialist II and other Staff Assistant and is a paymaster.

Administrative Assistant: Louis Carrillo
Represents the department as first point of public contact; directs telephone callers and foot traffic as appropriate; has responsibility for maintaining supplies inventory, security of classroom equipment inventory, and maintenance of office copier; backup for Academic Advisor, back-up for Editorial Assistant for typing of syllabi, exams and correspondence; maintains department classroom schedule, and supervises two student employees, first contact for building keys.

Project Coordinator for Grants: DeeAnn Quintana
Coordinates all phases of extramural funding requests; examines all proposals for accuracy; trains and supervises project personnel; monitors and reports on direct and indirect costs associated with research grants; department liaison to the Office of Research Administration and Contract and Grant Accounting.
APPENDIX M (continued)

RESEARCH SUPPORT STAFF

Research Engineer: Patrick Sharp
Supports faculty, staff and graduate students with computer needs; responsible for
electronic design, fabrication, troubleshooting, installation, computer upgrades,
consulting, repair, and preventive maintenance for a vast assortment of electronic
equipment; fabricates wood and metal products using a variety of equipment;
responsible for annual department equipment inventory; advises Chair and
department faculty regarding purchase, installation and maintenance of electronic
equipment.

Laboratory Animal Technician IV: Ector Estrada
Supervises the daily operations of the Psychology Department’s animal colony,
including animal husbandry and environmental control; functional supervisory
responsibility for the other Animal Technician IV and two student employees;
works with department’s veterinarian in treatment of laboratory animals and in
monitoring compliance with the Animal Welfare Act; works under general
supervision of Department Chair, Veterinarian, and Chair of Animal Care and Use
Committee.

Laboratory Animal Technician IV: Gilbert Borunda
Under limited supervision, maintains and breeds laboratory animals and functions
as a section leader of student assistants; primarily responsible for daily care and
preparation for surgery of laboratory animals; assists department veterinarian in
all animal treatment; back-up for senior Laboratory Animal Technician IV.

Veterinarian: Linda Contos, DVM
Provides preventive, acute and on-call medical treatment to a variety of
departmental laboratory animals; provides professional management of animal
research facility and monitors compliance with the Animal Welfare Act; provides
relevant instruction to faculty, graduate and undergraduate students concerning
care and treatment of laboratory animals; reports to Department Chair and Chair
of Animal Use and Care Committee.
APPENDIX M (continued)

PSYCHOLOGY CLINIC SUPPORT STAFF

Clinic Director: Daniel Matthews, Ph.D.
Has overall administrative and fiscal responsibility for the Clinic and executes Clinic policies as set by the Department faculty; reports to the Department Chair through the Associate Chair for Clinical Training. Duties include triage of referrals to the Clinic, supervision of doctoral students, report writing, community relations and some direct clinical services, including assessment.

Administrative Assistant: Wanda Sharts
Works under general supervision and in support of Psychology Clinic Director, Psychology Department Chair, and Department Administrator. Assists in the formulation of Clinic policies and procedures; performs a wide variety of duties in the areas of budget, personnel, payroll, and related matters, and performs administrative work at the paraprofessional level; supervises student employee.

Certified Educational Diagnostician: Melissa Behrens-Blake
Participates in research projects conducted through the Department of Psychology as related to general disorders of neurological processing (including but not limited to dyslexia, learning disabilities, traumatic brain injury, schizophrenia and stroke/aphasia). Responsibilities include conducting extensive educational diagnostic evaluations as directly related to the specific requirements of the research project. Also serves as certified educational diagnostician in the department’s Psychology Clinic with diagnostic evaluations to be integrated into the client’s overall treatment program.
I am pleased to submit this report covering the first year of my second term as department chair. The main office was characterized by change this fiscal year. Emily Griffith left the department to pursue career and educational goals at the University of Nevada, Las Vegas. Rose Muller was promoted to Departmental Administrator and Karen Majors was promoted to Administrative Assistant II. The 1996/97 academic year witnessed several important developments with respect to our faculty.

A. Significant Achievements

Among the achievements and accomplishments of the Sociology Department in 1996/1997, there are several of which we are especially proud.

The Sociology Convocation was held in the Student Union Ballroom on Saturday, May 17th at 3:30 p.m. A total of 66 undergraduates received Bachelor of Arts degrees from the Department of Sociology with the following substantive breakdown: 23 Sociology majors; 43 Criminology and Criminal Justice majors. An estimated 820 persons were in attendance including family and friends. This year, the Department heard presentations from two Sociology graduates, Aaron Laing and Jennifer Medrano. Sarah Augustine was awarded the McGee award for the best undergraduate paper on a sociological topic. The Department also awarded honors to the five Sociology Honors students; Christopher Battersby (magna cum laude), Aaron Laing (magna cum laude), Avie Livnat (cum laude), Jennifer Medrano (cum laude), and Elizabeth Whiting (cum laude). In addition, the Department recognized the accomplishments of graduating seniors with grade point averages above 3.50: Cathleen Castle, Jennifer Cawley, Cynthia Gonzales, Arthur Jaynes, Jacque Moise, and Susan Walker. Master of Arts degrees were awarded to Rebecca Frerichs, Karen McGruder, and Rebecca Whitecotton. Heidi Ballard and David Broudy were awarded PhDs.

The Department of Sociology Honors Program received $2000 from the Dean's Office of the College of Arts and Science in 1996-97. These funds were used for three purposes: 1) Nine of the 10 first-year honors students attended a weekend retreat at which they discussed their honors thesis proposals, attended workshops on working with faculty and successfully completing a thesis, and reflected on their educational experience up until now. 2) Two second-year honors students were partially funded to attend the Pacific Sociological Association annual meetings, at which one delivered a paper. 3) All 14 second-year honors students had photocopying charges subsidized. These funds received from the College of Arts and Sciences made a significant difference in strengthening our students training for future study.
The department published the fourth annual graduate student working papers series. Over the last four years, we have seen a steady improvement in the scholarly quality of the Sociology Graduate Student Working Papers Series. The current issue features articles by Kathryn Hovey and Sandra Woerle. These articles are of professional quality. We are recommending that the authors polish them, expand them, and send them to a refereed journal.

The department produced a pilot project for undergraduate outcomes assessment. The final report met with the approval of the Institutional Research, Outcomes Assessment, which reported that "the assessment efforts of the Sociology department were also well done. Overall, this is an excellent pilot study and report in student outcomes assessment... This is a very well constructed report and it will serve as an excellent model for other UNM departments (with permission of the department)."

The Sociology faculty held a series of retreats in the Spring 1997 semester to address various important issues facing the department in the areas of 1) the equitable distribution of responsibilities and rewards (including salary); 2) the development of guidelines for structuring the undergraduate and graduate curricula; 3) enhancement of the department's research mission, including better integration of research carried out at the Institute for Social Research and within the department; and 4) revision and clarification of guidelines and policies for the graduate program. Summary reports of these retreats were distributed to faculty and the Dean of Arts and Sciences.

B. List of Faculty Publications, Research, Committee Participation

Tomas Atencio

Research Projects or Creative Work:


Beverly Burris

Publications:


**Research Projects or Creative Work:**


**Activities in Learned and Professional Societies:**


"Gender Inequality in the Workplace," discussant at 1996 SSSP session, New York.

**Richard Coughlin**

**Publications:**


**Research Projects or Creative Work:**

Activities in Learned and Professional Societies:

Organizer, two sessions on political sociology, 67th Annual Meeting of the Pacific Sociological Association, March 21-24, 1996, Seattle, WA.


Executive Director and member of the Executive Council, Society for the Advancement of Socio-Economics.

Robert Fiala

Research Projects or Creative Work:

Author of Report to the ad hoc Committee to Evaluate the Institute for Social Research. 1996. UNM: ISR. 24 pages plus appendices.

Director and Principle Investigator, Center for Data Collection and Analysis, Institute for Social Research. Surveys completed on: 1. Public views on police behavior (two surveys--for APD and Sheriffs Department); 2. Illegal drug use in New Mexico; 3. Gambling behavior among New Mexico citizens; 4. Employee views on benefits packages at UNM.

Revision of a paper with Susan Tiano on Fertility and Employment among Maquila workers, and a paper on the effects of higher education on professional employment.

Phillip Gonzales

Publications:


Research Projects or Creative Work:

Accepted for publication:


Accepted for Inclusion in a Proposed Anthology:


Book Manuscript in Progress:

*The Hispano Cause: Political Ethnicity, Race Relations and Social Change in New Mexico 1848-1940.*

Grants from:

Charles Redd Center for Western Studies, Brigham Young University. $3,000.

Research Allocation Committee, UNM. $2,700.

Dean's Research Award, College of Arts & Sciences, UNM. $2,700.

Support of Sociology Grad Student; $3,500 for Soc. R.A. (Erika Derkas) from these grants.

Video Documentary in Progress:

Co Producer: "This Town is Not for Sale: The Santa Fe Mayoral Election of 1994."

Research Proposal in Progress:

"Mexican Immigration to New Mexico: Baseline Investigations." Social Science Research Council, International Migration Program, Planning Grant.

Activities in Learned and Professional Societies:


Section Organizer. Land Grants Studies. Western Social Science Association for 1997 conference.
Jane Hood

Publications:


Research Projects or Creative Work:


"Review of *Home and Work*, by Christens Nippert-Eng." *Contemporary Sociology*.

Activities in Learned and Professional Societies:

Offices:

Pacific Sociological Association Council (1996-98)

Presentations and Conference Participation:


**George Huaco**

Research Projects or Creative Work:


**Miguel Korzeniewicz**

Publications:


Research Projects or Creative Work:


Book review essay for *Latin American Research Review* titled "Economy and Society in Brazil: Background and Possibilities of Cardoso's Presidency."

Project titled "Global Dimensions of Corporate Social Responsibility" - Analysis of data collected from a survey of 200 respondents conducted in November 1995 and replication of the survey in November 1996.

Project titled "The Shifting Contexts of Industrial Competitiveness" - Collection of data and preparation of manuscript to be presented at the 1997 Congress of the Latin American Studies Association, Guadalajara, Mexico, April 1997.
Review of the manuscript "Comparative Strategies of Industrialization: The Case of the Auto Industry in South Korea and Mexico" for *Journal of Interamerican Studies and World Affairs*.

**Activities in Learned and Professional Societies:**

Organizer of the Political Economy of the World System Section Roundtables for the annual meetings, of the American Sociological Association, New York, August 1996.

**Gary LaFree**

**Publications:**


**Research Projects or Creative Work:**


Activities in Learned and Professional Societies:

Served on the editorial boards of American Journal of Sociology, Criminology, and Journal of Criminal Law and Criminology.

Attended meetings and presented professional papers at three national and international conferences this year.

Philip May

Publications:


Research Projects or Creative Work:

Currently Funded:


University of New Mexico, $120,000, "Supplement (from Associate Provost for Research and Arts and Sciences) to the New Mexico Access to Research Careers Program," July, 1995 - June, 2000. FY 1996 = $24,000.


U.S. Centers for Disease Control, $1,062,000, "ARBD Epidemiology and Prevention Research in New Mexico," October, 1992 - September, 1997. FY 1996 Funding = $256,000.


NIAAA, "$110,000, "Fetal Alcohol Syndrome Prevention Research," grant supplement, August 1, 1996-July 31, 1997.

Center for Substance Abuse Treatment (CSAT) and Navajo Nation. Evaluation and Technical Assistance for Alcohol Treatment Programs. $371,000, April, 1995 - March, 1999. FY 1996 = $136,000.

Activities in Learned and Professional Societies:

Member, American Sociological Association, American Public Health Association, Population Reference Bureau, College on Problems of Drug Dependence.

Member, Minority Scholarship Committee, American Sociological Association, 1996-1998.


Research Associate, American Indian and Alaska Native Mental Health Research Center, University of Colorado. Health Sciences Center.


Patrick McNamara

Publications:


Research Projects or Creative Work:


Activities in Learned and Professional Societies:


Gilbert Merkx

Publications:


Research Projects or Creative Work:


Activities in Learned and Professional Societies:

Co-Chair, Council of Directors of Title VI National Resource Centers for Foreign Language and Area Studies.

Executive Council, Latin American Studies Association.

Kalman Silvert Award Committee, Latin American Studies Association.

Committee on Nominations, Latin American Studies Association.

Commission on International Education, American Council on Education.
Editorial Advisory Board, Estudios Interdisciplinarios de America Latina y El Caribe (Tel Aviv).
Consejo Honorario, Seguridad Estrategica Regional en el 2000 (Buenos Aires).

Keiko Nakao

Publications:


Research Projects or Creative Work:

Kinship and Urban Social Networks. Supported by the Ministry of Education in Japan.

Urbanity and Social Networks. Grant obtained from the Urban Research Institute and the City Government of Tokyo.

Activities in Learned and Professional Societies:

Annual Meeting of the Japanese Sociological Association.

Meeting of the Association for the Japanese Mathematical Sociology.

John Roberts

Publications:


Research Projects or Creative Work:

H. Laurence Ross

Publications:


Research Projects or Creative Work:

Proposals written for National Institute of Justice and National Science Foundation.


Consultant to State of Delaware on mandatory liability insurance.

Activities in Learned and Professional Societies:

National Academy of Sciences, Transportation Research Council, Washington, January: Committee on Alcohol, Other Drugs, and Transportation.


American Sociological Association, New York, August, Chair-Elect of Section on Crime, Law and Deviance.
Paul Steele

Publications:


Research Projects or Creative Work:

Lennox, R., G. Zarkin, P.D. Steele and J. Bray, "The Differential Effects of Alcohol Consumption and Dependence on Adverse Alcohol-Related Consequences: Implications for the Workplace." Addictions in press.


Steele, P. and N. Rodman, "Core Technologies in Employee Assistance Programs: Their Prevalence and Co-occurrence." In preparation for submission to EAP Digest.

Activities in Learned and Professional Societies:

Professional papers read:

Steele, P.D., "Implementation of Core Technologies by EAPs: Results of a National Study." Annual Conference of the Employee Assistance Professionals Association, Chicago, November 11, 1996.


Invited participant:

Physician Consortium on Substance Abuse Education. Sponsored by the U.S. Department of Health and Human Services, Health Resources and Services Administration. December 5, 1996.


Meetings Attended:

The American Public Health Association Annual Meeting, New York:, September.

The American Sociological Association Annual Meeting, New York, August.

Office of Justice Programs Annual Meeting on Research, Washington, D.C., August.

Susan Tiano

Publications:


Research Projects or Creative Work:


Initiated contacts, read literature, received tentative agreement for funding, and began research design for study of Vietnamese immigrants in Albuquerque.

Activities in Learned and Professional Societies:

Committee for International Sociology.
Bert Useem

Publications:


Activities in Learned and Professional Societies:


Nelson Valdes

Publications:


Research Projects or Creative Work:

Created Home Page within the Internet in Cuba.

Participated in Georgetown University seminar on the Role of the Internet in Cuba, September 1996.
Richard Wood

Research Projects or Creative Work:

"Religious Networks and Immigration to the U.S. from Urban Neighborhoods in Mexico," research funded by UNM's Research Allocations Committee and by the Latin America Institute. Field research completed in summer 1996, data analysis now underway. Article to be written in 1997.

"Social Capital and Public Spaces in Semi-rural New Mexico," research funded by UNM's Research Opportunity Program and a local non-profit development agency. Field research completed in 1996 by undergraduate researcher Arthur Jaynes; report submitted to development agency October 1996. Article may be written in 1996; may become basis of masters or doctoral research for Jaynes.

Currently revising doctoral dissertation for submission in 1997 as book manuscript.

Received National Institute of Justice (Department of Justice, Washington, DC) research grant ($151,000) for "Creating a Culture of Community Policing," a two-year study of organizational culture within the Albuquerque Police Department and the interaction between APD and Albuquerque communities. Project began l/97 and will produce both scholarly and popular articles, and hopefully a book.

Activities in Learned and Professional Societies:

"Incarnational Social Ethics: The Role of Conflict in Community Organizing," paper read to the Pacific Coast Theological Society (April 1996).

C. Graduate Program

Awarded Doctoral Dissertations, Masters' Theses
Sociology Department/Summer '96, Fall '96, Spring '97

<table>
<thead>
<tr>
<th>Author</th>
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<tr>
<td>Heidi Ballard, Ph.D.</td>
<td>The Ideology of Development</td>
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<tr>
<td>Rebecca Frerichs, M.A.</td>
<td>The Christian Patriots: A Comparative Historical Analysis</td>
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Suggestions for a Phenomenological Approach to the Study of Crime

A Sociological Analysis of Factors Which Draw Spiritual Seeker to the Unity Church of Christianity

The graduate program in Sociology continued to make substantial progress with 21 new admissions for 1996/97. Out of those 21 admitted, 8 students joined the program with 4 being supported during their first semester on GA/TA assistantships. The Sociology Graduate Student Association (SGSA) remained active with President Mike Logan retiring and Karen Washburn taking on the job.

The Fourth Annual Graduate Student Colloquia were held on March 24th and April 14th, 1996 at 2:00 p.m. in the Sociology Commons. The first session included the following presenters: Kathryn Hovey, Tom Macias, Aki Takeuchi, and Sandra Woerle. The second session included: Erika Derkas, Mara Fridell, Deborah Holmes, Deinya Phenix, and Eric Strayer.

D. Appointments

Dr. Richard Coughlin was appointed Chair of Sociology by Dean Michael Fischer of Arts and Sciences, replacing outgoing Chair Dr. Gary LaFree.

Dr. Felipe Gonzales was appointed the Director of the Southwest Hispanic Research Institute.

Dr. Gary LaFree was elected director of the Institute for Social Research (ISR).

Dr. Raymond Liedka remained as a full-time Visiting Assistant Professor for Spring 1997. Dr. Liedka obtained his Ph.D. from Cornell University. Dr. Liedka will remain teaching sociological methods and statistics; this appointment fills the vacancy created by the resignation of Assistant Professor David Rhodes to pursue a research career at the Pelavin Research Center in Washington, D.C.

Dr. Phil May continued to serve as the Director of the Center for Alcoholism, Substance Abuse and Addictions.

Dr. Gil Merkx continued to serve as the Director of the Latin American Institute.

Dr. Art St. George served as the Program Director at the National Science Foundation.

Dr. Susan Tiano was appointed as Associate Dean of the College of Arts and Sciences by Dean Michael Fischer. She replaced outgoing Associate Dean Kate Vogel.
Dr. Nelson Valdes continued to serve as the Director of the Latin American Data Base.

E. Leaves of Absence. Sabbaticals, Resignations

Lecturer Tomas Atencio received a one-year leave to work on research on a distance learning idea for an eventual interdisciplinary project involving KNME-TV, Educational Media Technology, Library and community work sponsored by Rio Grande Institute (RGI). He also worked on RGI community project, Resolana Electronica.

Assistant Professor Robert Fiala took a two-week trip to Japan which included a visit to Tokyo Metropolitan University.

Professor Gary LaFree spent one month in Christchurch, New Zealand as a visiting professor at the University of Canterbury.

Professor Phil May took a 6-month leave of absence from CASAA to do research and serve an appointment as an Affiliate Fellow at the Virginia Center for the Humanities and Public Policy at the University of Virginia in Charlottesville, VA.

Professor Patrick McNamara spent his Fall 1996 semester leave engaged in research for the Lilly Endowment.

Associate Professor Keiko Nakao spent the first six months of 1996 teaching at Tokyo Metropolitan University in Japan.

Assistant Professor David Rhodes resigned his appointment to take a research position at the Pelavin Research Center in Washington, D.C.

Professor Paul Steele was granted a one-year leave of absence to do research at the Vera Institute in New York.

Professor Art St. George was granted a one-year leave of absence to direct the Competency and Research section of the National Science Foundation in Washington, D.C.

F. Visiting Faculty

Ulf Drugge, Associate Professor of Sociology at the University of Umea, Sweden came to UNM as a visiting scholar for the Spring 1997 semester. Dr. Drugge completed a book-length manuscript on families with Huntington's Disease.
Luis Gerardo Gabaldon, Professor of criminology and law at the University of the Andes, Merida, Venezuela returned to the department as a visiting lecturer for the Spring 1997 semester, in which he taught three sections of Sociology 412, Police and Society. He previously visited the university in 1991 as a Fulbright Scholar.

Dr. Raymond Liedka remained as a full-time Visiting Assistant Professor for Spring 1997. Dr. Liedka obtained his Ph.D. from Cornell University. Dr. Liedka will remain teaching sociological methods and statistics; this appointment fills the vacancy created by the resignation of Assistant Professor David Rhodes.

Dr. Greg Newbold, Senior Lecturer at the University of Canterbury, Christchurch, New Zealand, spent one month at UNM, where he served as a visiting professor in Gary LaFree's Sociology 312 (Causes of Crime) and Sociology 500 (Deviance) classes while Dr. LaFree was on exchange in New Zealand, teaching Dr. Newbold's classes.

G. Colloquia Series

Drs. Beverly Burris and Robert Fiala presented a Brown Bag Colloquium titled, "Integrating Theory & Research," in the ISR Conference Room on Wednesday, October 9, 1996.

Dr. Paula England, Professor of Sociology at the University of Arizona, made a presentation titled, "The Devaluation of Women's Jobs (and Other Factors in the Sex Gap in Pay)," in the Commons Room on Monday, March 31, 1997.

Dr. Jack Goldstone, Professor of Sociology at the University of California - Davis, presented, "Prison Riots as Revolutions: A test of structural and process theories," in the Commons Room on Tuesday, April 22, 1997.

Dr. Jane Hood presented a Brown Bag Colloquium titled, "Introduction to Qualitative Analysis," in the ISR Conference Room on Wednesday, April 9, 1997.

Dr. Hank Jenkins-Smith, Associate Professor of Political Science, presented a Brown Bag Colloquium titled, "Interview Effects," in the ISR Conference Room on Wednesday, November 13, 1997.


Dr. Michael McKee presented a Brown Bag Colloquium titled, "Taking Care of Human Subject Requirements," in the ISR Conference Room on Wednesday, March 12, 1997.
Dr. Greg Newbold, Senior Lecturer at the University of Canterbury in Christchurch, New Zealand presented a Brown Bag Colloquium titled "Convict Culture: Dynamics and Change," in the Commons Room on Wednesday, October 9, 1996.

Dr. H. Laurence Ross presented a Brown Bag Colloquium titled, "Obtaining Funded Research," in the ISR Conference Room on Wednesday, December 11, 1996.


H. Institute for Social Research

The Institute for Social Research operates as an adjunct component of the Department of Sociology. (See Table 1.) The ISR Director, Dr. Gary LaFree, in consultation with an executive committee, is responsible for overall operation of the Institute. Accounting, payroll, publishing, reception, community relations and an array of other activities are the responsibility of the central administrative unit, run under the supervision of Stella Anagnostakos. The staff position of Research Coordinator has been added since the last annual report and Robert Wilson has been moved into this position. The responsibilities of this position include maintaining relationships with granting agencies and generating new contracts and grants.

Most current research occurs within one of nine centers within the Institute. Below is a description of each center.

The Statistical Analysis Center (SAC) Gary LaFree, Ph.D. (Director)

The SAC is currently working on two major research projects. The first is a study of juvenile access to firearms and how the criminal justice system functions to regulate firearm use. The second project, which will begin in October, 1997, is a study of violent juvenile offenders in New Mexico's adult and juvenile corrections systems. Several research articles are planned for both projects and both projects will also be used to support graduate student research.

The Institute, through the SAC, continues to supervise the research contract for the Criminal and Juvenile Justice Coordinating Council (CJJCC). The CJJCC is officially a state agency chaired by Gary LaFree. The CJJCC is composed of representatives from various criminal justice constituencies in New Mexico, with a mandate to advise and make recommendations on matters relating to criminal and juvenile justice.
The Center for Applied Research & Analysis (CARA)  Paul Guerin, ABD (Acting Director)

In 1994 YRAC changed its name to the Center for Applied Research and Analysis (CARA) to better reflect its expanding focus on applied research outside of issues dealing only with youth. CARA's diversification has included the addition of several research projects including contracts with the Administrative Office of the New Mexico Courts, the Administrative Office of the Courts (2nd Judicial District), and New Mexico Corrections Department (Probation, Parole, and Community Corrections). Additionally, CARA was successful in securing a National Institute Of Justice ADAM contract which is a multi-year drug and alcohol data collection and analysis effort.

The Center for Criminal Justice Studies (CCJS)  Pete DiVasto, Ph.D., (Director)

One of the first projects in the CCJS was to provide psychological testing and evaluation of applicants for positions within the New Mexico Department of Corrections. That project lasted for seven years, ending in 1994 with over 4,000 completed interviews. Efforts are currently being made to obtain funding to help code and analyze this unique and rich data set. The Center for Criminal Justice Studies (CCJS) was formed in 1993 as the unit responsible for carrying out the last round of these interviews, and has been involved in providing psychological testing and evaluation for other criminal justice agencies in New Mexico. Dr. DiVasto also edited the Journal of Police and Criminal Psychology at the Institute during the past year.

The Center for the Study of Social Problems (CSSP)  Ed Gilliland, Ph.D., (Director)

CSSP is involved in research, planning and program evaluation focusing on a variety of social problems. Clients include the New Mexico Corrections Department, the Police Activities League, and New Mexico Advocates for Children and Families. CSSP has several projects pending with both State and Federal agencies.

The Center for Opinion Research, Scott Goold, ABD, (Acting Director)

In 1995 the Executive Committee of the ISR gave its approval for starting a Survey Research Center (SRC) within the ISR. From November, 1995 through June, 1996, the SRC completed four surveys varying in size from 400 to 3,000 interviews. Surveys are usually done as subcontracts for other projects within the ISR. In early 1997 the name of the Center was changed to Center for Opinion Research (COR) to reflect the capability of the Center to function in areas other than telephone survey research. The Center has recently completed three 1,200 person surveys and is preparing to begin a 1,000 respondent out-of-state survey.
Center for Religious Studies, Patrick McNamara, Ph.D. (Director)


APD / UNM Partnership, Richard Wood, Ph.D. (Director)

In 1996, Dr. Richard Wood was awarded a multi-year contract from the National Institute of Justice for an interactive project with the Albuquerque Police Department to study the needs of the APD in creating a culture of community policing. The project requires a significant amount of cooperation between the research group and various members of the APD. Dr. Wood is finishing the first year of data collection. Dr. Wood will be preparing several research publications based on these data.

Los Pasos Evaluation, Richard Boyle, Ph.D. (Director)

The Los Pasos Evaluation, schedule to end after the fifth year (1996), has been continued by the Pediatrics Department of University of New Mexico Health Center for an additional four years. The evaluation focuses on measuring the effects on the child at birth of prenatal drug, alcohol, and tobacco use during pregnancy. In addition to the Los Pasos evaluation, Dr. Boyle will begin an evaluation of the Start Early - Start Smart (SESS) project. SESS, a multi-year research project, is funded by the Center for Substance Abuse Prevention and administered by UNMH.
I. TEACHING FACULTY AND STAFF

A. Tenured and Tenure Track Faculty

Spanish

John Bergen  Professor
Garland Bills  Professor
Anthony Cárdenas  Professor
Dick Gerdes  Professor
Erlinda Gonzales-Berry  Professor
John Lipski  Professor
Tey Diana Rebolledo  Professor
Alfred Rodríguez  Professor
Enrique Lamadrid  Associate Professor
Mary Carmen Iribarren  Assistant Professor
Michael Kidd  Assistant Professor
Antony Higgins  Assistant Professor
Kimberle López  Assistant Professor
Susan Rivera  Assistant Professor

Portuguese

Jon Tolman  Professor
Margo Milleret  Assistant Professor

B. Lecturers

Deanna Cornejo-Patterson
Hilma Espinosa
Raquel Martínez
Katharine Riker
María Dolores Velásquez Gonzales
C. Emeritus Professors

Ruben Cobos
Robert Duncan
Pelayo Fernández
Rosa Fernández
Angel González
Tamara Holzapfel
Albert Lopes
Raymond McCurdy
Marshall Nason
Sabine Ulibarri

D. Project Assistants

Elvira Desachy-Godoy
Gregory Utley, Lower Division Coordinator for Summer 1996

E. Teaching Assistants

Ph.D.
Tracie Batson
Stephanie Becker
Debbie Berho
Elvira Desachy-Godoy
Gabriela Díaz
Fernanda Ferreira
Robin Fetters
Devin Jenkins
Eric Jewell
Sangsuk Kim
Maribel Lárraga
Andrés Lee
Eduardo López
Shigeko Mato
Patrick O’Connell
Michael Pagel
Susan Rivera-Mills
Martha Ruiz-García
Xochitl Shuru
Jean Silesky
Luis Soto
Cathleen H. Tarp
Rena Torres

M.A.
Jorge Andrade
Laura Araujo-Salinas
Andrés Armijo
Gabriela Baeza
Rosa Campos-Brito
José Juan Colín Alcántar
Yamile Cox
María De Abajo
Myriam Egusa
Arthur Fowler
Kristina Galindo Knudsen
Paul Goldberg
Saulo Gouveia
Antonio Grau-Sempere
Donetta Hines
Ronit Melleras Elliot
Valérianie Mofatto
Guadalupe Rivera
Fernando Rojas-Galván
Marcos Romero
Karen Stocker
Gueli Ugarte

F. Office Staff

Rosario Johnson, Department Administrator
Ivana Cerna, Administrative Assistant III
Ana Zazueta, Administrative Assistant II
Rosita Pickle, Administrative Assistant I

G. Work Study Team

Carolyn Aparici-Law
Gretchen Boon
Javed Church
Tanyia Escajeda
César Mirón
Eric Ruvalcaba
H. Degrees Awarded

Ph.D. in Romance Languages/Spanish

Fall 1996
Kathryn Funkhouser, Dissertation title: "The Sick Heart of the House: Quantum Anarchy in Three Novels by Latin American Women"

Spring 1997

Spring 1997

Master of Arts/Spanish Fall 1996

Gabriela Baeza
José Juan Colín Alcántar
Paul Goldberg
Michelle Morton
Gueli Ugarte

Master of Arts/Spanish Spring 1997

Andrew Armijo
Rosa Campos-Brito
Ana Cuervo Utley
Myriam Egufa
Kristina Galindo Knudsen
Fernando Rojas-Galván
Theodore Walker

Master of Arts/Portuguese Spring 1997

Saulo Rezende Gouveia

Bachelor of Arts/Spanish Major Summer 1996

Leroy Martínez
Bachelor of Arts/Spanish Major Fall 1996

Veronica Calvillo
Thomas Casey
Corina Esquivel

Bachelor of Arts/Spanish Major Spring 1997

Suzette Marie Belouin
Steven Byrd
Alexander Gonzáles
Emanuel Guardiola
Cecily Ann Kuehl
Linda Sofía López
Cara O’Flannigan
Cyrus Fleming Rilee, III
Rachel Shriver
April Allison-Viscoli
Jessica Pauline Whitcomb

BA/BS-Spanish as a Second Major Summer 1996

Rosa Amparan
Elizabeth García
Alan Herrera
Diane Villegas
Irby Wood

BA/BS-Spanish as a Second Major Fall 1996

Rachel Anne Alarid
Amy Nicole Babington
Teresa Duck
Blanca Elia
Angela García
Georgia García
John Gill
Julie Luna
Miriam Maldonado
Audrey Mendonca
**BA/BS-Spanish as a Second Major Spring 1997**

Juan Alderete  
Jennifer Baca  
Jayme Beaber  
Amy Carnes  
Peter Kismadi Celnicker  
Rosa Cervantes  
Freddy Chacon  
Amanda Crocker  
Michelle Teresa Degnan  
Mario Joaquin Encinias Herrera  
Bonnie Gayle Englehart  
Cecilia Galarza  
Barbara Gonzales  
Claire Haston  
Aaron Matthew Laing  
Claire Latowski  
Diana Lopez  
Martin Lucero  
Amery Martinez  
Matthew Martinez  
Rachael Montoya  
Stephanie Nevarez  
Melissa Ortega  
Carlos Pacheco  
Dana Pappas  
Joseph Pesce  
Emily Pratt  
Donna Rivera  
Lydia Sequeira  
Jeanette Susan Solomon López  
Kathleen Spencer  
Deirdre Ann Thomas

**II. COURSES OFFERED**

**A. Summer 1996**

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B. Fall 1996

Spanish

101, Elementary 24 1,791
102, Elementary 16 1,062
103, Elementary Conv. 1 15
201, Intermediate 15 1,056
202, Intermediate 11 780
275, Accel. Beginning 1 102
276, Accel. Intermediate 1 108
301, T/Hispanic Cult Thr Lit 1 174
301, T/La Nueva Cancion 1 96
301, T/Latin American Culture 1 81
301, T/NM Culture 1 90
301, T/NM Culture 1 96
301, Latin American Culture 1 81
301, Latin American Culture 1 75
301, Soc Protest in Latin America 1 69
301, Afro Hispanic Culture 1 78
301, T/Afro Hispanic Culture 1 72
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**Portuguese**

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**C. Spring 1997**

**Spanish**

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The Department of Spanish and Portuguese enjoyed a productive year, with excellent research and teaching achievements. Here are some highlights:

### III. DEPARTMENT HIGHLIGHTS

The Department of Spanish and Portuguese enjoyed a productive year, with excellent research and teaching achievements. Here are some highlights:

#### Portuguese

- **200, Intro to Braz Cult Capoe**
  - 1 student, 30 hours
- **275, Accel Begin Port**
  - 1 student, 126 hours
- **276, Accel Intermed Port**
  - 1 student, 78 hours
- **302, Telenovela Braz II**
  - 1 student, 18 hours
- **401, T/Brazilian Film**
  - 1 student, 18 hours
- **570, Sem/Cont Braz Novel**
  - 1 student, 12 hours
enrollment at all levels, no underenrolled sections, and a number of positive accomplishments. The faculty publication list is impressive, many professors and graduate students presented papers at professional meetings, and several colleagues were invited keynote speakers at important academic events. The academic year 1996-97 was a year of transition for the department, with a new chair, new coordinator of Lower Division Spanish, new faculty, three senior resignations, and a number of new initiatives. Professor Mary Carmen Iribarren, the new Lower Division Spanish Coordinator, reorganized and gave additional direction to the already smoothly running Spanish program, as well as contributing to teaching and advising in Spanish linguistics. Professor Margo Milleret, the other new colleague, developed and taught courses in both Portuguese and Spanish. Particularly noteworthy was her Spanish 301 class taught in Spring 1997. The class was devoted to producing several one-act plays, and after numerous rehearsals, the final performance—a resounding success—was given in the UNM Experimental Theater.

The Department of Spanish and Portuguese will sorely miss Professors Dick Gerdes, Erlinda Gonzales-Berry, and Alfred Rodríguez, all of whom retired at the end of this year. They were among the most productive and dynamic leaders of the department, and regardless of who is hired to replace them, the department will emerge with a substantially altered profile.

Two colleagues participated in successful study abroad programs. Professor Enrique Lamadrid organized and led the Conexiones program (sponsored by General Honors) to Cayey, Puerto Rico, establishing the first Caribbean presence by a UNM Spanish group,
and reinforcing the Chicano-Riqueño connection. Dr. Neddy Vigil directed the program in Xalapa, Mexico sponsored by the Office of International Programs. Both programs enrolled large numbers of students and were enthusiastically received. Several faculty members received special distinctions this year. Angel González, Professor Emeritus and prize-winning poet, was named to the Spanish Royal Academy, the highest honor for a person of letters. Professor González was also the recipient of one of two honorary doctorates awarded by UNM in Spring 1997. Professor Diana Rebolledo was named NACS Professor by the National Association of Chicano Studies, a signal honor which adds to Professor Rebolledo's already impressive list of achievements.

The Department of Spanish and Portuguese continued its outreach to the public schools through participation in the Fiesta de Otoño held at Highland High School, at which several faculty members and graduate students presented workshops. The departmental presence was also manifested at the spring Language Expo at Sandia High School.

Two issues of the Hispanic Linguistics Journal were published during the year.

The culminating event of the year was the Sixth Annual Conference on Ibero-American Culture and Society, whose theme this year was "Paradigms of truth in Iberian literature." This highly successful conference, organized by Professors Michael Kidd and Susan Rivera, drew participants from all over the world, and included readings by internationally famous Spanish authors, and a keynote address by Professor John Kronik of Cornell University, a distinguished Hispanist. Support for the conference was obtained from the College of Arts and Sciences, several UNM departments, the President's office, the GPSA, the Latin American Institute, the Spanish Colonial Research Center, the
Spanish Ministry of Education, the Spanish Resource Center, and the Albuquerque Hispanic Chamber of Commerce. This event was of great importance for our undergraduate and graduate students, many of whom who chaired sessions and presented papers, as well as for the continuing professional development of our faculty.

We approach the coming year with a combination of hope and concern. The hope stems from the continued excellence of our current faculty, an incoming group of well-prepared graduate students, healthy enrollment, and the temporary presence of two superb visiting faculty members. The concern is based on the uncertainty surrounding permanent replacements for the colleagues who have resigned or retired, and the financial woes of the university, which are making it increasingly difficult to recruit and retain faculty and graduate students.

A. New Professors

The Department of Spanish and Portuguese was joined by two new faculty members in the Fall: Professors Mary C. Iribarren, received her Ph.D. from the University of Florida, Gainsville, Florida, Assistant Professor of Spanish; Margo Milleret, Assistant Professor of Portuguese received her Ph.D. from the University of Texas at Austin, Austin, Texas.

B. Retirement

Professor Alfred Rodriguez retired in May 1997. Professor Erlinda Gonzales-Berry and Professor Dick Gerdes both retired in June 1997.
C. Staff Changes

The position of Staff Assistant was changed to half time. The vacant position of Secretary of Spanish Lower Division, was turned into a full time position and was filled by Ms. Ana Zazueta. The position of Department Secretary vacated by Ms. Zazueta was filled by Ms. Rosita Pickle. Due to the UNM-Pact, the positions of Staff Assistant, Spanish Lower Division Secretary, and Secretary of the Department were changed to Administrative Assistant III, Administrative Assistant II, and Administrative Assistant I respectively.

D. Awards

1. Professors

Professor Tey Diana Rebolledo was elected NACS Professor of the year by the National Association of Chicano Studies. This is a signal honor, which recognizes Professor Rebolledo's many contributions to Chicano scholarship and leadership.

2. Graduate Students

Rena Torres-Cacoullos received a Latin American Institute Ph.D. Fellowship for academic year 1996-97.

IV. DEPARTMENTAL ACTIVITIES

A. Lectures and Conferences Sponsored by the Department of Spanish and Portuguese
Dr. Lauro Cavalcanti, Director of the Paço Imperial (Imperial museum) in Rio de Janeiro, "Brazilian Architecture of the 1930's and 1940's: Under the Good Neighbor Policy" spoke on September 26, 1996 at 12:00 noon at the Latin American Institute.

Ana Maria Shua, Argentine Writer, spoke on "Narradoras argentinas: la diferencia, el humor, el absurdo" on October 7, 1996 at 4:00 pm at Woodward Hall 147 and October 8, 1996 "Los amores de Laurita: novela y cine" at 12:45 pm in Ortega Hall 115. Also, Bilingual Reading and Discussion: "A Good Mother/Como una buena madre" (short story) at 3:00 pm in Women Studies.

Héctor Dante Cincotta presented "La poesía de Ricardo E. Molinari and Héctor Dante Cincotta" on October 14, 1996 at 3:00 pm in Ortega Hall, Reading Room 335.

Debbie Berho, "Nosotros-Argentina': Metaphors in Juan Domingo Perón's Political Discourse" and participated in A Graduate Student Colloquium in Linguistics on November 25, 1996 at 3:00 pm in Ortega Hall, Reading Room.

Robin M. Fetters, "Stray Erasure Versus Epenthesis: Evidence from Romance" participated in A Graduate Student Colloquium in Linguistics on November 25, 1996 at 3:00 pm in Ortega Hall, Reading Room.

Emily Spinelli, "Communicative Teaching in the Foreign Language Classroom" on
March 6, 1997 at 1:15 pm in Ortega Hall, reading room.

Dolores Soler Espiauaba, Professor and Writer, “El Español de los Sentimientos” on May 7, 1997 at 2:00 pm at Ortega Hall, Reading Room.

Cristina García, read from her work on June 10, 1997 at Zimmerman Library in the Special Events Room at 12:00 noon.

B. Invited Talks


Spanish Caribbean," at Stanford University, Stanford, California, April 11, 1997; 5) "La africanía del español caribeño," for Conexiones, at the University of Puerto Rico at Cayey, July 3, 1997.

C. Papers Read by Faculty

Garland Bills, 1) "El cambio lingüístico en el español nuevomexicano: Los factores de edad y educación" at the 11th Congreso Internacional de la Asociación de Lingüística y Filología de la América Latina, Las Palmas, Canary Islands, July 1996; 2) "A methodology for rapid geographical mapping of dialect features" at the 9th International Conference on Methods in Dialectology, Bangor, Wales, July 1996.

Anthony Cárdenas, 1) "Why Can't Woman Be Like a Man?": The Virgín Mary and Androgyny in Berceo and Alfonso X, at the Seventy-eight Annual Meeting of the AATSP, Kissimme, Florida, August 9-11, 1996; 2) "Campbell, Wagner, and the Two Manuscript Versions of the Zifar" at the 32nd International Congress on Medieval Studies, Western Michigan University, Kalamazoo, Michigan, May 8-11, 1997.

Erlinda Gonzales-Berry, "Political Messianism in C. de Baca's Noches Tenebrosas en el Condado de San Miguel" at Recovery the US Hispanic Literary Heritage, University of Houston, December 1996.

Antony Higgins, "No Laughing Matter: Normative Discourse in the Satirical Poetry of

Mary Carmen Iribarren, 1) "Origen y Desarrollo de la sufijación en -rr-;" 2) "Los vocablos en -Vrr-en la lengua vasca" at the IV Congress Internacional de la Historia de la lengua Española, La Rioja, Spain, April 1-5, 1997.


Margo Milleret, 1) "Student Visions of Immigrants/Immigrant Visions of the US"
American Association of Teachers of Spanish and Portuguese, August 1996; 2) “Growing Up “Good Girls” in Two Chicana Plays” at the III Congreso de Teatro Latinoamericano, University of Kansas, Lawrence, Kansas, April 2-5, 1997.

Tey Diana Rebolledo, 1) “Creating Space of Their Own: Las Locas, Escandalosas, Atravesadas and Mujeres Sueltas in Chicana Literature” at the Crossroads in Cultural Studies International Conference in Tampere, Finland, July 1-4, 1996; 2) “Sandra Cisneros in the Public Gaze: The Creation of a Public Icon” at the South Central Modern Languages Association Meeting. San Antonio, Texas, October 31 - November 3, 1996; 3) The “Diablo a Pie”: Hispanic Cuentos from the WPA at the National Association for Chicano/a Studies (NACS) at Arizona State University, February 1-2, 1997.

D. Papers Read by Graduate Students


José Juan Colín Alcántar, "Lenguaje como resistencia en la obra de Rolando Hinojosa Smith," at the 1997 Southwest Council of Latin American Studies meeting, at the University of Texas, Austin, Texas, February 21, 1997.

Gabriela Díaz, "Culturas híbridas: Nestor Candiri y su obra en torno a la frontera," at the Southwest Council of Latin American Studies at the University of Texas, Austin, Texas, February 2, 1997.

Fernanda Ferreira, "Grammaticalization in Portuguese: The competition of -haver- and -ter- and the development of an Anterior," at the 7th Colloquium of Luso-Brazilian Literatures and Linguistics at the University of Texas at Austin, Austin, Texas, April 11, 1997.


Cathleen Tarp, 1) "Caytoz: Celestial Groutescue," at the AATSP in Orlando, Florida on August 12, 1996; 2) "‘Truth’ and Alfonsine Science: Man’s Participation in the Divine" at 6th Annual Conference on Ibero-American Culture and Society at the University of New Mexico on February 14, 1997.
E. Other Research Projects or Creative Works in Progress or Completed during period

Antony Higgins, developed work on research project on parodic and satirical literature written in Spanish America during the colonial period, "Questioning Authority: The Role of Satirical Literature in the Formation of a Public Sphere in Colonial Mexico."

Margo Milleret, "Women on Stage/Stages of Women critical literary study of Latin American women's dramaturgy." Research trip sponsored by RAC, awarded Nov. 1996.

F. Activities in Learned and Professional Societies

Garland Bills, 1) Executive Director, Linguistic Association of the Southwest; 2) attended 25th Annual Meeting of the Linguistic Association of the Southwest, Baton Rouge, Louisiana, October 1996.

Dick Gerdes, Chaired a session at the Southwest Council of Latin American Studies Conference at The University of Texas at Austin, February 20-23, 1997.

Erlinda Gonzales-Berry, 1) attended Board Meeting of the Association of Departments of Foreign Languages in New York City on October, 1996; 2) paneled at "New Trends in Chicano Literature" at the Border Book Festival, organized by NMSU and the City of Las Cruces, March 20-23, 1997.

Margo Milleret, Executive Committee for Luso-Brazilian Division, Modern Language Association, December 1996.

Jon Tolman, 1) coordinated (Conference Organizer of) the Third Annual Conference of the Brazilian Studies Association Congress in Cambridge University, England and presided three sessions of the Congress on September 7-10, 1996; 2) Executive Director of the Association (1996-2000).

G. Other Professional Activities (exhibits, off campus talks, etc.)

Garland Bills, 1) "Spanish of New Mexico" workshops for area high school students as part of the Fiesta del Otoño of the Cibola Chapter of the American Association of Teachers of Spanish and Portuguese, Albuquerque, November 16, 1996; 2) External evaluator of candidate for tenure/promotion: University of Iowa; 3) Reviewer of research proposals for National Science Foundation and National Endowment for the Humanities; 4) Reviewer of article manuscripts submitted to Modern Language Journal.

Antony Higgins, served as reader and book reviewer for the journal Colonial Latin
American Historical Review.


**Jon Tolman**, 1) Graduate Committee for the Department of Spanish and Portuguese; 2) Coordinator of Luso-Brazilian Studies; 3) Associate Director for Luso-Brazilian Programs for Latin American Institute, (LAI); 4) Executive Committee for LAI; 5) Budget Committee for LAI; 6) Research and Grants Committee for LAI; 7) Academic Freedom and Tenure Committee for UNM; 8) Interdisciplinary Committee on Latin American Studies for UNM; 9) Council of the Americas for UNM; 10) referee for Mônica Rector promotion to full Professor, University of North Carolina; 11) referee for promotion/tenure for Gary M. Vessels, Georgetown University; 12) referee for promotion/tenure for Rodolfo Franconi, Dartmouth University.

**H. Non-teaching University, College, and Department Service**

**Garland Bills**, 1) Chair, Department of Linguistics; 2) member, Grants and Awards
Committee for Latin American Institute; 3) member, Interdisciplinary Committee for Latin American Studies for the College of Arts & Sciences.

**Antony Higgins**, 1) served on Undergraduate Committee for the Department of Spanish and Portuguese; 2) served on Graduate Committee for the Department of Spanish and Portuguese; 3) served on Merit and Evaluation Committee for the Department of Spanish and Portuguese; 4) participated in Summer Institute in Spanish and Hispanic-American Archival Sciences at Newberry Library Center for Renaissance Studies, Chicago, Illinois, June-August, 1996.

**Michael Kidd**, 1) Chair, Activities Committee for the Department of Spanish and Portuguese; 2) Undergraduate Committee for The Department of Spanish and Portuguese; 3) Co-coordinator of Sixth Annual Conference on Ibero-American Culture and Society for The Department of Spanish and Portuguese, 4) Coordinator of Masters exams for the Department of Spanish and Portuguese.

**John Lipski**, 1) Chair for the Department of Spanish and Portuguese from June 1996-present; 2) Chair, Senate Graduate Committee for UNM since Fall 1996; 3) Committee on Governance for UNM; 4) Core Curriculum Task Force for UNM.

**Kimberle López**, 1) served on University New Faculty Committee, 1996-97; 2) served on Graduate Committee, the Department of Spanish and Portuguese, 1996-97; 3)
conducted Dissertation Writing Workshop, UNM's Feminist Research Institute, December, 1996; 4) Conducted Workshop, Job Search, Application and Interviewing Techniques, the Department of Spanish and Portuguese, October, 1996.


Tey Diana Rebolledo, 1) Undergraduate Advisor, 1996-Summer '97; 2) Committee of Undergraduate Advisors (College of Arts and Sciences) 1996-97; 3) Dean's Search Committee (College of Arts and Sciences) 1996-97; 4) Senior Promotion and Tenure Committee (College of Arts and Sciences) 1996-97; 5) Faculty Research Associate (the Southwest Hispanic Research Institute) 1996-97; 6) Executive Committee (the Department of Spanish and Portuguese) 1996-97.

Susan Rivera, 1) Arts and Sciences Undergraduate Committee; 2) Undergraduate Advisor; 3) Chair, Undergraduate Committee; 4) Women Studies Associate; 5) Evaluation and Merit Committee; 6) Co-coordinator, Sixth Annual University of New Mexico Conference on Ibero-American Culture and Society: "Paradigms of Truth in Iberian Literature," February 1997; 7) Prepared dossier for honorary degree nomination; 8) Faculty mentor for graduate students Beth Epstein and Donetta Hines.
I. Grants and Contracts, Extramural and Otherwise Funded

Erlinda Gonzales-Berry

Title: The Spanish Language in New Mexico: A 100 Year Struggle for Native Language Rights

Agency: Recovery Project, University of Houston

Dates: January - December 1997

Funding: $3,000.00

Antony Higgins/Tey Diana Rebolledo

Title: Teaching Allocation Grant Videos for the Classroom

Agency: T.A.S Committee/UNM

Dates: January - December 1997

Funding: $1,500.00

Enrique Lamadrid

Title: Summer Program/Research Allowance

Agency: Student Affairs/UNM

Dates: Summer 1997

Funding: $500.00
Margo Milleret

Title: Women on Stage/Stages of Women
Agency: UNM/RAC
Dates: January - May 1997
Funding: $1,065.00

Tey Diana Rebolledo

Title: Research Allowance
Agency: Student Affairs/UNM
Dates: August 1996 - May 1997
Funding: $500.00

Title: Summer Program/Research Allowance
Agency: Student Affairs/UNM
Dates: Summer 1997
Funding: $500.00

Title: Teaching Allocation Grant Videos for the Classroom
Agency: T.A.S Committee/UNM
Dates: January - December 1997
Funding: $1,500.00
Jon Tolman

Title: BRASA for Congress/Database of Brazilian Studies ($10,000.00) and Book Exhibit at the Interamerican Development Bank ($20,000.00)

Agency: Brazilian Embassy in Washington, D.C.

Dates: April 1997

Funding: $30,000.00

J. Pluralism

This past year, the department tried to attain the goals of pluralism, providing employment to qualified personnel, making the effort to attract women and minority groups. During this year, the department issued contracts to 43 teaching assistants, 21 of which were Hispanic and 3 of them were Asian. Twenty-seven of those teaching assistants were women, 13 of them were of Hispanic origin and 2 were Asian. A total of 5 lecturers taught on a part-time basis, 5 of them were women of Hispanic origin. The work study team was composed of 6 students, 4 being Hispanic.
Department of Speech and Hearing Sciences

July 1, 1996-June 30, 1997

Submitted by

Linda Riensche

Professor and Chair, Department of Speech and Hearing Sciences

1. **Significant developments during the academic year, 1996-1997**

The name of the Department was changed to the Department of Speech and Hearing Sciences.

Dr. Patrick Finn received Tenure and was promoted to Associate Professor. Dr. Bopanna Ballachanda completed a successful mid-probationary review. Drs. Mary Oelschlaeger and Janet Patterson completed successful Code 3 reviews.

**Research**

Funding was obtained from Graduate Studies for equipment and graduate assistantships for the Speech and Hearing Research Institute. Space in the EECE building was prepared and bids were requested for setting up the sound booth. Research projects initiated included (a) the Evaluation of the AHE by Parent, Stewart, and Bricker and (b) the DEPA by Parent, Magotra, and Bricker and (c) evoked potentials and signal processing techniques for extracting features of brainstem responses by Ballachanda and Whitman.

**Curriculum and Advisement**

The use of the National Teachers Examinations in Speech-Language Pathology and Audiology as well as a Comprehensive Issues Paper in place of the old Comprehensive Examination plan was implemented.
A Distance Education and Evening Weekend Degree Program was implemented to provide a major and minor in Speech and Hearing Sciences at the undergraduate level. The first course, Introduction to Communicative Disorders, was taught in Spring 1997. The 29 month program entails simultaneous telecasting of most of the undergraduate program with a few of the courses scheduled to be presented as ground courses because of the nature of the materials. Courses for completion of the graduate program are scheduled to be offered on the Santa Fe and Gallup campuses following completion of the undergraduate program offerings.

Brochures were developed on recommended minors for undergraduate students in Speech and Hearing Sciences, the Minor in Speech and Hearing Sciences, and on the Evening and Week-end degree Program.

The four advisors reviewed their work and made modifications for consistency in their advisement procedures.

New Equipment
The Audiology program received a new video otoscope and a hearing aid station donated by Starkey Laboratories in Austin, Texas. The value of these instruments is estimated at $80,000.

Scholarships
Funds for the Bruce E. Porch scholarship and the Richard Hood scholarship continued to accrue.
ASHA Accreditation

The Department was notified that it had been reaccredited by the Council on Academic Accreditation in both Audiology and Speech-Language Pathology.

The UNM Speech-Language-Hearing Center

The number of Community practicum sites was increased to include the following:

Albuquerque Area Indian Health Board
Albuquerque Grand Retirement Apartments
Albuquerque Manor
Albuquerque Public Schools
Albuquerque Speech, Language, and Hearing Center
Albuquerque Veterans Administration Medical Center
All Angels Preschool
All Indian Pueblo Council
Alta Mira
Aspen Living Center-CO
Bear Canyon Senior Center
Bernalillo Public Schools
Boulder Valley Schools-CO
Brushwood Care Center
Carrie Tingley Hospital
CCDP Child Development Program
Chelwood Learning Center
Clark County Schools-NV
Class and Cradle Preschool
Cleft Palate Clinic
Coddington Care Home
Crestview Academy
Cuddles Child Learning Center
Delamar Care Home
Escuela del Sol
Eubank Daycare
Explorabilities
Gila Regional Medical Center
Green Project
Health South Rehabilitation Hospital
Hearing Aid Dispensers Company
Hearing Evaluation Center
Hearing Health Care Center
Horizons Specialty Hospital
Hospitality House
Interface
Kindercare-Lower Terrace
Kindercare-Panorama
La Mesa Preschool
Las Palomas
Las Vegas Medical Center
Los Volcanes
Lovelace Hospital
Meadowlark Senior Center
Metrowest Braintree Rehab Center-MA
Montessori Academy
Monzano del Sol
Moriarty Public Schools
Mountain Home, TN Veterans Affairs Medical Center
New Mexico Preschool for the Deaf
New Mexico School for the Deaf
New York Jewish Hospital
Northern BPS Communities
Parent-Child Development Center
Parkview Hospital-CO
Pathways, Inc.
Prime Time Home Daycare
Public Health Services
Presbyterian Ear Institute
Presbyterian Hospital Rehabilitation Services
San Juan Regional Medical Center
Santa Fe County Community Head Start
Santa Fe Speech and Language Associates
St. Joseph Rehabilitation Hospital and Outpatient Center
Southern BPS Communities
Southwest Daycare-Texas
The May Clinic, Scotsdale, AZ
Tres Manos Parent Child Center
The UNM Child Development Center
Transitional Hospital Corporation
UNM Adolescent Mental Health Center
UNM Audiology Clinic
UNM Audiology Clinic-Otolaryngology Department
UNM Children’s’ Psychiatric Hospital
UNM Senior Health Clinic
UNM Speech-Language-Hearing Center
UNM University Affiliated Programs
Preschool and Infant Evaluation Program
UNM University Hospital Neonatal Intensive Care Unit
UNM University Hospital Speech and Language Department
YMCA Preschool
Youth Diagnostic and Detention Center
Audiology Clinic

The Universal New Born Hearing Screening Project was implemented, providing hearing screening opportunities for all audiology and speech-language pathology graduate students.

Widex held a seminar at the University Hospital for our students and the audiology community. This seminar covered new developments in digital hearing aids, as well as compression advances. Starkey labs hosted UNM at their facility in Austin, Texas. Training courses were taught on earmold impression techniques, shell modification, and hearing aid repair. Participants included 6 students and 2 professional staff.

Special Programs

Augmentative Communication Program

The Augmentative Communication Program was less active this year because of the departure of Dr. Sandy Damico who was a Visiting Assistant Professor. Dr. Damico arranged for a summer program of a smaller magnitude in Albuquerque Public Schools with our student involvement along with her supervision and that of 2 speech-language pathologists employed by Albuquerque Public Schools. A tenure track position was requested for continuation of the program.

Mexico City Interdisciplinary Program

Dr. Sandra Damico and Ms. Kate Blaker visited Comunidad Crecer in Mexico City in January in order to follow up on clinical plans for the handicapped children served by the school as well as to practice their Spanish speaking skills. In July and August, Ms. Kate Blaker led a group to the
school for additional clinical and cultural experiences and to enjoy intensive work on their Spanish speaking skills. Other members of the group included Ms. Yvonne Soto-Gomez, Ms. Elayne Kessler, graduate students Stacey Burke, Diola Garcia, Sylvia Sarmiento, and Craig Tucker as well as Ms. Saundra Anderson, Occupational Therapist, and Mr. Ruben Castillo, Adaptive Equipment Specialist who served as interdisciplinary teaching faculty.

Villahermosa Program

Claudia Lopez Ramirez and Sandra Perez Chavez, speech therapists from Villa Hermosa in Tobasco, Mexico visited the Department in October, 1996 as part of our exchange program with the clinic in Villa Hermosa owned by Dr. Gustavo Sala Villanueva and Dra. Yaxavira Florville Alejandra. While here, they visited the UNM Speech-Language-Hearing Center including the Augmentative Communication Program and the Audiology Clinic at University Hospital as well as the New Mexico School for the Deaf, Albuquerque Public Schools sites, and a rural public school site. They also spent many hours with Dr. Deborah Detorie, her husband Patrick Ward, Ms. Kate Blaker, Yvonne Soto-Gomez, Amanda Aragon-Gabaldon, and Tania Triolo allowing for all to practice their second language of Spanish or English. The visit included tours of Santa Fe, the Jemez, the Balloon Fiesta, a reception given by the Partners of the Americas, and a welcome party at the home of Tania Triolo.

Albuquerque Public Schools Programs

The Albuquerque Public Schools program continued to provide 4 clinical supervisors and considerable financial support. It was modified so that the Longfellow Elementary School
program served by Yvonne Soto-Gomez includes a Spanish speaking only special education classroom.

Leadership Training Program

The Leadership Training Program (LEND) was in its second year of a 5 year cycle. Our Department’s participation was increased to include 3 students (Cathy Brinkley, Erica King, and Shirley Allison). The program continues to provide student financial support, multicultural clinical opportunities, interactions with many disciplines, professional travel, and experiences with the legislative process.

Allied Health Interdisciplinary Program for Rural Areas

This Allied Health Interdisciplinary Program was in its second year of a 5 year cycle. The program continues to provide an opportunity for students in the various health related disciplines to learn together and gain an understanding and appreciation for the expertise that each brings to the solution of health problems. It also continues to use the Problem-Based Learning Approach of the UNM School of Medicine with the experience extended to the rural setting through clinical placements and the use of centralized library resources. This year, one additional location was filled with a student in Las Vegas, bringing the number of student participants to 4. Other locations included the Gila Regional Medical Center in Silver City, San Juan Regional Medical Center in Farmington, and UNMH/Moriarty.

Project Hozho

Ms. Christina Vining served as the director of Project Hozho ("ho o"), a multicultural project funded by The American Speech-Language-Hearing Association through the New Mexico Center
for Developmental Disabilities. The project provides opportunities for clinical practicum experiences with individuals in Native American communities who have developmental disabilities. The UNM students who were chosen to participate in the Project Hozho were Melissa Butler, Feizi Spencer, and Melissa Martinez.

Special Events

Convocation

A convocation was held at the Kiva Auditorium for faculty, staff, undergraduate, non-degree, and graduate students. Students were provided professional and departmental information. Faculty, staff, and officers of the UNM Chapter of the National Student Speech, Language, and Hearing Association were introduced. Program requirements, special events, and plans were discussed. Approximately 70 persons attended.

Annual Picnic

Department held its sixth annual picnic on Saturday, September 7 at Snow Park. Faculty, staff, undergraduate, non-degree, and graduate students were invited. Approximately 70 persons attended.

Faculty-Student Attendance at National Conventions and Conferences

10 audiology graduate students, 3 faculty and professional staff members, and 2 alumni attended the American Academy of Audiology Convention in Fort Lauderdale, Florida in April. Four faculty members attended the American Speech-Language-Hearing Association Convention in Seattle, Washington.
Holiday Party

The Annual Holiday Party was held at the Continuing Education Building. The event was a potluck and included music provided by graduate students as well as a questionnaire in a ‘guess which faculty member’ format for entertainment. Approximately 80 faculty, staff, students, and family members were in attendance.

December Graduation Reception

The December Graduation was celebrated by a reception in the Department before the UNM Commencement ceremony. Bachelor’s level graduates were presented certificates and master’s level graduates were presented a UNM pin by Dr. Richard Hood, Professor Emeritus and past departmental chair. The event was attended by approximately 30 faculty, staff, graduates, and family members.

Interdisciplinary Career Fair

Speech-Language Pathology students were again included in the Interdisciplinary Career Fair hosted by the UNM Physical Therapy Club and the UNM Student Occupational Therapy Association.

NSSLHA Fifth Annual Southwest Conference

The Sixth Annual Southwest Conference on Communicative Disorders was held March 13 and 14, 1997. It was designed for attendance by both students and professionals, though it was put on by students. There were 21 speakers and 376 participants from Texas, Arizona, Oregon,
California, and throughout New Mexico, 151 of whom were students. An opening reception was held at Scallo's Restaurant on Wednesday evening. The conference itself was held at the Albuquerque Convention Center and was comprised of four blocks of four simultaneous sessions throughout the day on Thursday and Friday. An awards banquet and ceremony followed the Thursday sessions at the La Posada Hotel. Speakers included the following:

Amy Wetherby
Professor, Department of Communication Disorders
Florida State University
“Communication Assessment with Infants and Toddlers for Early Identification and Intervention Planning.”

Kathleen Y. Haaland
Professor, Psychiatry and Neurology at the University of New Mexico School of Medicine
“Limb Apraxia: Definition, Assessment, and Rehabilitation Implications”

Paula Square
Chair of Speech-Language Pathology
Faculty of Medicine
University of Toronto

and

Deborah Hayden
Founder and Director of the PROMPT Institute located in Santa Fe

Clinical Assistant Professor, University of Toronto

“Assessment and Treatment of Speech Production Disorders: New Directions.”

James Jerger

Professor, Baylor College of Medicine

Department of Otorhinolaryngology & Communication Sciences

“Binaural Hearing in the Elderly”

Caroline Musselwhite

Assistive Technology Consultant in Phoenix, Arizona

“communication All Day Long! Light Tech, Cheap Tech, No Tech”

Raquel T. Anderson

Assistant Professor

Speech and Hearing Sciences

Indiana University

“Assessing Language in Children from Diverse Language Backgrounds: Issues & Guidelines”

Karl R. White

Director, Universal Newborn Hearing Screening Program

Professor of Psychology & Special Education
"Within Our Reach: Universal Newborn Hearing Screening"

Theodore J. Glattke
Professor, Speech & Hearing Sciences and Surgery
University of Arizona

"Otoacoustic Emissions in a Pediatric Population"

Jack S. Damico
Doris B. Hawthorne Chair
Communication Disorders & Special Education
University of Southwestern Louisiana

and

Wayne A. Secord
Professor and Chair of Speech Pathology & Audiology
Northern Arizona University

"Classroom Language Intervention: A Collaborative Approach for the School Age Child"

Sandra B. Chapman
Research Scientist, University of Texas at Dallas Professor, Neurology,
University of Texas Southwestern Medical Center as Dallas

"Long-term Recovery in Pediatric Head Injury: cognitive, Linguistic, and Brain Correlates"
Robert E. Waterman
Professor, Dept. of Anatomy,
University of New Mexico, School of Medicine
“Problem-Based Learning in an Interdisciplinary Program”

Mead C. Killion
Founder and President of Etymotic Research
Professor, Audiology, Northwestern University
“The Hair Cells Request: Improved Hearing Aids”

Nina Simmons Mackie
Associate Professor
Communication Sciences and Disorders
Southeastern Louisiana University
“Adult Aphasia: Alternatives to Traditional Approaches”

Patricia G. Larkins Hicks
Founder and President, Outcomes Management Groups, Ltd., Columbus, OH
“Into the 21st Century: Issues, Challenges, Opportunities”

Marci Laurel
Speech-Language Pathologist
Albuquerque Public School System

and

Carla Cay Williams
Occupational Therapist and owner of Kid Power therapy Associates

“Celebrating the Connections: Sensory Integration for Speech/Language Pathologists”

Christina Brown
University Affiliated Programs
University of New Mexico

and

Linda Coleman
Directs Assistive Technology & Telecommunications Program at the
University of New Mexico’s Health Sciences Center

“Family-Centered Assessment Process for Augmentative and Alternative Communication”

Ruth A. Bentler
Associate Professor
Speech Pathology and Audiology
University of Iowa

“How to Select and Evaluate New “High-Tech” Hearing Aids”
May Graduation Reception

The May Graduation was celebrated by a reception at the Albuquerque Country Club following the UNM Commencement ceremony. Bachelor's level graduates were presented certificates and master's level graduates were presented a UNM pin by Dr. Richard Hood, Professor emeritus and past departmental chair. The event was attended by 205 faculty, staff, graduates, and family members.

Other Activities

NSSLHA Meetings

NSSLHA meetings were held at the Nursing and Pharmacy Building.

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<th>Date</th>
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<td>NM Protection and Advocacy</td>
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<td>“Protection and advocacy issues within our profession”</td>
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<td>October 29</td>
<td>Susan Rush</td>
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<td>UNM Communicative Disorders</td>
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Public Information

a. “Orientation and Overview of AAC” presented by Sandy Damico, Desiree Whalen, and Kathy Dieruf, August, 1996. (Community Workshop)
b. “Nonelectronic and/or Low Technology AAC Systems” presented by Sandy Damico, Desiree Whalen, and Kathy Dieruf, September, 1996. (Community Workshop)

c. “Assistive Technology Funding with Augmentative Communication Systems” presented by Bill Newroe, September, 1996. (Community Workshop)

**ASHA and State of New Mexico Continuing Education Units sponsored by UNM**

a. Student Development of Critical Thinking

b. Using Stories to Promote Beginning Communication

c. Advanced Hearing Aid Seminar (State of NM only)

d. Digital Processing in Hearing Instruments

e. Developing Inclusive Schools

f. 6th Annual Southwest Conference on Communicative Disorders

g. Widex Seminar

**Facility Modifications**

A new roof was put on Trailers M and N and both were painted. Med 3A and Trailers M and N were re-carpeted.

2. **Significant plans and recommendations for the near future.**

a. Identify a Speech-Language Pathologist from APS to replace Linda Bivins.

b. Complete a search for a person to manage the distance education program.

c. Complete a search for a permanent Director of the UNM Speech-Language-Hearing Center.
d. Seek funds to support the Visiting Assistant Professor position in Audiology.

e. Identify a new Department Chair to replace Linda Riensche.

f. Complete process for return of Barbara Rodriguez to department in a tenure track position.

g. Request a search for a tenure track position in Speech-Language Pathology.

h. Request a search for a tenure track position in Audiology.

i. Continue review of the curriculum.

j. Complete the Speech and Hearing Research Institute facility.

k. Establish one additional clinical funding source.

3. **Appointments to staff.**

a. Tabitha Parent, Visiting Assistant Professor 8/19/96

b. BJ James, Department Administrator 10/1/96

c. Andrea Billey, Director of the Audiology Clinic 4/1/97

d. Dave Yegerlehner, Audiologist 3/3/97

e. Mariposa Varela, Administrative Assistant 5/1/97

f. Anita Kessler, Administrative Assistant 5/15/97

4. **Separations from staff.**

b. Carol Clifford, Director of the Audiology Clinic 7/31/96

c. Holly Oeltjen, Department Administrator 7/31/96

d. Chris Brown, Speech-Language Pathology Clinical Supervisor 8/14/96

e. Anna Ontiveros, Administrative Assistant 9/22/96
f. Joe Lobato, Audiologist 11/22/96

h. Sandy Damico, Visiting Assistant Professor 1/31/97

i. Shirley Padilla, Administrative Assistant 2/12/97

j. Linda Bivins, Lecturer II, on loan from Albuquerque Public Schools was re-called to Albuquerque Public Schools 5/30/97

5. Publications of the division; publications of individual faculty/staff.


6. Outside professional activities of staff members.

Presentations


Professional Memberships and Leadership


e. Blaker, K., Member, Membership Committee, New Mexico Speech, Language and Hearing Association.

f. Blaker, K., Member, Training and Recruitment Committee, New Mexico Speech, Language and Hearing Association.

h. Blaker, K., Preceptor, Allied Health Interdisciplinary Program.

i. Blaker, K., Director, Mexico City Augmentative Communication Clinic, Comunidad Crecer, Mexico City, July, 1997.


k. Detorie, D., Task Force on Recruitment, The State of New Mexico Department of Education.


m. Detorie, D., Member, The University of New Mexico Trialliance Consortium for Clinical Education.

n. Detorie, D., Member, Licensure Committee, The New Mexico Speech, Language and Hearing Association.


p. Finn, P., Reviewer, Journal of Speech and Hearing Research

q. Finn, P., Reviewer, American Journal of Speech-Language Pathology

r. Finn, P., Reviewer and Member, Convention Program Committee for Fluency and Fluency Disorders, Annual Convention, American Speech-Language-Hearing Association for 1997.

s. Myers, N., Chair, Licensure Committee, the New Mexico Speech, Language and Hearing Association.

t. Myers, N., Participant, Project Access, The State of New Mexico, Department of Education.

v. Oelschlaeger, M., Board Member, Albuquerque Stroke Club

w. Oelschlaeger, M., Regional Representative, National Aphasia Association

x. Oelschlaeger, M., Faculty Mentor, The University of New Mexico Research Opportunity Program.

y. Parent, T., Section Editor for Feedback publication of the Academy of Dispensing Audiologists.

z. Parent, T., Board Member, Audiology Foundation of America.

aa. Patterson, J., Faculty Mentor, The University of New Mexico Research Opportunity Program.


d. Riensche, L.L., Participant, Project Access, The State of New Mexico, Department of Education.

e. Soto-Gomez, Y. Team member of the Unified Education System inclusive classrooms. Longfellow Elementary, Albuquerque, NM.

ff. Soto-Gomez, Y., Member, Bilingual Committee, Longfellow Elementary School, Albuquerque, NM.

gg. Soto-Gomez, Y., Member, Technology Team, Longfellow Elementary School, Albuquerque, NM.
Continuing Education


i. Blaker, K., Attended the Southwest Conference on Communicative Disorders, presented by the UNM Chapter of the National Student Speech, Language and Hearing Association, Albuquerque, NM, March, 1997.


m. Finn, P. Attended the American Speech-Language-Hearing Association Convention, Seattle, WA, November 1996.


u. Parent, Attended Academy of Dispensing Audiologists Convention, Las Vegas, NV, October 1996


y. Patterson, J., Attended the New Mexico Speech-Language-Hearing Association Convention, Albuquerque, November 7-8, 1996.


Individual and Program Affiliations

a. Academy of Dispensing Audiologists

b. Acoustical Society of America

c. American Academy of Audiology

d. American Association for Supervision and Curriculum Development

e. American Speech-Language-Hearing Association

f. Association for Research in Otolaryngology

g. Audiology Foundation of American

h. International Fluency Association

i. Fluency Special Interest Division of the American

j. Speech-Language-Hearing Association

k. Partners of the Americas
1. SERTOMA Club of Albuquerque

m. The New Mexico Speech, Language, and Hearing Association

Internal Fundings

Ballachanda, B.B., Magotra, N., and Whitman, R., Joint proposal for collaborative research and teaching between the EECE and Communicative Disorders Departments, "($69,000)

7. Outside sponsored research and training.

a. Maternal and Child Health Interdisciplinary Leadership Training Program, .50 FTE of Pat Osbourn’s salary for service as a clinical supervisor to our program from July 1, 1996 through June 30, 1997. Funds were directed through the University Affiliated Program. ($24,000). Assistantships for 3 graduate students were also included.

b. UNM-APS Collaborative Program in Speech-Language Pathology, Linda Riensche and Deborah Detorie. ($121,000 + 4 professional staff).

Honors

(An incomplete listing)

Undergraduate Students

a. Cheryl Anaya, Golden Key National Honor Society

b. Tonda W. Smit, Phi Theta Kappa, Golden Key Honor Society, Phi Beta Kappa Honor Society

c. Nicole Willis, Golden Key Honor Society, Omega Greek Scholar

Graduate Students

a. Rachel Bauman, Interdisciplinary Health Care Grant for Rural Areas-Las Vegas
b. Christina Condon, Outstanding Pass-Comprehensive Issues Paper

c. Marti Buck, Honors of the UNM Chapter of NSSLHA

d. Kim Foster, Arts & Sciences Graduate Assistantship; President, UNM Chapter, National Student Speech, Language and Hearing Association; Honors of the UNM Chapter of the National Student Speech, Language, and Hearing Association; CO-Chair Southwest Conference

e. Kathleen Hamilton, The American Speech, Language, and Hearing Foundation Award

f. Katherine Kohlhepp, Interdisciplinary Health Care Grant for Rural Areas-Silver City

g. Alexander K. Ledbetter, Veterans Administration Medical Center Traineeship in Speech-Language Pathology

h. Dawn Pfaff, Mexico City Scholar

i. Melody Potts, “Hall of Fame” award

Faculty

a. Kate Blaker received the Teacher of the Year Award
### Appendices

#### Program Inquiries

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Percentile Scores on CCC (National) Examination* by Semester of Exam Taken.

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SLP Mean for 1996-97 = 706  Aud Mean for 1996-97 = 620

*The procedures for reporting scores on the national examination changed for Fall, 1993 with the result being that percentiles were no longer reported. However, according to p. 17 of the May 1994 copy of the American Speech-Language-Hearing Association Journal, “NESPA exams are designed and administered by the Educational Testing Service. The average score is 600.

Between 1988 and 1991, 26% of speech-language pathology examinees and 22% of audiology examinees failed. In that same time period, students scored a mean of 625 in speech-language pathology and 652 in audiology.” Note also that on a national basis, the distributions of scores for the audiology and the speech-language pathology exams are different, with the audiology exam having scores distributed lower than the speech-language pathology exam scores.
## Enrollment Statistics

### Summer 1996

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**Totals:** 121 407
# Enrollment Statistics

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Totals 541 1,681
Clinical Hours

SUMMER 1996

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FALL 1996

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SPRING 1997

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ANNUAL TOTAL FOR SPEECH-LANGUAGE PATHOLOGY = 8,191:03
### Audiology Clinic

#### Diagnostic Evaluations

(Number of appointments based on an average of one hour each):

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<th>Sep</th>
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<td>166</td>
<td>171</td>
<td>159</td>
<td>165</td>
<td>98</td>
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<td>189</td>
<td>236</td>
<td>162</td>
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#### Newborn Screens

(Number of baby screens):

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#### Aural Rehab Sessions:

##### Individual

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##### Group

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Annual Report
Women Studies Program
College of Arts and Sciences
July 1, 1996 - June 30, 1997

Prepared by Karen A. Foss, Director

Staff

Karen Foss, Professor of Communication and Journalism, served as half-time director for summer, 1996; AY 1996-97; and summer, 1997.

Teresa Cordova, half-time core faculty in Women Studies, was promoted to associate professor, effective August 1996. She asked that her line be moved entirely to Architecture and Planning, a move that was effective May, 1997. She taught WS 231--Introduction to Chicana Studies in summer, 1996; WS 324--Contemporary Feminist Theory for Women Studies in fall, 1996; and WS 231--Introduction to Chicana Studies and WS 379--Women and the Millennium (with Gordene MacKenzie) in spring, 1997.


We also offered several courses taught by part-time instructors or graduate students during this period. In summer, 1996, WS 379--Women’s Utopian Fiction and WS 379--Women, Music, and Western Art were offered; in fall, 1996, WS 357--Media Arts and Women, WS 379--Mixed Race Women, WS 379--Women’s Autobiography, WS 379--Images of Women, WS 379--Politics of Reproduction, and WS 379--Women and Social Change were taught by part-time faculty; and in spring, 1997, the following courses were offered by part-time instructors: WS 200--Women in Contemporary Society, WS 240--Black Women, WS 322--Race, Class, and Feminism, WS 339--Women and Cultural Violence, WS 379--Women and Law, WS 379--Teresa and Women Mystics, WS 379--Goddess Mythology of the Celts, WS 379--Native American Women Writers, and WS 392--Senior Seminar.

Barb Korbal, Carmen Salazar Lowhar, and Kate Greysen were hired as graduate assistants in the program for the 1996-97 academic year.

Bessie Gallegos-Torrez continued as Administrative Assistant.
The program also continued its publication of a newsletter about program activities. This was sent to all women faculty, advisors, departments, and administrators at UNM; it was also sent to all Women Studies programs in the country.

The Feminist Research Center was officially established as a component of the Program, beginning fall, 1996. It was given the funds that had been devoted to the journal, *Frontiers*. Shane Phelan, Associate Professor of Political Science, served as the director for fall, 1996; Louise Lamphere served as director for spring, 1997. Xochitl Shuru served as graduate assistant for the Institute. The Institute selected two visiting scholars for 1996-97--Susan Geiger and Beth Bailey--both of whom presented their research in university-wide colloquia, spoke in classes, and were available for consultation by students.

Publications and Professional Activities

During the year, the director and the two faculty members in the program participated in a variety of professional activities related to feminist, gender, and multi-cultural scholarship. Karen Foss, director, presented papers at the Speech Communication Association convention, November 1996; at the Western States Communication Association, February 1997; and at the Conference on Gender and Communication, March 1997. She also presented a talk, "A Feminist Perspective on Communication" at Southern Utah University as part of their Centennial Lecture series in February, 1997, a similar talk at Northern Arizona University in April, 1997; and a lecture on "Discourse of Marginalized Groups" for the Gender Studies Program at the University of Rosario, Rosario, Argentina, in June, 1997. She continued work on her book, *Feminist Rhetorical Theories*, to be published in 1998 by Sage.

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1996 - 1997

Annual Report

for

Computer and Information Resources and Technology

University of New Mexico
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<td>CURRENT COMPUTING ARCHITECTURAL STANDARDS</td>
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Computer and Information Resources and Technology (CIRT) provides services to both administrative and academic communities at the University of New Mexico. The variety of computing needs has dictated the necessity for an assortment of computer and support systems to meet the demands of the extensive and diverse computer user community within the University.
Despite a drop in student enrollment and budget reductions, CIRT continues to increase the quantity and quality of services to UNM students, staff and faculty. Broad areas of activity this fiscal year included:

- Internal reorganization
- Infrastructure upgrades
- New software applications
- New service initiatives

and are described in detail in the report sections that follow.

The internal reorganization reduced the number of directors within CIRT from three to two and resulted in a more natural distribution of responsibilities. It also helped to provide some funding for needed infrastructure to help offset the CIRT budget reduction.

The upgrades were in all major areas of the university's information service infrastructure including the campus network, dial-up access, storage, and CPU capacity. The increases in storage and CPU capacity were necessary to allow CIRT to continue to provide production services concurrently with on going Year 2000 conversion. They also position us to more effectively provide backup over the network for distributed departmental servers used for storing data and meeting specific departmental needs that cannot be readily provided centrally.

Despite the fact that the University experienced a drop in student enrollment, demand for CIRT services continues to increase due to a combination of factors including greater student, staff and faculty computer literacy, ever improving campus network connectivity, (12,500 active network connections today as opposed to about 770 nine years ago). deployment of new and more convenient
applications (e.g., grade availability in electronic form) and more computer training support. The increases were in the number of sessions (logins) to CIRT systems, the connect hours, and disk usage. It must also be noted that, while the CPU usage shown has not changed much, it is an artifact of what has been measured in the past and under reports the true situation. It does not include CPU usage for very important services that are provided but do not require a specific login – examples include the "News" service, network file service and access to the various UNM web servers maintained by CIRT. These services are relatively new but growing and the CPU usage for their support will be reflected in future years.

While the usage statistics shown are interesting and indicate that usage continues to increase, they provide only an implicit measure of the value of computing. Since effective use of information technologies can increase revenues, cut existing costs, reduce future costs, increase staff and faculty productivity and provide new services for all, CIRT is reviewing the metrics it currently uses with the objective to better measure the "return on the investment" for what it does. This is an extremely complex issue, even for businesses where return on the investment is all that matters. It is made even more complex at the University where it is difficult to quantize the value (as opposed to the cost) of the education provided, and even more difficult to quantize the value of providing students with services that make them proficient in the effective use of computers in their disciplines. For this reason, CIRT's initial efforts will concentrate on administrative systems where the value may be easier to quantize. Initial results of these efforts, will be included in next year's report.

A final important activity has been the planning done to upgrade the campus network to handle anticipated future traffic increases that will be generated by computer audio and video conferencing and by new types of web-based applications that will include audio and video clips in addition to
text and still graphics. This planning effort, together with UNM’s heightened visibility as an Institution active in high performance computing research that is being coordinated by the High Performance Computing Education and Research Center, has resulted in an National Science Foundation award to provide vBNS (very high bandwidth network service) to the university. This makes UNM a member of a small club of some of the most prestigious universities in the nation that are both charter members of Internet2 and have an NSF vBNS award.
Prior to January 1997 CIRT was organized into three directorates with cross CIRT support from the executive offices of the associate vice president. With the retirement of Terry Wold as IRC Director, there was a realignment of the departments in CIRT. The Information Resource Center (IRC) joined Administrative Information Support in reporting to Bill Adkins, CIRT Director. Other areas of CIRT, the Distributed System Integration Group (DSIG), the Communication Support Group and Central Systems and Operations Support (CSOS) report to Lou Sullo, CIRT Director. Cross CIRT support is still provided by the executive offices of the associate vice president. The following summarizes the activities of these major groups.

EXECUTIVE OFFICES OF THE ASSOCIATE VICE PRESIDENT

The Executive Offices consist of:

- Associate Vice President
- Administrative Coordinator
- Contract Administrator
- Executive Network Services Officer
- Supporting Staff

The executive offices provide support that is common to all groups within CIRT and include contracting, materials management as well as secretarial and clerical support for all of CIRT. Planning is the shared responsibility of upper level management of the executive offices and the operational groups which include: Administrative Information Support (AIS), Information Resource Center (IRC), Central Systems and Operations Support (CSOS), Distributed Systems Integration Group (DSIG), and the Communications Support Group (COMMSUP).
Administrative Information Support (AIS)

AIS serves the administrative information needs of the University, primarily through the development and 24 hour maintenance of central systems such as Registration, Financial Aid Management, Financial Reporting System, etc.

Information Resource Center (IRC)

The IRC provides the UNM community with the first level of support for CIRT supported hardware and software. The IRC department includes the CIRT Help Desk, Staff Consultants, the CIRT computing facilities (pods and classrooms), Computer Accounting, Public Relations, Hardware Maintenance, Software Distribution, Security and the CIRT Library.

Central Systems and Operations Support (CSOS)

CSOS provides operational support for all CIRT shared systems. This includes the monitoring and operation of all systems, data entry, scanning services, mainframe operating system and telecommunications support (System Programming) and database technical and administrative support. In addition, CSOS provides delivery service to administrative departments on campus; and records, monitors, and reports the status of hardware problems. CSOS also has staff that supports outside contracts.

Distributed Systems Integration Group (DSIG)

DSIG supports a variety of systems running AIX and a number of other dialects of the UNIX operating system. DSIG works with Academicians, Researchers, and Administrators throughout the UNM campus and associated organizations to support their computing and system management needs. In addition, DSIG develops and supports university wide systems such as electronic mail, the World Wide Web server, and automatic generation of user accounts.
Communications Support (COMSUP)

COMSUP is in charge of designing, installing and supporting the Campus Data Communications Network (CDCN). They work closely with various units to ensure their networking needs are met. In addition to the installation of the network, this group maintains the current network configurations to ensure accessibility on a 24 hour, 7-day a week basis.
I. INFRASTRUCTURE

OS/390 Implementation

CIRT upgraded the IBM System/390 operating system from MVS/ESA to OS/390 in November 1996. This upgrade is important for several reasons: Without it, IBM software support for some products would have been lost. It also situated us in an environment that will be enhanced by IBM in the future, and it reduced our software costs by more than $9,000 per month. Furthermore, compared with MVS, OS/390 takes less effort to maintain. It is more reliable due to extensive system testing done by IBM and it incorporates open features that may be valuable in the future such as UNIX services and the Distributed Computing Environment. OS/390 has proven to be the most manageable, trouble-free operating system CIRT has ever run on a System/390 Enterprise Server.

New Enterprise Server

In June, CIRT replaced the ES 9121-511 mainframe with a new 9672-RA5 Enterprise Server. The IBM 9672 was just announced and provides a 50% improvement in speed. Memory size is also doubled from 512MB to 1024MB. Ethernet and FDDI network adapters are incorporated into the system, as are higher speed connections for magnetic tape and disk systems.

The new processor immediately relieved capacity constraints and allowed customers and programming staff to process their work with a reasonable response time. The increased capacity is especially important for fall semester registration in August and for the increased workload being required to make year-2000 changes.
Network 2000 Completion

During this fiscal year CIRT completed the internal building network installation in 29 campus buildings, with over 1,500 network plates installed. This final phase of Network 2000 provided for a total of more than 10,000 new network nodes at UNM.

Modem Upgrades

All 272 dial up modems were upgraded to 33.6 Kbps with features to handle both PPP and ASCII emulation services automatically. For efficient modem usage and effective management, the recent rotor reconfiguration consolidates the previous seven hunt groups to three hunt groups with incremental session time limits.

Dialup Provider Contract

A contract has been awarded to New Mexico Technet to provide additional dialup service for UNM students, faculty and staff for a fee. Service will be provided before the fall semester, 1997. All UNM-affiliated people, who have a CIRT UNIX account, including those at the branch campuses, can subscribe to this service at a low cost. This service is fully compatible with the Mirada suite software and will be supported by Technet.

SP Research Machine

The IBM SP2 Supercomputer, a 4-node SP class machine with a specialized high-speed switch between the nodes, was made available for general use as a specialized research machine. An oversight committee was formed to review proposals for use of the SP2 regarding access and merit of the proposed projects.
vBNS

The University of New Mexico has recently received a National Science Foundation award (number NCR-9710949) to connect to NSF's vBNS (Very high speed Backbone Network Service). This award will enable researchers to use the UNM Campus Data Communication Network (CDCN) to access remote supercomputers and other resources to support research applications requiring a combination of low latency, high bandwidth and other Quality of Service attributes. The vBNS is funded by the Foundation to support scientific meritorious research, which requires high performance networking. Initially it served only the NSF funded Supercomputing Centers.

Enterprise Storage

In June, CIRT upgraded both the tape and disk storage systems connected to the System 390 Enterprise Server. One key criteria for this upgrade was that both systems could connect to the AIX systems as well as to the S/390 Server.

The tape system is a 3494 Tape Library Dataserver robotic unit with two controllers and four high-performance 'Magstar' tape drives. The unit will hold 515 cartridge tapes, each with a capacity of 10GB uncompressed or 30GB compressed. The capacity will double late in 1997. The robotic library will improve data integrity while minimizing operator intervention. The system can be expanded with additional drives and storage slots, if required.

The disk storage system is a 9393 RAMAC Storage Array with 290GB capacity. The unit utilizes RAID-6 disk, which are faster and more reliable than our old system. Physically, this box with twice the storage requires one-sixth the floor space of the old system and capacity can be doubled without increasing the floor space.
UNIX Upgrades/Enhancements

Hardware

Additions and enhancements to the UNIX systems' hardware included the acquisition of two IBM RS6000/43P CPUs for use in the campus-wide e-mail systems. One IBM RS6000/43P CPU was added for use as the campus-wide on-line "News" server. One IBM RS6000/43P CPU was added for use as the "UniCenter" application server. The IBM RS6000/J30, an SMP (Symmetric Multi-Processor,) was upgraded on a no-cost option with IBM to an RS6000/J40. This was accomplished by swapping out the older main CPU chipset for the latest versions offered by IBM, yielding a CPU power increase of 50 percent.

Disk storage was increased with the addition of two Network Appliance "Toasters," which are RAID and disk hot-swap enabled file servers, each of which has 12GB of disk storage. One was used for additional disk support for the e-mail servers and the other was used for additional systems level storage. Also, an older Network Appliance FAServer 450 "Toaster" was upgraded to a FAServer 330 with an additional 20GB of disk space targeted specifically for the general user community. This disk upgrade represents an approximate increase of 50 percent since FY 95-96.

The memory of several UNIX systems was increased. Six IBM RS6000/370 machines were upgraded from 128MB of memory to 256MB. The single IBM RS6000/580 machine was upgraded from 256MB of memory to 512MB.

Software and Operating Systems

Two licenses were procured for research and development on the Network Appliance FAServers for Web serving and for NT-based file serving. All SGI systems were upgraded from IRIX v5.3 to IRIX
0958

v6.2, ensuring continued compatibility with the ESC Pod Visualization Lab software. The final DEC UNIX systems were retired and removed from service.

Infrastructure

Enhancements and upgrades were performed on the UNIX systems with the express intent of increasing the availability, manageability, reliability, and scalability of these systems. Configuring a loose cluster of IBM RS6000/43P machines into a rotating CPU-based service increased electronic mail service capacity. Oracle database software was installed on an IBM RS6000/370, which was permanently transferred from the R&D section to the production section to accommodate the need for a dedicated server. Oracle WebServer, with an encryption certificate, was also installed on this system. IBM’s Print Server Manager (PSM) was installed on the UNIX systems with the result being greatly enhanced management functionality of campus-wide printing services.

E-Mail Statistics of Interest

Electronic mail on the UNIX systems is averaging approximately 50,000 messages per day (weekdays) during the semester, with lows around 35,000 and highs around 65,000. During non-semester times, the average is approximately 32,000 messages per day (weekdays), with lows around 18,000 and highs around 55,000. This represents an increase of approximately 27 percent over FY 95-96’s high volume level of 51,000 messages per day.

Braille Printing

A new service allows UNM computer users with limited vision to produce Braille on their own Windows PCs (Windows 3.x/Windows 95/Windows NT) and send it to a Braille embosser at CIRT. The service, jointly funded by CIRT and the ADA Coordinator, provides Braille production software
to the user and uses LPR print spooling (part of the Mirada suite) via the network to access the Braille embosser. Beyond the $20 cost of Mirada, there is no charge to the user for either software or Braille output.

Pods/Classrooms Upgrades

During the past fiscal year, the CIRT computer pods and classrooms received both new and upgraded hardware and software.

The CIRT pod and the Communication and Journalism classroom received new Pentium-Pro II equivalent PCs with MMX technology. The ASM Pod also received several of the new PCs. Lobo Lab and the Economics classroom were upgraded with Pentium PCs. The Johnson Center Pod received a new laser printer, projector and a color scanner. Lobo Lab received a new laser printer for the Macintoshes, and the Engineering and Science Pod received two new laser printers.

The desktop Macintoshes at the CIRT Pod and Johnson Center Pod, along with the Macintosh file servers, all received memory upgrades. Also, all pods PCs received memory upgrades. Lobo Lab's network was upgraded. The Communication and Journalism classroom received new carpet and a new coat of paint. Lobo Lab and the Johnson Center Pod received new chairs and CIRT's computer training facility (room 147) received a new adjustable workstation table for clients with special physical needs.

A variety of new software upgrades were implemented in the pods for both the PC and Macintosh platforms. The PCs received a new Windows NT operating system for the workstations and Novell NetWare version 4.1 for the file servers.
The following PC application software was installed: Microsoft Office Pro 97, SPSS-NT, X-Win, Lotus for Windows, PageMaker for Windows, PC Mirada, WordPerfect for Windows and F-Prot viral software.

Software upgrades for the Macintoshes included an operating system upgrade and upgrades for the following applications: MS-Word, Canvas, PhotoShop, OmniPage, AppleShare, Quark and MacMirada.

**Novell NetWare Directory Services Guidelines for UNM**

CIRT helped organize and lead a subcommittee, consisting of top UNM Novell Administrators from across campus, that develops guidelines and standards as well as make important decisions regarding UNM's NDS (NetWare Directory Services) Tree. The subcommittee was formed under the UNM NUG (NetWare User Group) in order to make the guidelines and standards as open and accessible as possible, and to ensure that the NDS guidelines will be maintained.

The UNM NDS Tree is a form of network intelligence that coordinates the distribution and access of NetWare resources across the UNM network, providing comprehensive directory services for University departments with NetWare servers that are part of the Tree.

**Network Printing**

The UNM-CIRT print systems project is based on a strategy of developing a functional distributed print environment.
The following is a summation of the desired functions and capabilities.

- Print from any campus system to any printer on the campus network and to any printer in the world.
- Produce consistent high-quality images and results from all platforms to all printers.
- Move from scheduled printing to print-on-demand.
- Move to printing from the network without direct connections, with the same simplicity and reliability as in directly attached printing.
- Utilize a single architecture for both departmental and enterprise printing.
- Develop printer redundancy to ensure backup and service continuity.
- Provide management capability that allows operations to control print jobs.
- Provide a high availability of resources and print capabilities.

The print facilities provided by CIRT at the University of New Mexico now include a true distributed printing environment. A client may now submit a print job to any number of network attached printers at UNM and have the job arrive at its destination with high reliability. Furthermore, clients may access printers at remote sites such as Valencia, Taos, Grants, and even the High Performance Computing Center on Maui.

This new print environment is a first step to achieving true printing on demand, where information is stored in a data warehouse and then accessed as needed. Offices with network attached printers may now print this information locally in their departments.
We desire reliability, availability, manageability, and scalability in our print services. Manageability has now been achieved with the recent installation and configuration of the PSM software. Scalability is inherent in the print system design. While reliability is now relatively high, it can and will be improved. Availability is currently limited by the system configuration and the software being used. Both of these issues will be addressed in the coming year.

Finally, CIRT designed a process for the fast, and easy, addition of directing CIRT print queues to departmental network attached printers. This may seem trivial, but the old process took up to six weeks to move an administrative network attached printer into production. The new process takes three to five working days after completing the initial network attached printer (NAP) form. In this manner, any office on campus may (after acquiring a printer and network card) request a printer be network attached for administrative use, and have it running within a week.

II. SOFTWARE APPLICATIONS

Financial Aid Direct Lending

The University decided to participate in year two of the Federal Direct Lending Program. Using this program, students no longer go through a lending facility. Instead, they complete an application, which is, then put into UNM's Financial Aid System, where it is then sent electronically to the Direct Loan Servicing Center. The project team participated in bringing up 9 on-line screens and 9 batch programs. These screens and programs will now be part of the annual federal regulation changes.

This program has enabled the Financial Aid Department to better serve the student population in getting the loans out to the students in a more timely manner.
Project PROGRESS

Project PROGRESS, an automated degree audit and advisement system, has been implemented for two colleges, Arts and Sciences and the Anderson Schools of Management, in the past year.

The PROGRESS degree audit can quickly tell students which requirements they have met and what is required to graduate. The audit also gives a clear picture of what transfer work from other institutions is accepted at UNM. The degree audit allows the advisor to work with students to ensure successful completion of degree requirements as well as answer questions about changing degrees. There was a well-received presentation to the regents on project PROGRESS.

All two-year New Mexico institutions have the Transfer Articulation component coded, so students' transfer work automatically is converted to a UNM-equivalent course. Also all AP (Advanced Placement) and CLEP (College Level Examination Program) credit is accounted for in the PROGRESS report. Students receive their PROGRESS TOWARD DEGREE reports via email. The implementation team is coding the changes for the new catalog and for all second majors and minors. Undergraduate Studies and Fine Arts are the colleges targeted for PROGRESS during the next year. The Admissions Office is working on transfer articulation for NMSU and will switch in October to an improved data entry process.

UNM Directory

CIRT revised and improved the paper and on-line versions of the UNM Directory this year. These revisions were performed because all the phone numbers in the Health Sciences Center changed. Departmental listings were added to the online directory this year. Departments have been trained to use this new feature to review the accuracy of departmental listings.
UNMpact

Implementation & Conversion

A database was developed to track employees during the reclassification effort. This database was not only critical for providing the data to convert employee records on the University's Payroll/Personnel System (HRS) but also to produce all management reporting. It was the source of the Employee Profile Statements and was used to track all reconsiderations.

Job Description & Posting Databases

A database was developed to maintain UNM job descriptions. This database design gives the University the ability to search job descriptions for specific duties, skills, etc, and also maintains better consistency by eliminating redundant data. The Posting database is used to produce a job posting. It also eliminated redundant keying of information by linking to the Job Description database, and it forces consistency on job postings. A new and improved Web page was also designed to display UNM postings on the Internet.

Electronic Time Input

This system has been deployed in several large departments to eliminate paper timesheets. It allows the department to enter employee time on-line and provides improved editing. This was critical since UNM's non-exempt population changed from 30% to 70% as a result of the UNMpact's reclassifications.
Retroactive Pay

CIRT was pivotal in the design and implementation of the retroactive pay process. A special database and reports were designed just for this process which generated retroactive pay for over 2000 employees.

Contracts and Grants Release 1.0

The Contracts and Grants System provides automation for the post-award accounting process. The system interfaces with the Financial Reporting System to reduce data entry and ensure consistent data. Accountants use this new system to create invoices automatically, track aging of invoices/receivables through reports available online, produce Principal Investigator verification letters, automatically generate monthly prorates and create ad-hoc reports for management.

Year 2000 and UNM's Administrative Applications

CIRT is in the process of making UNM's central administrative applications Year 2000 compliant. The problem with the new millennium is that the majority of our legacy systems do not use a century code when storing date information. They store the two-digit year, which has been the de-facto standard since the 1960's. The year 1997 is stored as 97 and the year 2000 is stored as 00. The assumption is made that the century code is 19 so 00 may be processed as 1900. This lack of a century code and the use of a two-digit year can result in logical errors. Billing dates, long-term projections and inventory order dates are just a few of the areas that may be invalid if the millennium change is not recognized by our computer systems.

The conceptually simple tasks of analyzing the dates and expanding date fields where needed, becomes complex when one considers the sheer number of dates and date routines used within applications.
CIRT currently maintains over 2.2 million lines of code and recognized this as a major undertaking. The initial analysis of the project was started in 1994. The estimated end date of the project is August, 1999. All of our on-line administrative applications have been analyzed and the failure points have been identified. Wherever possible Year 2000 changes are being made when system modifications occur. CIRT is creating a Web page with information related specifically to Year 2000 issues and concerns.

Mirada Updates

MacMirada

MacMirada version 1.0, the Macintosh edition of CIRT's Internet suite for the UNM community, was released in the spring of 1997. As with the Windows version, it provides for a fully automated installation of Internet tools and settings required to access UNM network services and the Internet, both from CDCN-connected computers and from home via dial-up access.

The MacMirada suite includes:

- MacTCP or Open Transport setup (network connectivity software)
- PPP (Point to Point) Software (MacPPP)
- Terminal emulation software (Telnet 2.6)
- Fetch 3.0 (FTP access software)
- Outside In (universal file viewer)
- Stuffit Expander (file decompression utility)
- NewsWatcher (newsgroup reader)
- Netscape 2.0.2 (web browser)
Mirada for Windows Upgrades

Mirada for Windows was upgraded during the past year, with several enhancements:

- A more current version of the Netscape Navigator (web browser) was added
- LPR/LPD print spooling was implemented allowing Windows desktop applications direct access to both CIRT's heavy-duty and special purpose network printers and to allow for sharing of networked local printers
- Online UNM phonebook lookup (CSO client) software was added to version 2.0 of Mirada for Windows (This allows the user access to the most current and complete UNM directory)
- Mirada's universal file viewer technology (Quick Views Plus, formerly Outside In) was upgraded regularly as new releases to handle additional file types became available
- Mirada upgrades provided online were fully automated to ease their installation by non-technical users
- Web access to Mirada upgrades was added to the existing FTP access
- Updates to several other applications (including FTP and terminal emulators) were released and the automated installation designed by CIRT improved to allow un-installs and to address new Windows 95 PCs

Campus-wide Synchronize

CIRT has worked this last year to move UNM to an electronic calendar management system called Synchronize. The list of departments on Synchronize grows larger. We continue to give demos and training to departments wanting to know more about Synchronize, or wanting to learn how to use the product. This product has facilitated scheduling meetings and other events between various people across campus, saving hours of tedious calling and re-scheduling by UNM office staff.

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Support Change to MS Office

Over a year ago CIRT began to consider the possibility of changing its supported office applications. After much deliberation and discussion with campus faculty and staff, CIRT made the decision to go forward with the Microsoft Office suite. CIRT is working on many ways to ease UNM through this transition, which we hope will be gradual. In the spring CIRT put the MS Office 95 suite into transitional support status. Since then, Microsoft has released the MS Office 97 suite. This will also be added to the transitional support status. CIRT’s goal is to gain expertise, establish support resources including training materials, conversion tools and reference guides, and provide the following support by fall of 1997:

- **Word**  
  Version 95/97 Full Support.

- **Access**  
  Version 95/97 Full Support.

- **Excel**  
  Version 95/97 Limited Support.

- **PowerPoint**  
  Version 95/97 Limited Support.

We will not be providing support for releases of MS Office prior to Office 95, since we will continue to support past releases of WordPerfect, Alpha Four/Five, and Lotus through the end of the fall of 1998 semester. The supported versions of these products will be frozen at their current levels (WordPerfect 5.1+, 6.1; Lotus 2.3, 2.4, 3.1, 3.4, 4.0, 5; AlphaFour 2.x, 3.x, 4.x; AlphaFive 1.0.).

### III. SERVICE INITIATIVES

**Business Recovery Plan**

An outside consultant developed a business recovery plan for CIRT. The consultant interviewed numerous employees and customers of CIRT to determine computing requirements in case of disaster. These needs were documented and incorporated into a plan that CIRT will use in case of an emergency. The interviews also raised awareness with CIRT customers regarding
departmental backup, documentation, and manual procedures in case the central computer system or network becomes inoperable. The plan will be reviewed and enhanced as part of an ongoing process.

Computing Architecture Standards

In order to establish consistent, supported standards, which the UNM campus can use as guidelines in deploying technology, CIRT has begun the process of developing a technical computing architecture. This architecture supports standards in areas such as computing operating systems; application development tools; database management systems; database query transport, which allows clients to access distributed data on other systems without concern for the data's location; database replication, which allows distributed (possibly heterogeneous) databases to be duplicated, relocated, or synchronized with other databases in an automated fashion; and network protocols. This architecture will be modified and enhanced as technologies evolve. A copy of the current architectural standards can be found in Section 9.

New Training Initiatives

CIRT has revamped some of its classes this year. Some of these are the Employee & Organizational Development classes -- the classes offered to faculty and staff through the EOD department. The e-mail presentation has been transformed to an on-line class. Faculty and staff get to learn e-mail while they are actually using it! In addition to the current class on the World Wide Web (WWW), CIRT also began offering a class on “Creating a Departmental WWW Page.” This class is designed to help departments get a start on designing their own Web pages. Also, the Mirada class has been split into two sections: Introduction to Mirada, and an intermediate version of the class that goes into more detail on how to use and configure the Mirada software.
CIRT also has added a training room in the CIRT library. This room contains a desktop computer along with a TV and VCR. Faculty, staff, and students can schedule time to view videos or computer based training materials. Current training room materials include the Microsoft Office and operating system products.

See Section 6 for a list of training and demonstration sessions that CIRT provided to the UNM community, and beyond, during this fiscal year.

New Getting Started Document

CIRT created a new publication, login:_, for newcomers to the UNM computer community. Login:_ is a compilation of various CIRT computing resources available to anyone eligible to have a CIRT computer account. Information includes how to get an account; special services, Internet tools and resources, how to dial-in to the UNM networks from off campus, and computer pod location, equipment and hours, etc. It is distributed when someone opens an account; at new faculty, staff and other orientations; or to anyone who asks for a copy. It is published in the late summer, ready for the fall semester.

Participation in Cyberfest96

CIRT was active in four phases of Cyberfest96. CIRT staff was present at planning meetings for the exposition. CIRT provided equipment, and installation and maintenance skills to wire the SUB Ballroom, where the Cyberfest Exhibit Hall was located. CIRT was an exhibitor with staff displaying CIRT's presence on the World Wide Web. Finally, a number of CIRT staff presented short workshops on using Internet tools, including Mirada and connecting to the UNM networks.
Implementation of Faculty E-mail Distribution List

CIRT assisted the department of Faculty Development in the creation of departmental electronic mail distribution lists for faculty. These individual lists were then entered into a UNM-wide distribution list, with an e-mail address of allfac-l@unm.edu, so that electronic postings can easily be sent to all UNM faculty. The departmental distribution lists facilitate communication among and to faculty in individual departments.

CIRT Reaches Out

CIRT continues to improve its communication in a series of events that brings CIRT services and staff out into the UNM community. This past year these events have included:

- Answering questions for Mirada users in the UNM Bookstore, where it can be purchased
- Bringing the CIRT Help Desk to the SUB during the first weeks of each semester
- Solving problems of those dialing into the campus network with Modem Day at CIRT

In this coming year, we are planning:

- 'Computing 101' in the pods, for students to get started computing in the UNM environment
  (This will be offered during the second week of the semester)
- Another modem day in the fall for solving the problems of those who dial into the UNM network
- Bringing the CIRT Help Desk to the SUB during the first weeks of each semester
- Another Mirada Q/A day in the Bookstore

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5.0

Cirt Staff

Professional Development
5.0 CIRT STAFF PROFESSIONAL DEVELOPMENT

CONFERENCES:

ACM SIGUCCS Conference, Chicago, IL
Sandra Chavez-Hall, Catherine Luther

AFCOM '96 Conference, Miami, FL
John Alfaro, Marcelino Lucero

AFCOM '97 Spring Conference & I.S. Trade Expo, Los Angeles, CA
Steve Sanchez, Veda Tanner

CA World Conference, New Orleans, LA
Kingsavanh Bounkeua, Starlyn Brown, Yvette Fournier, Penny Giller,
Cynthia Leon

CAUSE Conference, San Francisco, CA
William Adkins, Terrence Wold

CAUSE Winter Institute Conference, Palm Springs, CA
William Adkins, Louis Sullo

CHECS Conference, Farmington, NM
William Adkins, Kathryn Ballard, Donald Brady, Roy Corey, Mary Hanson, Gary Louie,
Maria de Jesus Malczynski, David McGuire, Linda Miller, Pamela Mirabal, John
Sobolewski, Todd Underwood, Terrence Wold

Computers on Campus Conference, Myrtle Beach, SC
Louis Sullo

CUMREC '97 Conference, St. Louis, MO
Mary Hanson, David McGuire

Department of Energy, "Electronics Riding the Road to Success", Tahoe, NV
Barbara Nolan

EDUCOM '96 Conference, Philadelphia, PA
Rosemary Barrett

Gartner Group Conference, Orlando, FL
Ivan Boyd

Governor's Career Conference, Albuquerque, NM
Martha Suiter
IBM Higher Education Conference, Winston-Salem, NC
John Sobolewski

IBM's Vista '97 Pathways Int'l Executive Customer Conference, Palm Springs, CA
Donald Brady, Jim Iden

Information Systems Executive Exchange, Colorado Springs, CO
Louis Sullo

International Oracle User Week Conference, Dallas, TX
Starlyn Brown, Beth Lowery

MIS Open Systems Security '97, Orlando, FL
David Grisham

NASFAA Conference, Denver, CO
Barbara Nolan, Barbara Pfaff

Networkers '97, Los Angeles, CA
Mark Jones

Networld '97 Interop, Las Vegas, NV
Paul Chang, Kelly Lesher, John Lutz, Louella Phillips, Luay Shawwa

Oracle Conference, San Francisco, CA
Starlyn Brown, Jan Diewald, Bruce Fraser, Theresa Villereal

Organizational Excellence Conference, San Antonio, TX
William Adkins, Louis Sullo

Share Conference, New Orleans, LA
Chuck McQuade

SHARE Technical Conference, San Francisco, CA
Raymond Garcia, Jim Iden

Super '97 Conference, Austin, TX
Roy Corey, Charles Phillips, Carlos E Silesky

SWASFAA Conference, Tulsa, OK
Barbara Nolan, Barbara Pfaff
SEMINARS/CLASSES:

AMA Management Seminar, San Francisco, CA
Mark Harty

Advanced Management Program, Albuquerque, NM
Mark Harty, Joseph Quintero

CREN Campus Networking Workshop, Salt Lake City, UT
Luay Shawwa

Department of Energy Title IV Training, Santa Fe, NM
Barbara Nolan

Gardner Group Client Server, Albuquerque, NM
Mary Berrens, Aaron Ezekiel, Todd Underwood

Macintosh Troubleshooting, Albuquerque, NM
Betty Sparks

Mastering Computers Inside Windows Workshop, Albuquerque, NM
Aaron Baca, Rosemary Barrett, Kathryn Ballard, Tom Becker, Matt Carter, Randy Eldredge, Aaron Ezekiel, Larry Fernandez, Alice Garcia, Paula Gibson, Farid Hamjavar, Becky Harris, JoAnn Perry, Barbara Pfaff, Mike Prine, Theresa Sanzone

ORACLE Training, San Diego, CA
Carolyn Brislen, Jan Diewald, Jean Russell

ORACLE Training, Denver, CO
Carolyn Brislen, Jan Diewald, Beth Lowery, Susan Minter, Shawnee Pace, Sue Roujansky, Jean Russell

ORACLE Training, San Francisco, CA
Jan Diewald, Julianne Hultzen, Beth Lowery, Susan Minter, Shawnee Pace, Jean Russell, Richard Valdez, Randy Whelan

ORACLE Training, Tampa, FL
Shawnee Pace

OSU Director's Seminar, Snowmass, CO
Linda Miller

Supporting and Troubleshooting Windows '95 Seminar, Chicago, IL
Tony Waldron
Supporting and Troubleshooting Windows '95 Seminar, Albuquerque, NM
Fran Carusone, Sa Heon Lee

XPLOR Seminar, San Antonio, TX
Donald Brady, Yvette Fournier

MEETINGS:

Bay Networks OSPF/BGP-4 Internet Workshop, Santa Clara, CA
David Hyatt

CHECS Organization Planning Meeting, Ruidoso, NM
Pamela Mirabal, John Sobolewski

Legislative Finance Committee Meeting, Santa Fe, NM
Terrence Wold

Network Meeting, Socorro, NM
Gary Bauerschmidt, Luay Shawwa

New Mexico Supercomputing Challenge, Glorieta, NM
Valerie R. Anzalone, Nancy Dennis, Christina Lopez, Susan Magee,
Pamela Mirabal, Barbara Rosen, Kevin Stroup

New Mexico Supercomputing Challenge Training and Coordinating, Gallup, NM
Pamela Mirabal

CHECS Planning Meeting, Socorro, NM
William Adkins, Pamela Mirabal, John Sobolewski

Second International IMAP Meeting, Seattle, WA
Aaron Ezekiel

Westnet II Meeting, Salt Lake City, UT
John Sobolewski

Westnet II Steering Committee Meeting, Boulder, CO
Luay Shawwa, John Sobolewski

Westnet Planning Committee Meeting, Phoenix, AZ
Luay Shawwa, John Sobolewski
PRESENTATIONS:

Presented by John Sobolewski

Presented by John Sobolewski

Presented by John Sobolewski

Implications for Distributed Memory Systems, presented to the universities in Brazil, August 5-9, 1996, Sao Palo, Brazil.
Presented by John Sobolewski

Presented by John Sobolewski

Scalable Data Mining Systems, CHECS Conference, Farmington, NM, November 6-8, 1996.
Presented by John Sobolewski

Touch Tone Telephone Access to Employee Benefits, CHECS Conference, November 1996
Presented by Bill Adkins and Maria de Jesus Malczynski

Web Mining: Information Extraction and the Web, CHECS Conference, November 1996
Presented by Roy Cory

IT Staff Training: A Program for a Rising Tide of Change, CUMREC Conference, May 1997
Presented by Mary Hanson and David McGuire

How to Prevent Viruhamaphobia, NM Computer Expo ’96)Conference and NM Computer Expo 97 Conference
Presented by Dave Grisham

Developing and Implementing an Interned Security Policy, Open Systems Security ’97 Conference
Presented by Dave Grisham

Security Incident Handling, Open Systems Security ’97 Conference
Presented by Dave Grisham

5-5
6.0

Statistical Review of CIRT

Provided Services
6.0 STATISTICAL REVIEW OF CIRT PROVIDED SERVICES

The following statistics summarize key services provided by CIRT. CIRT maintains numerous additional statistics and diagrams that provide more analysis and information about the services and support we provide. Additional statistics include pages printed by system, connect hours by system, and CPU utilization by system. Diagrams include, POD layouts, system configurations and network diagrams. If a reader wishes to see any of CIRT’s additional documentation or statistics, please call the Associate Vice President’s Secretary at 277-8125.
### 96-97 Class Stats

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| 3/27/97           | Gen Staff | Miller / Anderson | 17          | 2               | 34           |
| 6/5/97            | Gen Staff | Barrett     | 12            | 2               | 24           |
| 6/5/97            | Gen Staff | Miller / Barrett | 16          | 2               | 32           |
| **Class Totals**  |        |               |               | 63              | 8            | 126           |

<p>| Development &amp; Implementation of Internet Security |        |               |               |                 |              |               |
| 3/16/97           | Open Systems Security Conference 97 | Grisham | 150          | 2               | 300          |
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Pod Orientation

|            | 11/19/96 | History | Ezekiel | 10      | 1.5 | 15  |
| Class Totals |         |         |         | 10      | 1.5 | 15  |

Security Incident Handling

<p>|            | 3/16/97  | Open Systems Security Conference '97 | Grisham | 150   | 2   | 300 |
| Class Totals |         |                                       |         | 150   | 2   | 300 |</p>
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Average Authorized Accounts

per month

CIRT Shared Systems

8 year history

Average Authorized Accounts per month

Academic Year

1989-1990
1990-1991
1991-1992
1992-1993
1993-1994
1994-1995
1995-1996
1996-1997

Academic Year

1989-1990
1990-1991
1991-1992
1992-1993
1993-1994
1994-1995
1995-1996
1996-1997

1996-1997
Average Active Accounts
per month
CIRT Shared Systems
8 year history
Number of Pages Printed

CIRT Shared Systems

8 year history
Total Connect Hours
CIRT Shared Systems
8 year history

---|---|---|---|---|---|---|---|---
Connect Hrs | 0 | 1,000,000 | 2,000,000 | 3,000,000 | 4,000,000 | 5,000,000 | 6,000,000 | 7,000,000

1989-1990 to 1996-1997 academic years with total connect hours.
Total Number of Sessions
CIRT Shared Systems
8 year history
Average Disk Usage
(gigabytes/day)
CIRT Shared Systems
8 year history

Average Disk GByte/Day


Academic Year

7.0

Networks

and

Networking

LANS
CDCN
BITNET
TECHNET
WESTNET
NSFNET
## Buildings Connected to the CDCN By Fiber

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Appointments

and

Terminations
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Current Computing

Architectural Standards
Computing Architectural Standards

The CIRT Computing Architecture document is intended to provide information regarding the technological direction that CIRT either recommends or is considering. Where applicable, it encompasses both protocols and applications. Its purpose is to provide information for people -- within the UNM community -- who are making hardware and/or software purchasing decisions.

To see the complete list of software that CIRT supports, please see the CIRT Software Support page at http://www.unm.edu/cirt/irc/svcs/software.

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<td>RFP in progress</td>
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<td>Netview</td>
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<td>Servers</td>
<td>Oracle Web Server</td>
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<td>Gopher</td>
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<td>UseNet News</td>
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<td>Clients</td>
<td>Netscape</td>
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<td>Technology</td>
<td>Application or Protocol</td>
<td>Use, Support, Recommend</td>
<td>Until</td>
<td>Planned Replacement</td>
<td>When</td>
<td>Under Consideration for replacement or addition</td>
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<td>ACF2</td>
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<td>u,s,r</td>
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<tr>
<td>Foolproof</td>
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<td>u,s,r</td>
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<td>Software delivery</td>
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<td>Workflow management</td>
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<td>IBM</td>
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<td>Oracle</td>
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10.0

Of Special
Interest
Source of Funds Budget
July 1996 - June 1997

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional</td>
<td>2,141,074</td>
<td>22.96%</td>
</tr>
<tr>
<td>Medical Center</td>
<td>253,000</td>
<td>2.71%</td>
</tr>
<tr>
<td>Student Affairs</td>
<td>2,193,089</td>
<td>23.52%</td>
</tr>
<tr>
<td>Zimmerman</td>
<td>159,393</td>
<td>1.71%</td>
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<tr>
<td>Asset Development</td>
<td>778,000</td>
<td>8.34%</td>
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<tr>
<td>External Income</td>
<td>101,221</td>
<td>1.09%</td>
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<tr>
<td>Other Recharges</td>
<td>277,699</td>
<td>2.98%</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td><strong>9,323,839</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>
Expenditure Budget
July 1996 - June 1997

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries &amp; Benefits</td>
<td>$6,833,144</td>
<td>73.29%</td>
</tr>
<tr>
<td>Training</td>
<td>$97,485</td>
<td>1.05%</td>
</tr>
<tr>
<td>Software Maintenance</td>
<td>$559,660</td>
<td>6.29%</td>
</tr>
<tr>
<td>Hardware Maintenance</td>
<td>$333,200</td>
<td>3.57%</td>
</tr>
<tr>
<td>Supplies</td>
<td>$97,107</td>
<td>1.04%</td>
</tr>
<tr>
<td>Other General Expenses</td>
<td>$428,064</td>
<td>4.59%</td>
</tr>
<tr>
<td>UNM Overhead</td>
<td>$213,816</td>
<td>2.29%</td>
</tr>
<tr>
<td>Hardware and Software Acquisitions</td>
<td>$722,453</td>
<td>7.75%</td>
</tr>
</tbody>
</table>

Total Expense $9,229,859 100.00%
COLLEGE OF EDUCATION

1996-1997 ANNUAL REPORT

Peggy J. Blackwell, Dean and Professor

Introduction

The College faculty continued their efforts in restructuring, now entirely centered on issues of students and programs. State accreditation was granted to the College in the early fall 1996, completing the five-year national and state accreditation cycle. Successful graduate reviews were conducted for Educational Administration and Psychological Foundations, which requested through curriculum governance procedures a name change to Educational Psychology. A graduate review for Art Education was also conducted, with the review team recommending that the program be moved to the College of Fine Arts. The team also recommended major curriculum revisions in the Art Education (teacher education) program. The programs of Nutrition and Dietetics and Recreation moved to other divisions than Physical Performance and Development. The Division of Teacher Education became a college-wide division, effective July 1996, as the unit facilitating all teacher education programs in the College. Faculty made the decision in the late spring, 1996 that the division should not administratively house faculty, except for the director. Consequently, in July 1996 all faculty in the College became administratively located in one of five divisions. In August, Peter Winograd, a new faculty member, became director of Teacher Education for the College. All administrative functions for teacher education, such as admissions, advisement, recruitment, and retention, were located in the division reporting to Professor Winograd. Much of Dr. Winograd's efforts were directed toward alignment of the administrative functions related to teacher education; to determining how a college-wide division should serve faculty and students with regard to substantive leadership for programs; and to determining how best to implement the 1996 Task Force recommendations.

The 1997 fiscal year saw a budget reduction of 5%, one of the largest academic reductions in the University. This led to the freezing of seven faculty searches with six searches being returned to the College for completion. The College's financial situation continued to deteriorate, with an additional budget reduction for the 1998 fiscal year. Much of the spring, 1997 was devoted to planning about how to absorb the additional 4.9% budget reduction, caused by reduction in University funding from the Legislature. Reductions again centered on open faculty positions, with the remainder coming from various administrative areas, such as the Dean's Office and Manzanita Center. Nonetheless, the Provost requested that the College submit a hiring plan for 1997-1998 in July 1997. Twelve positions were requested.

The major event for the College in 1996-1997 was the conduct of a dean's search. The Provost formed a search committee in the fall, 1996, with five faculty (one later resigning) represented. The search committee made recommendations to the Provost in early spring, 1997 and four candidates were invited for interview. Three of
the interviews were completed, with one candidate withdrawing prior to interview. The Provost then consulted the faculty and asked the search committee to go back into the pool and bring forward candidates for interview. Two additional candidates were interviewed and Viola E. Florez Tighe from Texas A&M University accepted the position as dean, effective August 1, 1997.

External funding to the College increased during 1996-1997 by $1,659,578. The College received 78 external awards for a total of $10,699,362. Approximately 75% of proposals submitted by faculty and staff in the College were funded.

In December 1995 the majority of faculty in the divisions of Educational Specialties and Language, Literacy and Sociocultural Studies moved to the newly renovated west wing of Hokona Hall. Administrative offices for the two divisions, the Division of Teacher Education, the APS/UNM Partnership, and the College Advisement Center were located on the first floor. Faculty moved into offices (selected by lottery) on the second floor, and various projects moved into offices on the third floor. Externally funded programs moved from Onate Hall to the basement of Student Services, while Nutrition moved from Johnson Center to the Education Office Building.

Throughout the academic year, discussions continued with the Albuquerque Public Schools regarding the APS/UNM Partnership Agreement. A Transition Team, headed by David Colton, met through the fall 1996 and made recommendations to the Dean and Superintendent regarding the 1997-1998 contract Agreement. The contract was signed by both institutions in June 1997.

Students

Enrollment continued to decline throughout the University in 1996-1997. As shown in Table 1, the College’s undergraduate headcount enrollment for the Summer 1996 increased about 7% over the Summer, 1995. The data reveal a 22% increase from the summer 1992 (five years) – during the same time span, total headcount enrollment for the University held almost steady. However, the College’s budget allocation did not reflect the same percentage increase over the five-year time period for summer allocations. The percentage of undergraduate University students enrolled in College of Education classes was about 7% in 1992 and had increased to about 8% by 1996.

Graduate headcount enrollment in the College also increased in the summer 1996 by just over 2%. However, College graduate enrollment over the five-year period from summer 1992 decreased by about 5%, continuing the trend to undergraduate enrollment in the College. Again, the University’s graduate enrollment over the same period of time remained almost constant.
Table 1. Summer, 1996. Enrollment (Headcount)

<table>
<thead>
<tr>
<th></th>
<th>1996</th>
<th>1995</th>
<th>1992</th>
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<tbody>
<tr>
<td>Undergraduate COE</td>
<td>576</td>
<td>540</td>
<td>472</td>
</tr>
<tr>
<td>Undergraduate U</td>
<td>7,070</td>
<td>7,241</td>
<td>7,074</td>
</tr>
<tr>
<td>Graduate COE</td>
<td>990</td>
<td>969</td>
<td>1,041</td>
</tr>
<tr>
<td>Graduate University</td>
<td>1,756</td>
<td>1,755</td>
<td>1,766</td>
</tr>
</tbody>
</table>

The academic year undergraduate enrollment patterns reveal consistent decline in undergraduate enrollment at the University level with consistent increases in undergraduate College of Education enrollment, a pattern that is inconsistent with the University's two-year, almost 10% budget reduction for the College. The University's spring enrollment pattern shows a 10% reduction in headcount enrollment over five years. The College of Education, in stark contrast, had a 12% increase in headcount enrollment. The fall patterns are more dramatic with the College increasing 16% and the University declining 8%.

Table 2. Undergraduate Enrollment, Fall 1996 and Spring 1997 (Excluding Non-Degree)

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<tbody>
<tr>
<td>College of Education</td>
<td>972</td>
<td>977</td>
<td>833</td>
<td>1,035</td>
<td>952</td>
<td>924</td>
</tr>
<tr>
<td>University of New Mexico</td>
<td>15,056</td>
<td>15,516</td>
<td>16,155</td>
<td>17,129</td>
<td>17,730</td>
<td>19,114</td>
</tr>
</tbody>
</table>

Graduate enrollment patterns for the College continue to decline, as seen in Table 3. Over the five year span in the fall semester, the College graduate enrollment has declined more than 4% and more than 7% over the spring semester five-year span. This decline in graduate enrollment, given the much greater weighting in the funding formula for graduate credit hours, probably accounts in part for the College's budget reductions.

Table 3. Graduate Enrollment (Headcount). Fall 1996 and Spring 1997

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</thead>
<tbody>
<tr>
<td>Graduate, College of Education</td>
<td>1,298</td>
<td>1,370</td>
<td>1,369</td>
<td>1,334</td>
<td>1,390</td>
<td>1,440</td>
</tr>
<tr>
<td>Graduate, University</td>
<td>4,113</td>
<td>4,271</td>
<td>4,109</td>
<td>4,031</td>
<td>4,107</td>
<td>4,113</td>
</tr>
</tbody>
</table>
Retirements from the College continued in 1996-1997.

New Faculty Emerti

- Keith Auger, Elementary Education, summer 1996
- Bill De Groot, Physical Education, summer 1996
- John Gustafson, Physical Education, summer 1996
- Richard McDowell, Special Education, summer 1996
- Glen VanEtten, Special Education, summer 1996
- Don Kelly, Elementary Education, summer 1996
- Marlís Mann, Elementary Education, November, 1996

Leave Without Pay

- Gregory Bowes, Educational Administration, AY 96-97
- Patrick Scott, Math Education, AY 96-97
- Teresa Kokoski (Higgins), Fall 1996
- Anne Tafoya, AY 96-97
- Jan Nasiund, Psychological Foundations, AY 96-97

New Faculty: Assistant Professor

- Sandra Bailey, Family Studies (January, 1997)
- Leslie Hall, Technology Education
- Kathryn Powell, Science Education
- Jan Plass, Training and Learning Technologies
- Mark Salisbury, Training and Learning Technologies
- Linda Ware, Special Education

New Faculty: Professor

- Peter Winograd, Teacher Education

Visiting Faculty

- Jake Henderson, Middle Level Education
- Michael Morris, Educational Administration
- Elizabeth Keefe, Special Education
- Vicky Mingus, Teacher Education
- Haroldie Spriggs, Teacher Education
- Jenní Beary, Nutrition
- Donna Rodriguez, Nutrition
- Joy Vanderhoof, Nutrition
Faculty Transitions

To Full Professor
♦ William Kane, Health Education

To Associate Professor, with Tenure
♦ Deborah Rifenbary, Counselor Education
♦ Robert Robergs, Physical Education
♦ Isaura Barrera, Special Education
♦ Anne Madsen, Mathematics Education
♦ Linney Wix, Art Education

Sabbaticals
♦ Charlotte (Lani) Gunawardena, Training and Learning Technologies
♦ Vera John-Steiner, Psychological Foundations
♦ Ruth Luckasson, Special Education
♦ Vivian Heyward, Physical Education
♦ Estella Martinez, Family Studies

Regents’ Professor
♦ Joseph Martinez

Regents’ Lecturer
♦ Christine McCormick

Standing Committees

Faculty Committee
Steve Preskill, Chair
Gary Anderson
Mary Harris
Elizabeth Nielsen
Pamela Olson
Loretta Serna
Virginia Shipman
Joseph Suina
Donald Zancanella

Graduate Committee
Christine McCormick, Chair
Isaura Barrera
Rebecca Benjamin
Jo Ann Krueger
Rosalita Mitchell
Gary Ness
Lynette Oshima
Hallie Preskill
Virginia Shipman
Joseph Stevens

Undergraduate Committee
Karen Heller, Chair
Charles Bleiker
Katia Goldfarb
Kathryn Herr
Anne Madsen
Gloria Napper-Owen
Elizabeth Nielsen
Quincy Spurlin

Overhead Funds Allocation Committee
Katia Goldfarb
Ernie Lange
Elizabeth Nagel
Steve Preskill
David Scherer
Deborah Smith

College Representatives to the Faculty Senate
Victor Delclos
Craig Kelsey
Elizabeth Nielsen
Loretta Serna
Polly Turner

College Administration
Peggy J. Blackwell, Dean
Richard van Dongen, Associate Dean
Frank Field, Associate Dean
Craig Kelsey, Associate Dean
Guillermina Engelbrecht, Associate Dean

Division Directors
Leroy Ortiz, Language, Literacy and Sociocultural Studies
Victor Delclos, Individual, Family and Community Education
Mary Jo Campbell, Physical Performance and Development
Breda Bova, Educational Leadership and Organizational Learning
Ginger Blalock, Education Specialties
Peter Winograd, Teacher Education
The Bureau of Educational Planning and Development (BOEPAD) fosters school improvement initiatives throughout New Mexico. Funding for this work is provided by external grants and contracts, and by the College. BOEPAD contributes to two of the College of Education's official goals: (1) to improve teaching and learning, and (2) to improve connections with constituent groups and school-related agencies. These goals were pursued through several programs and projects during 1996-97.

**New Mexico World Class Teachers Program (WCTP)**

The New Mexico World Class Teacher Program (WCTP) is managed by BOEPAD in cooperation with all of New Mexico's teacher education institutions and the State Department of Education. The main goal of the WCTP is to recruit and support New Mexico teachers seeking certification by the National Board for Professional Teaching Standards (NBPTS). In addition, the WCTP seeks to infuse national teaching standards into the work of New Mexico teacher educators and teacher education policy.

First-year funding (1994-95) for the WCTP was provided by the state legislature. Funding for 1995-96 and 1996-97 was obtained through Goals 2000 awards. (The Belen School District serves as fiscal agent for Goals 2000 WCTP funds.) WCTP funds are used to pay the NBPTS fees of candidates seeking certification (now $2000 per candidate), and to employ mentors and facilitators who provide technical and collegial assistance to candidates as they prepare their professional portfolios and engage in the assessment process.
Results to date have national significance. Although New Mexico employs less than 1% of the nation’s classroom teachers, by the end of 1996, 14% of all nationally-certified teachers were New Mexicans. Moreover, virtually all of the 158 WCTP participants to date -- certified or not -- testify that the process of preparing for certification was a peak professional development experience for them. Additional outcomes include the development of an effective collaborative project uniting the state’s teacher education institutions, growing recognition of teachers’ roles as experts, and expanding awareness of standards of teaching excellence. During the 1997 legislative session the WCTP alumni, and WCTP Coordinator Bobbie Smith, were invited to appear on the floor of the legislature, where they received a standing ovation.

Although the WCTP has enjoyed strong support from the organized teaching profession, from the State Department of Education, and from the New Mexico Legislature, others (notably including Governor Johnson, and many school superintendents) have yet to demonstrate support for the NBPTS process. The Gallup-McKinley and Belen districts, in contrast, have gone out of their way to be supportive. Within the College of Education, support has been uneven. However, conversations have begun, examining (1) how Board-certified teachers can participate more fully in the work of the College, and (2) how more COE faculty can become involved in WCTP. Another problem, being addressed by the WCTP Coordinators’ Committee, concerns cultural sensitivity issues within the NBPTS assessment process.

Albuquerque Learning Communities Network (ALCN)

During 1994-95, BOEPAD facilitated an effort to secure Albuquerque’s selection by the Rockefeller Foundation as one of four cities to participate in a project to develop
new infrastructures for professional development in urban schools. The effort was successful. In late 1995 start-up funds became available. The APS Foundation (the official recipient of the Rockefeller grant) then contracted with BOEPAD to coordinate the “Albuquerque Learning Community Network.” The Network currently represents UNM, the Albuquerque Business Education Compact, Albuquerque Interfaith, the city of Albuquerque, the Albuquerque Public Schools, the Albuquerque Teachers Federation, and the general community. ALCN provides a forum for the identification and clarification of basic issues in professional development. ALCN also sponsors projects designed to focus and extend a city-wide conversation which will eventuate in an improved infrastructure for professional development. Among the 1996-97 ALCN-sponsored projects were (a) an interview study of the school-related experiences of non-English-speaking APS parents, (b) a comprehensive telephone survey producing a description of the business community’s myriad involvements in school improvement, (c) seven school-based pilot professional development projects, (d) a policy seminar examining the policy context of professional development, (e) school principals’ study groups, (f) parent forums, and (g) COE faculty forums. In addition ALCN representatives visited other cities participating in the larger Rockefeller-funded project (San Diego, Flint, San Antonio), establishing networks and exchanging information, ideas and concerns.

The Rockefeller Foundation commissioned Michael Fullan to prepare an evaluation of progress in the sites and in the project as a whole. Fullan’s report was favorable, and in June 1997 the Foundation announced that funding would be continued. Negotiations and conversations about ALCN’s 1997-98 plans will be occurring during the summer of 1997.
BOEPAD provides staff support for the College's Professional Development Credit Council (authorized by the College faculty on a three-year trial basis in 1994, and extended for another three years by faculty vote in April, 1997). The Council seeks to foster non-degree graduate-level continuing professional development for teachers. Although UNM administrators and school-based educators have expressed strong verbal support for the concept of Professional Development Credit, and although pilot professional development credit initiatives have been quite successful, established faculty preconceptions, unresolved turf issues in UNM's structure (involving the roles of the College, Continuing Education, and UNM North), and long-standing Registration Office obstacles at UNM, have limited implementation of Professional Development Credit at UNM. Ironically, during the spring of 1997 the UNM model was adopted by most of the rest of New Mexico's institutions of higher education, which see the Professional Development Credit model as responsive to both outreach and revenue issues. The UNM Professional Development Credit Council, encouraged by the COE faculty's renewal of policy support, is holding meetings during the summer of 1997 in an effort to identify steps needed to secure better implementation of the policy.

Human Services Collaborative (HSC).

The Albuquerque Human Services Collaborative links several health-related and family service agencies with schools in the Highland Cluster (including the Emerson Professional Development School). A local expression of a nationwide movement toward the establishment of school-linked social services and community development, the HSC seeks to coordinate and intensify prevention and early intervention resources in an area of the
city plagued by nearly every urban social pathology. Several COE faculty members are engaged with the HSC in one fashion or another, working on issues and practices in initial professional and interprofessional training, continuing professional education, service provision, and community development. The HSC has helped stimulate a number of conversations and projects within the College, including the Institute for Education and Community Leadership initiated during the 1997 Summer Session. BOEPAD’s roles in the HSC include advocacy, evaluation, and dissemination. BOEPAD’s Danforth-funded 1996 evaluation report provides guidance to the HSC’s continuing evolution.

APS/UNM Partnership

In mid-1996, APS and UNM designed and approved a new “Partnership Agreement” which established a broad framework for restructuring APS/COE collaborative programs. These programs had evolved somewhat autonomously over a period of many years. The Agreement called for the formation of a “transition team” to facilitate the process of restructuring within the new framework. Starting in November, a seven-member transition team, chaired by BOEPAD’s Director and assisted by APS and UNM personnel involved in the collaborative programs, led a broad-based conversation intended to foster shared understandings of the terms of the Agreement, and to lay foundations for Partnership planning for 1997-98. The Partnership Transition Team completed its work and submitted its report in February, permitting a shift in responsibility from the transition group to those who would be responsible for implementing the 1997-98 Agreement.

Additional Activities

BOEPAD provided minor staff support to the Faculty Senate Budget Committee, chaired by BOEPAD’s Director. It processed minor paperwork for the New Mexico
Council on Vocational Education, for which UNM serves as fiscal agent. It provided support for the Education Administration EdD program. BOEPAD personnel participated in the development of New Mexico’s 1997 Long-Range Strategic Plan for Education, and in the APS Strategic Issues Management Process.

Plans and Prospects

BOEPAD’s Director has been granted a sabbatical leave for 1997-98. The sabbatical will focus on the community/school development mission of research universities, and of entities such as BOEPAD which participate in that mission. These inquiries, and consultations with the incoming Dean of the College, will provide bases for considering future directions for BOEPAD.

Funds for continuation of the Albuquerque Learning Communities Network and the New Mexico World Class Teachers Project will be negotiated during June and July, 1997. If negotiations are successful, these projects will be sustained by BOEPAD’s continuing staff and by new personnel, as needed.

It has been said that if we do not design our own futures, others will do it for us. It is appropriate, I believe, to think of BOEPAD in that context. The school improvements needed for the next millennium are likely to require professional development and interorganizational practices and policies quite different from those now in evidence, both in schools and in universities. Those practices and policies will recognize that pedagogical and subject-area expertise is not a university monopoly, that school-based and team-based learning is essential to school improvement, that continuing professional development opportunities for educators are essential, that inquiry is not solely a function of campus-based scholars, and that neither schools nor universities can work as partners...
without surrendering some of their prerogatives and autonomy. The larger society is moving toward lifelong learning strategies and new forms of interdependency. BOEPAD, like the College as a whole, is progressing along the same trajectory. What we find, in our BOEPAD work, is an enormous demand for fresh thinking, for new social tools, for changes in institutional assumptions and routines, and for critical analyses that respond to the needs that schools and citizens are experiencing. But new conceptualizations are not enough. We need to find ways to implement them. Therein lies BOEPAD's challenge.

The ongoing restructuring process in the College of Education, strategic planning initiatives in school districts and at the state level, assistance from federal and foundation sources, and a growing network of change initiatives offer hope that changes can be accomplished. BOEPAD should continue to be a player in that process.

Staff, 1996-97

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Roberta Smith, Project Coordinator
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--David L. Colton
June 1997
COE CENTER FOR TECHNOLOGY AND EDUCATION

1996 - 1997 ANNUAL REPORT

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"I didn't even know that the College of Education had a Center for Technology and Education."

"Well, actually it is a 'virtual' center on its way to becoming a physical presence."

"Does that mean that it doesn't actually exist?"

"Yes and No. Even though the Center is not yet a physical presence, 'virtual' can be interpreted to mean that its essence is everywhere in the College!"

The Center for Technology and Education is indeed a virtual center in terms of physical presence. However, at this time (Summer 1997), it is much more than a mere hope or a potential. In fact, in November 1996 when voters approved a NM General Obligation Bond, $1.5 million was allocated for an instructional facilities upgrade for the renovation of the COE Industrial Arts Building. Thus, capital outlay funds will be used to convert the Industrial Arts Building into the Center for Technology and Education. But the Center is more than a facility. If we do not also concern ourselves with personnel and the professional development of College faculty, with curriculum revisions, with upgrades of hardware capabilities as well as other computer laboratory facilities, the Center will be but an empty shell when it is completed.

The report that follows provides information regarding some of the progress that has been made recently in the name of the advancement of technology in the College. Several goals for the 1997-1998 academic year can be found at the end of this report.

RENOVATION OF THE INDUSTRIAL ARTS BUILDING

BACKGROUND INFORMATION

Built in 1963, the Industrial Arts wing of the College of Education has been vacant since 1988. Over the past nine years, various proposals have been written and supported by the College to renovate this facility and turn it into a technology center. For several reasons like
compliance with the American Disabilities Act, this project remained on the back burner for the University. During the 1995-1996 academic year, the Dean of the College and the Director of the Center for Technology and Education made a concerted effort to bring this issue to the forefront. State Senator Ann Riley and Dean Peggy Blackwell brought together business and education leaders to request a special legislative appropriation to remodel and re-furnish the Industrial Arts Building. This group, known as the “Friends” of the College of Education hosted members of the LESC, State Board, and the CHE to Dean Blackwell’s home for a reception and served in other ways to advocate the renovation (e.g., Dale Dekker gave a presentation to the Albuquerque Business/Education Compact regarding the proposed Center). Additionally, the Dean and Director traveled to Artesia, NM to present in front of the Legislative Education Study Committee.

1996-1997 ACCOMPLISHMENTS

After the G.O. Bond Issue passed in November 1996, the Dean and Center Director met with David McKinney, Vice President of Business and Finance, to establish next steps. The Director created brochures to provide a description of the project for different audiences (e.g., business and industry as well as the Board of Regents -- See Appendix A). Meetings were held with Roger Lujan, Director of Facilities Planning. The Board of Regents approved the request to proceed with selection of architectural services to design the Center following brief presentations by Vice President McKinney and the Center Director on April 10, 1997. During late spring a pre-proposal meeting was held with approximately 40 personnel from various architectural firms interested in submitting proposals. This summer a small committee from the COE (Peggy Blackwell, Vic Delclose, Mark Salisbury, and Carolyn Wood) will read proposals from architectural firms and work with Facilities Planning to select a firm to design the Center.
TECHNOLOGY PLAN

BACKGROUND INFORMATION

During the summer and fall 1995, the Director wrote a Technology Plan for the College. The Technology Plan includes: (1) a review of the literature focused on benefits and realities regarding technology use; (2) NCATE Standards related to technology; (3) technology instruction that should be provided to COE students; (4) professional development activities that should be available to COE faculty; (5) resources necessary in terms of facilities, hardware, distance learning, and human resources; and (6) a listing of six goals, along with implementation strategies for each goal. See Appendix B for a copy of this plan. The Plan was reviewed by professionals in the business and education communities (e.g., representatives from ABEC, Sandia Laboratories, Technology Division of the State Department of Education, teachers from Bernalillo Public Schools, as well as faculty members of the COE Technology Committee) and their suggestions were incorporated into the final document. The Plan was approved unanimously by Administrative Council in the fall of 1995.

PERSONNEL

Background. In addition to the Center Director and the Director of the computer laboratories in the Student Services building, only one faculty member in the COE devoted her attention to the use of technology in the schools; and her program (ITS) was focused on training students to be technology coordinators in the schools. Vacancies in the Training and Learning Technologies (TLT) program had not been filled during previous searches, and the Center Director chaired the committee to fill two of these vacancies during the 1995-1996 academic year. Additionally, during an Administrative Council meeting focused on determining which positions would be searched, the Center Director requested that the Council consider
designating a position for a technology person in teacher education. The response to this request was overwhelming -- every person in the room agreed to the necessity of this position even if it meant that positions in their divisions would not be searched! The searches during the 1995-1996 academic year yielded three assistant professors with a technology focus: Jan Plass and Mark Salisbury for TLT and Leslie Hall for teacher education.

Accomplishments 1996-1997. The Center Director searched for and hired a graduate assistant, Kevin Brady, who worked this academic year with faculty on: (1) problems with hardware, (2) integrating the use of technology into courses, (3) learning to upload and download e-mail, (4) expanding faculty use of the World Wide Web, (5) soliciting computer lab director position descriptions from other colleges of education, and (6) assisting with the design of WWW HomePages for individuals and divisions.

The Center Director chaired a search committee for the Director of the computer labs located in the Student Services Center. Paul Terrazas was hired for that position. As of January 1997, the person holding this position reports to the Director for the Center of Technology and Education.

CURRICULUM REVISIONS

Over the course of several meetings Spring 1997, Carolyn Wood, Leslie Hall, and Paul Terrazas met to discuss possible curriculum changes to ensure that students who graduate from the UNM-COE are not only technologically literate, but also are well able to integrate technology into the curricula. Three specific curriculum revisions are being proposed in the fall:

- to require that prior to entering a program in the COE, the candidate must demonstrate technological competence/literacy (this can be demonstrated through a competency/skill test or by taking Educ 124)
- to recommend that Educ 124 become a two credit hour course
to devise a different numbering system for different subject matter sections of Educ 365, e.g., perhaps eliminate 365 as a general course number and substitute 366 for the social studies emphasis, 367 for the math/science emphasis, etc.

UPGRADE FACILITIES / HARDWARE CAPABILITIES

The Center Director worked with the TLT Instructional Technology Curriculum Development Committee during fall 1996 to devise ways to improve the laboratory facilities in the TLT (now OLIT). Except for the hardware in one lab, the computers are very dated, slow, and some will not even handle current software. The OLIT program is attempting to establish partnerships with corporations in the Albuquerque community with one of the goals being assistance with upgrading the computers in the labs.

When the College searched for a new Director of the Computer Laboratories, we agreed to enlarge the previous job description to include oversight and staffing of the laboratory facilities previously considered as the property of OLIT. We hope that this will enhance utilization of these labs, thus increasing the number of lab fees collected, which will lead to equipment upgrades.

The Center Director, Leslie Hall and Paul Terrazas wrote a proposal requesting space for an open laboratory and an additional Power Macintosh computer lab. As a result, B-84 of the Student Services Building has been designated as COE computer lab space and will be used as an open lab facility. We plan to request additional space for a Power Mac lab from UNM Space Allocations Committee this fall.

PARTNERSHIPS

Partnerships with corporations and educational institutions have several benefits. For example, partnerships focused on technology will be of value to the College in that they will: (a) help to keep the College informed regarding cutting edge technology and practitioner skills
as well as needs, (b) afford us the opportunity to work collaboratively to promote common
goals, (c) assist the COE to become aware of and obtain state-of-the-art technologies. With
these in mind, the Center Director entered into partnerships with three entities during this
academic year. First is the partnership between Intel Corporation and Bernalillo Public
Schools. The primary goal of this partnership is: to work together to provide professional
development focused on integrating computer technology into the curricular and instructional
practices of prospective and practicing teachers in a way that will make learning relevant for
students. A copy of the working model we have established can be found in Appendix C.
Through a second partnership with Page One Book Store, the Center has acquired several
books on technology which we are housing in a special section of the Tireman Library. The
Center Director is also part of a partnership with OLIT and Engineering faculty and Lockheed-
Martin Corporation. This partnership has future implications not only for internships, but also
for equipment.

CONNECTING PEOPLE WITH PEOPLE & INFORMATION

Although the Center Director had not envisioned that the "virtual" Center for Technology
and Education would become an information center regarding almost anything remotely
connected to technology (would you call the Center to request the phone number for the COE
Publications Center???), people contacted the Director via phone and e-mail quite frequently.
Perhaps accessibility in terms of a live person answering the phone, rather than voice mail,
encouraged this practice. Because the Director has her office phone (which is also the
number listed for the Center) forwarded to her home, she is accessible day and night (received
one call at 11:00 p.m!!!!).
Late this spring the Center Director brought together people from around the College who have expressed an interest in technology. Eleven people attended, and several others expressed an interest in working together to advance the use of technology as a tool to enhance learning. We plan to meet this fall and form a Technology Task Force.

REPRESENTING THE COLLEGE OF EDUCATION

Last year the Center Director was part of a team of educators and other professionals (from the State Department of Education, NM higher education institutions, the national laboratories, NM-National Education Association, Online Internet Institution, Re:Learning and others) collaborating in the writing of a grant to the U.S. West Foundation to train and support 1% of the New Mexico teaching force (teachers and administrators) in the use of telecommunications technology over a three year period. The $583,000 grant, which will be housed at Las Alamos Labs, was approved in April 1997.

The Center Director also has represented the College of Education in a variety of other groups and situations. She is a member of the Faculty Senate Computer Use Committee, has attended several meetings called by the Director of Distance Education, attended a meeting with the Governor sponsored by Bernalillo High School, and for a week during the summer of 1996, she served as a reviewer of Challenge Grant applications for the U.S. Department of Education's funding process. The Center Director represented the College on two technology task forces during the summer of 1997: (1) she facilitated the APS-UNM partnership task force on technology (6 days) and (2) was a member of the technology policy seminar sponsored by the Albuquerque Learning Community Network (ALCN) (5 days). She also attended two conferences: in the spring 1997, the American Association for Higher Education in Washington, D.C. and in the summer the National Education Computing
Conferences in Seattle, WA. And finally, because she believes in modeling what she professes others do, the Center Director taught a course via Distance Education and worked with the Educational Administration Program to offer the majority of its courses via telecommunications and helped Distance Learning staff to design a brochure advertising the ED AD courses to be offered through telecommunications.

GOALS FOR THE 1997-1998 ACADEMIC YEAR

In the state of New Mexico whenever educators, business professionals, and community members discuss the most important issues in education, they inevitably name two areas as most in need of concerted focus. Technology use in the schools is one of these areas (bilingual education/limited English proficiency is the other). Additionally, the conceptual framework for Professional Education Programs in the UNM College of Education states the following:

UNM's College of Education advances the quality of educational experience for all learners through programs that value incorporating a variety of instructional technologies as tools which shape, enhance, and channel the learning process and promote COE students' capacity to use these tools as strategies for their own learning and to appropriately design learning environments that promote teaching and learning for others.

In order to implement this value statement and to assist in meeting the needs of educators and students throughout the State of New Mexico, the College of Education, with the assistance of other UNM, community, and governmental entities, must address several goals. The Director will continue to work toward the accomplishment of these goals.

Goal #1: Help to ensure that the necessary levels of hardware, software, and support are sufficient to enable a critical mass of COE faculty to become technology users and to use learning technologies in their courses.
Goal #2: Find ways to develop the expertise of COE faculty and encourage them to model technology use and to apply various technologies in teaching the content within their disciplines.

Goal #3: Support programs to develop strategies and opportunities for educators (UNM faculty as well as pre-service and inservice teachers) to become competent in the use and application of technology tools.

Goal #4: Work to create and sustain partnerships with industry to expand the educational opportunities through the use of technology.

Goal #5: Strengthen the involvement of COE faculty in distance learning.

Goal #6: Assist in establishing the Center for Technology and Education as a significant site for state of the art instruction, professional development, and research in learning technologies.

Even though the Director for the Center for Technology and Education will continue to work toward the accomplishment of the above listed goals during the 1997-1998 academic year, she cannot hope to accomplish these goals without additional assistance, both monetary and personnel. The resources allocated for FY 1997-1998 include 1 full time graduate assistant plus $1,800 and 2 course releases for the Director. Other than those two positions, the budget for this Center is $0.00. Obviously, the funding is inadequate.

Given that the mission of the UNM College of Education is to educate teachers for today's (and tomorrow's) world, teachers need not only to be literate in the world of technology, but they need to be capable of incorporating technology into their curricular and instructional practices. But who will teach COE students how to integrate technology into their classrooms and on what equipment will our pre-service and inservice teachers be taught? While UNM-COE faculty have access to computers, most use them for such activities as word
processing and spread sheets. Only a handful use computers as part of the instructional process. Additionally, the classroom facilities, including some of the computer laboratories, do not have the equipment necessary to incorporate technology use into curricular and instructional practices.

**Problem #1:**

There are at least three simultaneous aspects to the problem faced by the UNM-COE:

a. generally the faculty are neither trained nor motivated to use technology in their classrooms;

b. there is a lack of technology-fluent staff to teach faculty how to use and integrate technology in their university classrooms; and

c. even if the faculty were trained and motivated, the College lacks the necessary equipment and software to allow for the easy access to and use of technology for instructional purposes (there is a dearth of laptops and LCD panels, for example).

Consequently, we are not preparing COE students to use technology. In many ways, a lack of funding is at the heart of this problem. We do not have a regularly self-sustaining way to acquire, upgrade, and update hardware and software. If technology is not a regular COE budget item, how does the COE demonstrate that the faculty and administration are actually committed to the use and integration of technology into the instructional process?

**Problem #2:**

Universities and colleges of education across the country are positioning themselves to be both academically and economically viable in this era of change. Therefore, in addition to the more immediate problems addressed in #1, we have a long term problem in terms of delivery of education (i.e., distance education, CD-ROM). To ensure continued success, perhaps survival, the UNM-COE needs to find its niche in the technology revolution.
Ensuring that New Mexico Educators and Other Learners Receive the Benefits of Instructional Technology

College of Education
University of New Mexico
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INTRODUCTION

For the past decade and a half, the College of Education at the University of New Mexico has been on the forefront in terms of providing computer-related instruction. Not only did the UNM College of Education institute its first computer training laboratory in 1980, but it currently offers several recognized programs that highlight the use of technology in educational environments. The following are examples of the programs and expertise available in the College:

- Special Education has established a nationally recognized graduate program in assistive and training technologies, delivered through multimedia and distance education to 14 states.

- The Training and Learning Technologies Program was one of the first in the U.S. to offer master’s and doctoral courses integrating instructional technologies, adult education, training and development, and distance education.

- The Integrating Technology in Schools (ITS) Program educates 48 inservice teachers per year from nine NM school districts, focusing on ways in which information technologies can augment the teaching and learning process.

- Since the mid-1980s, the College has maintained two computer mediated communication networks: Educational Native American Network (ENAN) and SALSANET (for math and science teachers).

- College faculty are internationally recognized for research and scholarship related to the use of instructional technologies as well as the social and cultural consequences of technological change.

However, even though programs within the College of Education successfully have provided instruction to students interested in specializing in technology, COE faculty fully realize:

1. the necessity of providing all College of Education students the opportunity to learn to integrate the use of technologies into the practice of their professions of classroom teaching, administration, counseling, and corporate training and

2. the importance of delivering courses and programs through distance education.

There a critical need in New Mexico to prepare educators in all arenas to use instructional technologies. The UNM College of Education values the incorporation of a variety of instructional technologies as tools that shape, enhance, and channel the learning process. The College also promotes students' ability to use these tools as
strategies for their own learning and for furthering the teaching and learning of others. To these ends, the College of Education Technology Plan profiles the opportunities available through technology use and outlines the goals of the College as it seeks to advance quality educational experiences for all learners.

Organization of the Technology Plan. This document includes nine sections:

1. Educational Possibilities Available through Technology. This section describes several of the technological advances that are currently available in schools and teacher education institutions.

2. Benefits of Technology Use Indicated by the Research. This section offers a brief outline of the difference the infusion of technology has made to students and teachers in educational settings throughout the United States.

3 & 4 Realities Regarding Access and Use of Technology in the United States and Realities Regarding Access and Use of Technology in New Mexico. Regardless of the benefits that have accrued through the use of technology, these two sections indicate that schools and teacher education institutions tend to be deficient in terms of the incorporation of technologies into the instructional process.

5. Ensuring that New Mexico Educators and Other Learners Benefit from Technology. This section addresses the importance of providing current and future educators with instruction in the use and integration of technologies into their professional practice.

6. What Kinds of Technology Instruction Should Be Provided for Students? While suggesting that current and future educators take courses in instructional technology, this section stresses the importance of university faculty modeling the use of technology.

7. What Types of Professional Development Activities Should Be Available to COE Faculty? This section emphasizes that it is vital for the College of Education to overcome the barriers that tend to dissuade faculty from modeling technology use in their classrooms.

8. What Resources and Facilities are Necessary? This section stresses the importance of technologically adequate facilities, up-to-date hardware and software, and the availability of human resources.

9. Goals: To Ensure that New Mexico Educators and Other Learners Receive the Benefits from Technology. This final section lists six goals, along with several implementation strategies for each recommendation.
“Do not confine your children to your own learning, for they were born in another time.”

--Hebrew Proverb

Educational Possibilities Available Through Technology

In Schools:

- Students engage in a group problem-solving project based on a science software simulation. Through this simulation they learn to work as a team, develop expertise in science, become more confident learners, and to assess the merits of several possible solutions.

- Elementary students present multimedia reports in social studies that include clippings scanned in from newspapers, maps, photographs, as well as references from the CD-ROM encyclopedia.

- Students develop a deeper understanding of mathematical concepts using graphing software.

- High school students retrieve information from remote sources, including networked information, collections of books, journals, music, images, databases, software and multimedia.

- Special education students, mainstreamed into regular classrooms, work on a more equal basis with their classmates when a computer speaks for them or provides them large print reading materials. A touch-sensitive screen attached to a computer monitor helps students with motor control difficulties use the computer without struggling with a mouse.

By becoming proficient with tools such as word processors, databases, spreadsheets, multimedia, telecommunication programs and problem solving software, students can tackle more complex problems; can spend more time in higher level thought by delegating routine tasks to technology; can handle multiple variables in situations requiring intense analysis; can collaborate and communicate with peers and professionals both
locally and globally; can independently access worlds of
information; can emulate the kinds of work people do
across many professions; and can overcome some
limitations of physical disabilities.

In Teacher Education Institutions

- Faculty and pre-service students watch live teacher-student interactions in
exemplary and multicultural classrooms throughout New Mexico. The live
classroom interaction is followed by an interview with the teachers and
children in the classroom through two-way video and audio transmission.
The pre-service students also discuss teaching styles and strategies and
comment on teachers' performance by through the use of video footage which
has been converted to videodisc and is controlled by computer. In both
instances, the realities of teaching and learning are transmitted to the college
classroom to build the practical skills of would-be educators.

- Teacher education students review CD-ROM discs that contain video cases of
mathematics teachers working with students.

- College faculty use e-mail to communicate with their students, clarify
assignments, and provide assistance that does not require face-to-face
interaction.

- A faculty member in New Mexico communicates through e-mail with a faculty
member in Florida to discuss the ways in which both are using a language
arts simulation in their respective courses.

- Faculty and representatives from the corporate sector collaborate and share
resources to develop computer simulations and multimedia programs for
educational use.

Through the use of various technologies, faculty can access new
areas for their own learning, and this experience can serve as a
catalyst in stimulating instructional improvement efforts. Faculty
can use technology-based tools to produce materials for instruction,
access information for research studies and course content, improve
communication with colleagues, and to expand their access to other
professionals.

Benefits of Technology Use Indicated by the Research

A summary of current research on the use of technology in education by the Far West
Laboratory found that technology has several benefits:¹
Improves student academic performance

Increases the preparation of students for most careers and vocations

Significantly improves student problem-solving skills

Improves attitude and confidence—especially for 'at-risk' students

Provides vast instructional opportunities otherwise not available

Reduces the cost of effective education when carefully planned and integrated with high standards.

A study by the U. S. Office of Technology Assessment found that educators who are accomplished in using technology in the classroom indicate that using technology has changed their teaching practices and their expectations of students in several ways.² These teachers:

- Expect more of students,
- Are more comfortable with students working independently,
- Present more complex material,
- Tailor instruction more to individual needs,
- Spend less time lecturing and more time overseeing small groups or working one-on-one with students.

Realities Regarding Access and Use of Technology in the United States

In Schools

- Schools are not even close to meeting their basic technology needs -- many are wired for no more than film projectors,³
- Schools with a 50% or more minority population are less likely than other schools to have sufficient technology elements,⁴
- A substantial number of teachers report little or no use of computers for instruction despite technologies available in schools, ⁵
- Most teachers feel inadequately trained to use technology resources, particularly computer-based technologies (most districts devote no more than 15% of technology budgets to teacher training).⁶
Less than 1% of the amount expended for R & D in technology-related defense training is expended for similar purposes in education.7

"The current school model is generations old, and its age is showing.

--Charles W. Bray, Wingspread Journal

In Teacher Education Institutions

Technology is not central to the teacher preparation experience in most U.S. colleges of education. Consequently, most new teachers graduate with limited knowledge of the ways technology can be used in their professional practice8.

The majority of teacher education faculty do not model technology use, do not use information technology to accomplish the objectives in the courses they teach, and do not teach students how to use technology for instructional purposes9.

Most technology instruction in colleges of education is teaching about technology as a separate subject, not teaching with technology across the curriculum.10 Both types of instruction are important.

Most teacher education faculty do not require students to use technology, to develop materials, or create lessons using technology. Only the videocassette recorder (VCR) is used by more than 20% of teacher education faculty, and only word processing is cited by more than 10% of faculty as a basis for creating lessons.11

The federal government and the private sector have channeled more support to K-12 schools than to colleges of education -- an approach that seeks to address current needs but does not greatly influence teacher quality over the long term.12
Most New Mexico teachers have not completed enough training to prepare them to use technology in teaching.

--NM Road Map to School Improvement

Realities Regarding Access and Use of Technology in New Mexico

- NM is one of 4 states noted as most deficient in terms of technology elements (i.e., computers, printers, networks, modems, phone lines for modems, and phone lines in terms of instructional areas) available in the schools.
- NM ranks 49th in terms of the availability of laser disk players and VCRs.
- NM ranks 48th in terms of the availability of cable television.
- NM ranks 49th in terms of the availability of conduits for technology.
- Less than 1% of NM classrooms are connected to the internet.
- Few NM teachers have completed enough training to prepare them to use technology in teaching or in running classroom business.
- Most schools in NM lack the staff to provide curricular development, technical assistance, and the ongoing support necessary for using technology.

Ensuring that New Mexico Teachers and Other Learners Benefit from Technology

To prepare New Mexico children and adolescents to be competitive as workers in the 21st century, modern technologies must be part of their learning experience in school. Over the past two decades there has been significant public and private investment in the design and validation of learning technologies which has yielded a large inventory of first-class technology-assisted learning programs to help develop students' thinking abilities and also support more traditional school objectives. However, educational institutions are not deriving full benefits from investments already made in learning technology hardware and software. The mere availability of hardware and
software does not assure that they will be used. As indicated above, some schools and classrooms are without access to these modern technologies, but even in schools that have a sufficient number of computers and other technologies, the number of teachers who can use them for classroom instruction is low. Teachers lack information about hardware applications, the quality of available software, and techniques for effectively using both. In brief, only a small proportion of our teachers are proficient at adapting computer hardware and software to their instructional programs.

"There is little point in acquiring hardware but making no provision for teacher development and support."

--Office of Technology Assessment, 1995

Some educators are resistant to incorporating learning technologies into the curriculum and their teaching practices. Others have the desire but lack the education and technical support necessary to adopt new technologies. But there is little prospect that learning technologies will be institutionalized in the schools until educators themselves become the primary advocates and users. And, very simply, they will not become advocates and users until they are trained in how to use computers and until consistent support is available to them.

But how can we ensure that New Mexico educators will be adequately educated not only to use various technologies themselves, but also to integrate the use of technologies into their teaching practices? A recent report from the U.S. Office of Technology Assessment indicates that "the most direct and cost-effective way to educate teachers about technology is through the preservice education they receive in colleges of education or other institutions." Given projections that the school-aged population is growing and that teacher turnover (because of retirements) will be on the increase until at least the year 2000, the importance of acquiring knowledge and skill during preservice preparation cannot be overstressed. On the other hand, because there are thousands of educators in New Mexico who were not introduced to technology during their preservice or graduate programs, there also is a state-wide professional development need to educate these practitioners.

The National Council for Accreditation of Teacher Education (NCATE) expects colleges of education to prepare educators to use technology in their classrooms. This expectation is demonstrated through Standards used to evaluate teacher preparation programs. Several of these Standards focus on the integration of technology into preservice and graduate programs, and the preparation of college of education faculty in technology use. (These NCATE Standards are displayed in Box 1)
NCATE STANDARDS WITH A TECHNOLOGY FOCUS

CATEGORY I: DESIGN OF PROFESSIONAL EDUCATION

Std I.C: Content Studies for Initial Teacher Preparation (Initial)

(6) Candidates complete a sequence of courses and/or experiences to develop an understanding of the structure, skills, core concepts, ideas, values, facts, methods of inquiry, and uses of technology for the content they plan to teach.

Std I.D: Professional and Pedagogical Studies for Initial Teacher Preparation (Initial)

(8) Candidates complete a well planned sequence of courses and/or experiences in professional studies in which they acquire and learn to apply knowledge about:

- the impact of technological and societal changes on schools

(9) Candidates complete a well planned sequence of courses and/or experiences in pedagogical studies that help develop understanding and use of:

- educational technology, including the use of computer and other technologies in instruction, assessment, and professional productivity.

CATEGORY II: CANDIDATES IN PROFESSIONAL EDUCATION

Std II.C: Monitoring and Advising the Progress of Candidates (Initial & Advanced)

(33) Assessment of a candidate's progress is based on multiple data sources that include grade point average (GPA), observations, the use of various instructional strategies and technologies, faculty recommendations, demonstrated competence in academic and professional work (e.g., portfolios, performance assessments, and research and concept papers), and recommendations from the appropriate professionals in schools.
CATEGORY III: PROFESSIONAL EDUCATION FACULTY

Std III.A: Faculty Qualifications (Initial & Advanced)

(40b) Higher education faculty are knowledgeable about current practice related to the use of computers and technology and integrate them in their teaching and scholarship.

CATEGORY IV: THE UNIT FOR PROFESSIONAL EDUCATION

Std IV.B: Resources for Teaching and Scholarship (Initial & Advanced)

(63) Faculty and candidates have training in and access to education-related electronic information, video resources, computer hardware, software, related technologies, and other similar sources.

Std IV.C: Resources for Operating the Unit (Initial & Advanced)

(69) Facilities and equipment are functional and well-maintained. They support computing, educational communications, and educational and instructional technology at least at the level of other units in the institution.

The importance of learning technologies is emphasized in UNM 2000, the University of New Mexico’s long-range strategic plan: 21

UNM will give a high priority to customer satisfaction and accountability by:

- Creating an instructional environment that is conducive to high achievement through state of the art learning technologies.

The value placed on technology use is also evident in the UNM College of Education's Conceptual Framework for Professional Education Programs: 22

The College of Education advances the quality of educational experience for all learners through programs that value:
Incorporating a variety of instructional technologies as tools which shape, enhance, and channel the learning process and promote COE students' capacity to use these tools as strategies for their own learning and to appropriately promote teaching and learning for others.

Given the emphasis placed on colleges of education as the entities identified to help bridge the gap between the rhetoric and reality regarding the instructional use of technologies in school classrooms and given the commitment to technology use stated by the University of New Mexico and the UNM College of Education, three questions must be addressed with reference to how the College of Education at the University of New Mexico plans to assist COE students to acquire the requisite technology competencies:

(1) what kind of technology instruction should be provided for students;

(2) what type of professional development activities should be available to COE faculty; and

(3) what resources and facilities are necessary?

What Kinds of Technology Instruction Should Be Provided for Students?

It would be unheard of for doctors or nurses to complete their training and enter medical practice without understanding the technologies used in their specialties. In like manner, it is unthinkable for teachers to enter the profession of teaching without understanding how to use instructional technologies in their classrooms. Thus, the important question is not whether we should train prospective and practicing educators in the use of instructional technologies, but what kinds of instruction should be provided.

Technology instruction in education generally consist of two types:

(1) instruction focused on mastering the mechanics of the hardware and software, preparation in which technology is viewed as an end in itself, i.e., learning to use computers better and

(2) instruction focused on using technology as a means to accomplish other objectives, i.e., learning to use computers to better learn and to better teach (i.e. learning the appropriate use of technology in a given context for a given group of learners).
Instruction focused on mastering the mechanics is essential and should be available to COE students who lack a grounding in such fundamentals as word processing, spreadsheets, and e-mail. Competencies in these areas are prerequisites for learning and using more advanced technologies, such as presentation software and the World Wide Web. Computer literacy is also essential if educators are to use technological tools in a variety of contexts, such as leading students in computer simulated learning.

Technological instruction for educators must go beyond mechanics to focus on using technology as a pedagogical tool, one which will provide a variety of ways to access, analyze, apply, and present information. Educators must learn how to integrate technology into the curriculum because curriculum integration is central if technology is to become a truly effective educational resource. As Barbara Means indicated:

The challenge of integrating technology into schools and classrooms is much more human than it is technological. What's more, it is not fundamentally about helping people to operate machines. Rather, it is about helping people, primarily educators, integrate these technologies into their teaching as tools of a profession that is being redefined through the . . . . process.23

Particular instructional emphasis should be placed on assisting educators:

1. to determine how and which technologies will solve instructional problems and provide curricular opportunities that can not be achieved as efficiently or as powerfully otherwise,

2. to learn to use the various technologies and experiment with ways to apply them in an instructional context, and

3. to organize their classroom to make efficient and effective use of students' time when only a small number of computers are placed in the classroom.

If educators do not receive this type of instruction they may resort to using the computers for drill in the basics, for example, practicing arithmetic skills rather than using the computer to solve higher-level mathematics problems.

If College of Education students do not experience the power of learning through technology-based tools, they will have less motivation to make an effort to master these tools themselves. Therefore, in order to help prospective and practicing educators better understand technology integration in their own classrooms, they must be taught how to design technology-mediated learning environments. Additionally, they need to see technology use modeled by faculty, both in the college of education and in other departments of the University that participate in the preparation of educators. In other words, as is indicated in a recent report by the U.S. Office of Technology Assessment,
telling students about what is possible is not enough; they must see
technology used by their instructors, observe the use of technological tools in
classrooms, and practice teaching with technologies themselves if they are to use these tools effectively in their own teaching.

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University students will adopt the use of educational technology in instruction if they see faculty members modeling technology use.

--J. R. Mergendoller, Exemplary Approaches to Training Teachers to Use Technology

Thus, technology needs to be taught as a separate subject area and the use of technology should be interwoven throughout courses students take in the university. The situation with teaching technology use is comparable to that of teaching writing. Are writing skills to be taught only by the English faculty, or is it something all university faculty should take into consideration? And similar to learning to write, skills in using technology will not be well learned unless they are practiced. Therefore, College of Education students need the opportunity to practice teaching with technology by creating lesson plans and giving demonstration lessons that include technology use.

What Types of Professional Development Activities Should Be Available to COE Faculty?

A recent report by the U. S. Office of Technology Assessment indicates that most preservice teachers are not given the opportunity to experience models of computer-supported instruction before they attempt to manage them in their own classroom. The primary reason for this is that the majority of college and university faculty do not model the use of technology in their classrooms. There are at least three factors that serve as barriers to COE faculty modeling technology use in their classrooms:

1. Resources in terms of hardware, software, facilities, and even supplies are often in short supply.

2. Faculty perceive a lack of institutional support for technology use.
The emphasis placed on research and publication in tenure and promotion policies do not encourage COE faculty to spend a great deal of time developing curricular and instructional innovations.

(3) Although courses in computer literacy are available through a number of University sources, there is a dearth of courses, workshops, and support when it comes to assisting College of Education faculty to integrate technologies into instructional practice. No one is providing faculty development on such topics as using videodisc players with bar code readers, authoring a course presentation through presentation software, or the availability of software simulations for various disciplines.27

If technology-based learning is to be integrated into the curriculum and instructional activities of university faculty, at least the following must be available: opportunities to view demonstrations and to participate in hands-on-training programs and the availability of social and technical support systems.

"We must structure a means to encourage and enable our university faculty to both assume the pivotal role in modeling effective use of instructional technology, as well as make best use of technology in their scholarship and service activities."

--R. Flynn, Faculty Development in Support of Technology Instruction & Applications in Colleges of Education, 1995

Using technology in the college or university classroom requires a great deal more time and involvement of the faculty member than the traditional lecture/discussion formats that typically characterize higher education. And, since most university faculty completed graduate programs and taught in school organizations prior to the technological "revolution," it is not surprising that they have limited experience with instructional technologies. To become technologically involved will require changes in perspectives, attitudes, beliefs, as well as skills.

The way to encourage university faculty to integrate technology use into their courses is by addressing the barriers that tend to prevent them from doing so. The University of New Mexico and the College of Education need to make available technologically advanced instructional facilities, equipment, and other resources in addition to providing faculty with support and training. Finally, incentives such as recognition for faculty efforts in terms of tenure, promotion, and merit pay should be considered.
What Resources and Facilities Are Necessary?

Facilities and Hardware.

According to the U.S. Office of Technology Assessment report, "a typical college of education is more likely to be a 'have not' than a 'have' when it comes to many types of educational technology." The University of New Mexico College of Education is no exception. Although most of the faculty have been provided with computers in their offices, other equipment, instructional software, supplies, and technologically equipped classrooms are often in short supply. As but one example of a facility problem, the lights in a classroom must be turned off in order for students to see the images projected from a computer through a LCD panel. Without lights, students experience a great deal of difficulty taking notes.

In addition to the generally out-dated technologies available in the existing computer labs, the classrooms in which faculty teach are devoid of technology except for an overhead projector provided upon request through Audio-Visual Services and a television and VCR mounted in an occasional classroom. Classrooms (with a capacity of between 16-30 students) should be equipped to model the ways in which computers can be integrated into ongoing classroom practices. When faculty who want to use a computer in their teaching are restricted to teaching in computer labs, they convey to their university students that computers serve educational goals only when used in special rooms.

A hardware availability problem will become very prominent if more faculty are trained in how to use technology in their classrooms: more LCD panels, traveling carts, scanners, videodisc players with bar code readers, etc., will be necessary to support their innovative instructional practices.

Given the rapid pace of technological innovations, the one-time investment in hardware for faculty offices and laboratories is far from sufficient. Continuous costs are incurred relative to computer maintenance, replacement, and upgrades of harddrive capacity, along with speed and megs of RAM. At the very least, a percentage of the COE carry-forward monies should be designated each year for technology in order for the College to merely maintain technological viability. If the College is to have "an instructional environment that is conducive to high achievement through state of the art learning technologies," as is posited in UNM 2000, then a large capital outlay will be necessary.

Distance Learning

UNM's College of Education has an opportunity to change the structure of learning for people around the state by connecting them to instructional opportunities. Many have experienced difficulty accessing higher education because of geography, proximity, and the weather. Distance learning or accessible education creates classrooms and other learning environments based on interest and need rather than on convenience -- it creates possibilities and ensures equitable access to educational opportunities.
In a rural state like New Mexico, the distance problem is not only one of transporting faculty to remote sites, but of having a sufficient number of students in any one location to justify offering a course, a workshop or an instructional program. In a given semester, there may be only a handful of educators in any one town who want or need a particular course or educational experience. **Distance learning in this state, therefore, has become a necessity, not an extra.**

In the past we have relied on live one-way video technologies via satellite or broadcasting in conjunction with two-way audio (via phone lines) to expand learning opportunities to more remote areas. However, the costs involved in these methodologies have become prohibitive. Sending video images over satellite entails higher costs than other options like packaged video (videotape, videodisc, or CD-ROM), interactive compressed video (ICV), and new kinds of telecommunications network-based multimedia software, such as the World Wide Web browsers like Mosaic and Netscape. Although many network services are currently offered via single modem dial-up, dedicated access to the Internet is becoming increasingly attractive because, although it entails higher costs up front, it will be more cost-effective and certainly less limiting in the long run. In conjunction with UNM's Media Technology Services, College of Education faculty must **find ways to provide learning opportunities through distance education.** Additionally, in order for faculty to teach at a distance, they not only must be taught how to do so, but also, they must be supported in their efforts by administrators (e.g. up-to-date equipment and system maintenance).

**Human Resources**

Additional human resources are necessary for the technological viability of the College. At a very minimum (and this recommendation is made without reference to program level needs) the College needs the services of two types of individuals:

- **technical support personnel.** Technical support personnel should not only be able to answer technically-related questions and trouble-shoot hardware and software problems, but also should provide basic instruction to faculty in at least word processing, spread sheets, presentation software, and e-mail.

- **pedagogical support personnel.** Pedagogical support personnel should be conversant in technical issues but also experienced and knowledgeable about teaching methods, curriculum, students, and instructional design. More particularly, pedagogical support personnel should be able to provide advice on choosing relevant software, on integrating technology into various disciplines, on ways technology can be used to meet particular curricular goals, and should be able to assist faculty and university students in how to organize instructional environments to use several computer workstations or a single computer with a modem. In addition to providing workshops and short courses, pedagogical support personnel should provide advanced
individualized instruction to help faculty redefine curriculum and learning rather than just "infuse" technology into their curriculum and teaching practices.

"Having a person who can help faculty makes all the difference in the likelihood of their going further with technology -- someone who is knowledgeable about technology and can help them with questions or problems."

--Office of Technology Assessment, 1995

The individuals described above would provide the ongoing, long-term support that is necessary if a critical mass of COE faculty is to integrate technology into their university courses.

In sum, New Mexicans want their children to be able to compete in the national and global economies. In order to prepare students for the 21st century, the UNM College of Education must provide preservice and inservice teachers and other educators with the necessary competencies to assist students not only to function but to thrive in a technologically-driven world. To do this, the College of Education must have the facilities and resources to provide multiple and integrated experiences with technology for prospective and practicing educators. This, of course, assumes that College faculty have received the requisite instruction and have access to essential resources so that they are in the position to better prepare educators who, in turn, can better prepare their students to live and work in a technological age. Linda Mora, Director of Education and Employment Issues in the Health, Education, and Human Services Division, indicated, it is unfair to hold students to nationwide standards if they have not had an equal--or roughly equal--opportunity to learn. If schools cannot provide students with sufficient technological backup or with sufficient facilities for instruction and services, they may not be providing even a roughly equal opportunity for all students to learn.29

It is also unfair to hold public school educators and university professors accountable for the technological sufficiency and proficiency of K-12 students if they themselves have not been provided "an equal--or roughly equal--opportunity" not only to become technologically knowledgeable and competent themselves but also to learn to integrate various technologies into their instructional programs.
This document does not represent the first set of recommendations and goals regarding computing and instructional technology proposed by and for the College. Several Task Forces on Technology and Education have submitted reports and recommendations, among them are major proposals written in 1983, 1985, 1988, 1989, 1991 and 1995. For a variety of reasons, the recommendations contained in these proposals were not fully addressed. Consequently this plan presents a number of goals that are similar to the recommendations made in other reports. This document, however, also proposes a planning process and some implementation ideas for carrying out those goals. Even so, the goals posited here will also go unheeded without:

1. Administrative support, commitment, and participation that are essential to the success of learning technologies and the planning and implementation processes;
2. Direct involvement of divisions and programs in the planning process;
3. Acceptance of the major costs of computing and learning technologies as part of normal College of Education operating costs;
4. Willingness of the College to compete for grants; and
5. Willingness of the College to compete for qualified individuals in the job market to serve the growing need for professional service staff and encourage retention of technical expertise.

Assuming the support outlined above, we have established the following goals:

GOALS

To Ensure that New Mexico Educators and Other Learners Receive the Benefits of Technology

From the Conceptual Framework for Professional Education Programs in the College of Education at the University of New Mexico:

*UNM's College of Education advances the quality of educational experience for all learners through programs that value incorporating a variety of instructional technologies as tools which shape, enhance, and channel the learning process and promote COE students' capacity to use these tools as strategies for their own learning and to appropriately...*
design learning environments that promote teaching and learning for others.

In order to implement this value statement and to assist in meeting the needs of educators and students throughout the State of New Mexico, the College of Education, with the assistance of other UNM, community, and governmental entities, must address the following goals:

**Goal #1:** Ensure that the necessary levels of hardware, software, and support are sufficient to enable a critical mass of COE faculty to become technology users and to use learning technologies in their courses.

*Implementation Strategies:*

1. Survey the division heads and faculty to determine technological instructional resource needs,

2. provide the resources, equipment, and technologically equipped facilities necessary to reasonably meet the instructional needs of faculty,

3. designate a percentage of the annual budget for maintenance, upgrades, and replacement costs for hardware (for the laboratories and faculty computers),

4. designate a percentage of the annual budget for software acquisitions for division faculty and the laboratories,

5. designate a percentage of the annual budget for personnel to provide support and training in instructional technologies to COE faculty

6. complete the cable installation and upgrade of communication capability of computers through the installation of Ethernet cards in faculty offices, computer laboratories and classrooms, and

7. establish an interdivisional Educational Technology Committee which will (a) have the responsibility to identify overall technological directions to be taken by the College and (b) make decisions about technology purchases.

**Goal #2:** Develop the expertise of COE faculty and encourage them to model technology use and to apply various technologies in teaching the content within their disciplines
Implementation Strategies:

(1) survey division heads and faculty to determine professional development needs in terms of technology and instructional uses of technology;

(2) provide faculty with ready access to varied technologies and technology-based information;

(3) provide all COE faculty access to instruction relative to education-related electronic information, video resources, computer hardware, software, and related technologies;

(4) provide ongoing information and professional development opportunities (e.g., demonstrations, hands-on training workshops, and short-courses) for COE faculty in current practices related to the use of computers and technology and how to integrate the use of technology into their teaching and scholarship;

(5) provide ongoing technical and instructional support services for faculty;

(6) equip COE classrooms with computers, plus projection and telecommunications capabilities;

(7) give recognition to the importance placed on faculty incorporating technology into their courses by taking their efforts into consideration during reviews for tenure, promotion, and merit pay;

(8) hire technical support personnel to work with faculty in answering technically-related questions, trouble-shooting hardware and software problems, and providing faculty basic instruction in at least word processing, spread sheets, and e-mail; and

(9) hire pedagogical support personnel who are conversant in technical issues but also who are experienced and knowledgeable about teaching methods, curriculum, students, and instructional design to work with faculty on integrating technology into their disciplines, etc.

Goal #3: Support programs to develop strategies and opportunities for educators to become competent in the use and application of technology tools.

Implementation Strategies:

(1) encourage technological literacy among faculty and students,
(2) assist faculty to incorporate technology in innovative ways into regular classroom teaching in the College,

(3) request that faculty encourage students to use various technologies in their course assignments, and

(4) provide professional development opportunities in technology for current educators.

**Goal #4: Create partnerships with industry to expand the educational opportunities through the use of technology**

*Implementation Strategies:*

(1) work with local and state corporations to identify mutual interests

(2) talk with corporate leaders and request that they provide guidance and training to College of Education faculty

(3) prepare teaming agreements with industry to get support and expertise (for providing resources for instruction, hardware, facilities, etc.)

**Goal #5: Strengthen the involvement of COE faculty in distance learning**

*Implementation Strategies:*

(1) provide appropriate instruction for faculty in the nature of distance learning, with the opportunity to view other faculty in distance learning situations;

(2) provide incentives for faculty to teach via distance learning, e.g., course releases, teaching assistants, and other resources to assist faculty with preparation;

(3) identify courses and experiences that will fulfill the needs of communities that have contacted the College of Education requesting service; and

(4) with the assistance of UNM's Distance Education Center, investigate cost effective ways to offer College of Education courses and programs through distance education to more sites than are currently available.
Goal #6: Establish a facility for Technology and Education which will become a regionally and nationally significant site for state of the art instruction, development, and research in learning technologies.

Remodel and refurnish the existing Industrial Arts Building, turning this facility into a Technology and Education Building. In addition to housing computer laboratories (multiple platforms and multiple computers, e.g. PC, Macintosh, Unix) and state-of-the-art classrooms (at least one of which will be equipped for interactive distance education), the Technology and Education Building will be a place where COE faculty and other educators can experiment with different hardware, try out software programs prior to purchase, consult experts, and receive instruction on different technologies. A continuous series of workshops, seminars, and instructional sessions on various topics related to technology use in the schools also will be offered.

Implementation Strategies:

1. Establish a planning committee (consisting of representatives from the Legislature, the Governor's Office, in addition to business and educational leaders) to secure capital funds (approximately $2.4 million) from the Legislature to support a major renovation of the former Industrial Education Building. (Committee established as the "Friends of the College of Education");

2. Work with hardware manufacturers and software producers to support the Technology and Education Building initiative by helping to furnish state of the art hardware and software to be used in the facility;

3. Network with UNM, community, and governmental entities and request assistance with the planning and implementation processes;

4. Seek grants from private, state, and federal sources to secure technologies and applications; and

5. Establish faculty and staff positions and hire the personnel for the facility.
ENDNOTES


4. Ibid., p. 6


15. Ibid., pp. 16-17.

16. Ibid., pp. 16-17.

18. Ibid., Executive Summary, p. 1

19. Ibid., Executive Summary, p. 1.

20. Ibid., pp. 166-167.


25. This question was posed in the Office of Technology Assessment report, p. 190.


27. For every hardware investment, there should be a substantial investment in human resources, through expenditures for instruction, technical support, maintenance, and time to learn to use the technology. States with a strong commitment to effective technology use are beginning to allocate a much higher percentage of their technology budget on teacher development and support than in previous years. For example, the Texas Education Agency has recommended that districts allot 30% of their technology funds for hardware, 30% for software, 30% for staff development, and 10% for maintenance. See Ibid, p. 42.


The Division of Educational Leadership and Organizational Learning contains programs in Educational Administration, Organizational Learning, Instructional Technology and Adult Learning. There are currently 17 faculty in the division. During the last year, as a division, we have worked on the shared goals of:

- Increasing technology in the college,
- Joint planning for a Ph.D. program in leadership,
- Assisting the college via the Planning Committee in its continued long range planning,
- and
- The development of a data base for the division that will be able to be used as a possible example for the other divisions as well as the college.

The faculty has also been working across programs. Breda Bova has taught the Group Processes and Adult Learner course for OLIT and the students from the Ed. Ad. Program have enrolled in these courses through OLIT. This has eliminated the duplication of courses. Mike Milstein has also offered an advanced course in Organization Development under the OLIT prefix.

The Division of Educational Leadership and Organizational Learning (ELOL) has been a leader in the re-structuring efforts of the College of Education. This new conceptualization alone is insufficient. We as faculty need to find ways to implement it that will benefit students, faculty, the college, university and the community. ELOL will continue to work on behalf of the "new" College of Education.
EDUCATIONAL ADMINISTRATION PROGRAM

ANNUAL REPORT

BREDA BOVA, PROGRAM COORDINATOR

1996-1997

The program faculty in Educational Administration spent the 1996-97 academic year focusing on three main areas:

- On-going evaluation of the Ed.D. program,
- Graduate School Evaluation of the Ed Ad program,
- A formative evaluation of the licensure program

The work that the program faculty conducted this year is strongly aligned with two of the College's Plan of Action goals: 1) to improve teaching and learning, and 2) to improve connection to constituent groups and to school related agencies.

Ed.D. Program

There have been many important developments regarding the Ed.D program in educational administration during the 1996-1997 academic year. The program, which was significantly modified and enrolled its first student cohort during the summer of 1993, its second cohort in the summer of 1995 and its third cohort summer of 1997, will soon experience its second cohort of graduates.

Student Activities

During the past academic year there were no drop outs among the second cohort, which has remained at 16. Students have moved through another summer, fall, and spring of regular academic seminars. In fact, they are now finished with the course portion comprehensive experiences, which have been entirely redesigned to meet the needs and objectives of the program. Results of that effort have been judged positively by both students and faculty members. Additionally many cohort members have completed their prospectuses for their final research project (capstone) and have gained committee and HRRC approval of them. This summer the cohort is on campus focusing on their capstone write-ups. Their activities include seminars focusing on research and research write-up issues, tutorials, and extensive writing efforts. Most should be in a good position to meet with their committee chairs and members early this fall in an effort to complete this activity (and the entire portfolio) in time to graduate this fall.

A third cohort was selected during the past academic year. The process initiated for the second cohort was effectively used to identify, prioritize, and select members for the third cohort. Initially 22 individuals accepted our invitation to join the program, and will begin this summer.
Faculty Activities

The faculty have been engaged in several activities worthy of note. First, there has been much discussion about the program, what we have learned thus far, and what needs to be modified to improve it for the future. As a result of these discussions the faculty has altered the sequence of seminars, focused more on journaling, put more programmatic emphasis on research skills and knowledge, and solidified the field visit aspect of the program.

Fall 1997

During the coming fall students in the second cohort will be bringing their program activities to closure. A few will finish by the November deadline, but some may not complete all requirements until next spring semester. The cohort is participating in the decisions to be made about the nature and process of the final examination that will be conducted. There is good reason to expect that all members will finish, which would mean a 90 percent finishing rate, which is outstanding. We have also conducted a formal evaluation of the first cohort to assist us with our continued planning.

Licensure Program Evaluation

Over the past eight years UNM has purposefully moved from a licensure program that emphasized coursework almost exclusively and provided clinical experiences on request which were monitored infrequently and informally to a program which features hands-on apprenticeships, mentoring, field supervision and weekly reflective seminars as well as coursework. As a result of movement, the number of students who have clinical experiences have increased from only a handful to an average of 40-50 annually.

UNM currently offers two administrative licensure programs: The Cooperative Educational Administration Internship Program (CEAIP) and the Traditional Administrative Internship Program. CEAIP is reserved for students who are willing to make financial and time sacrifices required to continue full time employment while pursuing full time studies and internship activities. The Traditional Program is an outgrowth of earlier efforts, but, as a result of the experiences with CEAIP and the heightened commitment of the faculty, has been upgraded—e.g., regularized clinical experiences have been formalized.

UNM's program now has a national reputation as a unique and positive model of leadership preparation. Courses encompass extensive experiential work for students, including hands-on efforts in the field. Internship contact hours have been increased dramatically, form a hundred or so to more than 600, normally over a year's period of time. Management and supervision of internships have been improved with the appointment of a director., assistant director, field supervisors, and training for site-based mentors.

The state's school districts have responded positively to UNM's preparation program changes by hiring graduates in large numbers. Sixty-one percent (N=165) of the program's 269 graduates between 1988 and 1994 are currently employed in positions of school leadership—e.g., principals,
assistant principals, and central office administrators. This compares with a New Mexico State Department of Education estimation that only 25 percent of those holding current administrative licenses in New Mexico are actively employed in administrative positions in the state. The intent of the program evaluation has been to assess the effectiveness of UNM's educational administration licensure preparation program. Specifically, the study focused on gathering information about the long term impact on graduates' leadership effectiveness. Respondents included graduates form 1988 through 1994, as well as their in-school and district-level supervisors and teachers who work for them. Methods included a population survey of program graduates (65 percent return rate) and three focus groups (N=14) composed of graduates' supervisors and supervisees.

Data gathered from each of the four groups are consistent and supportive of the value of the program in preparing effective leaders for the state's K-12 schools. Program graduates from 1988 through 1994 who have obtained administrative positions (61 percent) are viewed as demonstrating effective leadership at their work sites. Graduates rate themselves as being effective school leaders (M=3,154 on a scale in which 4 is the highest rating). Equally important, graduates' leadership is viewed as most effective in being collaborators and in promoting effective consensus decision making—both of which are vitally important in this time when facilitation skills are so vitally needed in participative, site based management schools.

It is interesting that few distinctions were noted between graduates of the CEAIP and the Traditional Program. If effect, this is a powerful indicator of the extent to which the Traditional Program has been upgraded as a result of the establishment of CEAIP and the efforts of the faculty to enrich the licensure level experiences of students. During the initial few years of CEAIP, there were many references to the "haves" and the "have nots" but the current study supports the belief that the gap between the two programs has been minimized, to the benefit of all UNM's educational administration licensure students.

Respondents were able to differentiate between specific program elements and their perceived value. Specifically, all groups showed most familiarity about and support for clinically-related elements of the program. The "hands on" experiences that graduates received, as well as the role modeling of their mentors, the support of their peers, and the supervision of university personnel, were all highly valued elements in making the transition from the classroom to the administrator's office.

Although academic courses did not rank as high, the gap was not great, indicating that the faculty's efforts to infuse their courses with case studies, simulations, and field-based studies, have resulted in a more positive image of these university-based experiences. Graduates were able to discriminate among the courses they took as related to long term leadership value. Thus, the feedback should be of value to the faculty as it continues to modify and upgrade the program. The message received is clear—emphasize the "real world" as much as possible in courses.

Several additional areas for inclusion in the program were raised for consideration. First, it was suggested that more emphasis on technology is needed in the program. Given the rapid increase in the applications of technology for both administrative and instructional purposes, this is an important recommendation. Second, it was recommended that student internships be expanded. Graduates emphasized more in-school time while focus group participants emphasized internships in business
and government-sector settings. With the increasing emphasis on more coordination between education and other child-serving units as well as the focus on preparation for the world of work, this is important to consider. Third, extending efforts to promote university-school district partnerships and sponsorship of licensure candidates was frequently suggested. This is an ongoing concern and, even though major steps have already been taken, it needs further consideration.

UNM's efforts to improve preparation of K-12 educational leaders has made substantial progress. Both those who have gone through the program and those they work with express high value for the program and its outcomes. Other universities around the country are also attempting to modify preparation programs in ways that parallel the changes that have been implemented at UNM. It is important to know whether the hopes that have driven these program changes are resulting in graduates who are capable and willing to pursue improvements in the effectiveness of schools. This initial attempt to look at long-term outcomes suggests that the effort may indeed be having the hoped-for effect.

Continued collaboration with school districts, professional development, and support for the restructuring efforts in the College of Education will continue as the Educational Administration program faculty plans for the 1997-98 academic year. The restructuring process has provided an optimal environment for the efforts of the faculty in Educational Administration to foster and develop innovative ways of educating the school administrator.

**Graduate Review**

The faculty in Educational Administration spent the fall semester and the first part of the spring semester preparing for the external review by the graduate school. The review team consisted of Bruce Barnett, Northern Colorado University, Dean Webb, Arizona State University, John Greer, Georgia State University and Dick Nordhaus, UNM School of Architecture. The review included descriptions of the following:

I. Departmental Historical Review: 1990 - Present

   a) Status since the last review—What were the findings and the responses to same?
   b) Enrollment summary (headcounts, credit hour generation, etc): 1990-Present
   c) Curricula summary (significant changes, new initiatives, explanations for the discontinued programs of courses): 1994-Present
   d) Staffing (Faculty & staff headcounts and teaching loads): 1994-Present

II. Educational and Service Programs Quality

   a) Academic programs
   b) Assessment measures and evidence of quality improvements
   c) Comparison of Ed Admin's Units courses and curricula with UNM peer institution nationally
   d) Workstudy and graduate assistant selections, evaluation, and compensation criteria
e) Faculty evaluations by students--how is this used to enhance quality
f) Extracurricular activities (internships, practicums, etc.)
g) Advisement, mentoring, and placement services
h) Reward mechanisms (salary, promotion, tenure, etc) for exceptional teachers and educators

III. Research and Creative Scholarly Works Quality

a) Research and creative, scholarly works of faculty
b) Research and creative, scholarly works of students
c) Evidence of assessment of a) and b) above
d) Departmental and institutional support (financial) of research and creative, scholarly works
e) External funding obtained for research by faculty, staff, and students: 1994-Present
f) Kinds of publications and other scholarly work required for faculty tenure and promotion

IV. Library and Computer Support Services Quality

a) Analysis of the Library holdings and services in educational administration
b) Evidence of how the Library helps Ed Admin achieve its mission and goals
c) Computer Information Resources and Technology (CIRT) support services for Ed Admin
d) Inventory of computer hardware & software in Ed Admin — Adequate?
e) Hardware and software maintenance and update — Adequate?
f) Use of computer resources to support Ed Admin mission and goals

V. Level of Funding and Other Resources

a) Ed Admin budget: Fiscal Year 1996-97
b) How is Ed Admin budget prepared (i.e. the budget process, inputs, etc)?
c) Sources of funding — I) State and ii) External
d) Faculty ratio per student
e) Staff ratio per student

VI. Future Projection

a) Assessment of Ed Admin’s standing regionally and nationally
b) Affirmative action policies and efforts
c) Ed Admin priorities
e) Summary and conclusions

The review lasted three days ending with an exit interview. The comments at the exit interview indicated that the reviewers were very positively inclined toward the program. The commented on the high quality of work that the faculty was doing in teaching, research and service to the community
and state. They did suggest that the faculty review the decision to put the Ph.D. on a moratorium. The written report should be sent to the graduate school in the summer.

**Additional Accomplishments**

The Faculty in Educational Administration with assistance from the Teacher Education Faculty developed an Institute for Education and Community Leadership. This will be a year long program which began summer 1997. The curriculum and focus areas for the institute came from many focus groups that were held during the 1996-97 academic year. An additional feature of the institute is the community faculty component. A full description of the institute is attached to the annual report.

With the assistance of the New Mexico Research and Study Council, the Educational Administration faculty continued its commitment to professional development for administrators (specifically the superintendent) through the establishing of DELI (District Educational Leadership Institute). This endeavor was lead by Mike Milstein and met six times during the 1996-97 academic year. There were approximately 30 participants from around the state. These participants assisted in the planning of the program for the year. There was also an opportunity for them to take the program for credit. Next year the program will be expanded to include principals on a separate track for some programs and together with the superintendents for others.

The faculty in Educational Administration was very active this year in community issues that affect schools. Dave Colton and Breda Bova were representatives to the Human Services Collaborative, John Mondragon and Vita Saavedra worked with the Albuquerque Interfaith, Mike Milstein worked on the Statewide Professional Development Initiative, Michael Morris participated in the Levy-Strauss Project Change that worked on issues related to diversity in the schools and lending institutions, Carolyn Wood is director of the Technology Center for the College of Education and Breda Bova is on the board of the Family Focus at Zia Elementary School.
The annual report for the Division of Educational Specialties is organized under an overview and then the five goals of the College Action Plan. In addition, because the Division consists of five distinct programs (Art Education, Early Childhood Multicultural Education, General Elementary Education, Mathematics/Science/Environmental/Technology Education, and Special Education), each program is discussed separately within those goals. The list of accomplishments are impressive, particularly in light of the interruptions caused by the much-delayed move to Hokona Hall in November, a new division director, and two new programs added to the division.

OVERVIEW OF STRUCTURE AND FUNCTIONS

Division: One division director (Ginger Blalock), one administrative assistant (Julie McConnell), 3 clerical staff (Karen Olmstead in Art Ed, Carol Pierce in MSET, and Jo Sanchez in Special Ed), and 32 faculty members worked together this past year to incorporate 2 additional programs into the 1-year-old division. Faculty. Program coordinators from the 4 actual programs, as well as the 2 general elementary education faculty, worked closely with the division director to make administrative decisions and process paperwork necessary to keep programs running smoothly and moving forward, in line with the College's mission. The Division of Educational Specialties has COE's worst faculty-staff ratio for a division (7+:1). An additional .50 FTE clerical support has been requested to support the ECME Program.

ART ED: The 1996-97 year began with the start of a long-hoped-for search for a faculty member (candidate selected by committee the prior spring was rejected by the Dean), which later was put on indefinite hold with UNM's hiring freeze. Since spring 1995 the program has struggled with its 3 full-time faculty members (Smith, Srubek, Wix) and numerous part-time instructors. Wix began a plan to obtain her doctorate, after receiving promotion and tenure in summer 1996. The moratorium on the Art Therapy emphasis was continued, sharply reducing the total numbers of art education students and prompting the Art Ed faculty to promote their courses and program areas more vigorously (national ads, APS mailings, NM Art Education Association mailings). The program coordinator was removed from his role by the Dean, so the program currently has no coordinator. The program underwent its UNM Faculty Senate-mandated unit review during the Spring 1997 semester, resulting in many recommendations, one of which was to explore moving to the College of Fine Arts and another of which was to reduce Wix's load so that she can complete her doctorate in line with COE expectations for all faculty.
**ECME:** The Early Childhood Multicultural Education program, an exemplary integrated model based on exploration and constructive learning, graduated its first undergraduate cohort of 21, and began 2 others (16 new students). With 2 full-time faculty (Bieiker and Erwin), a part-time coordinator (Engelbrecht), and additional support (some of affiliated faculty P. Turner, part-time instruction, and clinical supervisor A. Lauer) attempting to meet the demands of a growing field, the program successfully searched for a new position oriented toward early language development. Dr. Baji Rankin (with expertise in curriculum, documentation, and collaborative teaching) was hired and began this summer with a special course linked to an exciting exhibit (The 100 Languages of Children") in Santa Fe co-taught with Bleiker. Great pressure exists to replicate their model of preparation around the state, with a kernel of that already begun at the UNM Center in Taos. In addition, hundreds need BA preparation through more nontraditional means (evenings, weekends, summer institutes, short courses, etc.). The demand and the past successes offer many opportunities for increased student enrollment, creation of alternative programs, and better meeting the needs of young children in the state. The ECME Program maintains a small but dedicated group of graduate students (MA in Elementary Education with emphasis in ECME). This program seeks (and greatly needs) .50 FTE clerical support.

**ELEM ED:** General Elementary Education continues to exist in the catalog as an emphasis but in reality boasts no faculty dedicated to general elementary education per se. Applicants are being advised to choose an emphasis from the many linked to elementary education (bilingual education, ESL/TESOL, literacy, mathematics/science are approved endorsement areas; technology and special education are more informal emphases at this point). Only those interns in the APS/UNM Partnership programs (RTP, TEP, CDP) follow a general elementary education path. Of the two elementary education faculty who moved to Educational Specialties in fall 1996, Grinberg returned to LLSS at the end of the year (although he will advise students in elementary education) and Suina focused on the urban-rural preparation of students to work with American Indian students through the Bernalillo Eisenhower Project and on the undergraduate elementary social studies cohort. The rest of the information on Elementary Education can be gleaned from the Teacher Education Division report.

**MSET:** Mathematics, Science, Environmental, and Technology Education started the academic year with 11 faculty (3 math - Madsen, Martinez, Scott on leave; 3 science - Kokoski, Powell, Spurlin; 3 environmental - Kelsey, Miko, Rubio; and 2 technology - Hall, Norton) and elected Kelsey as the program coordinator (who also served as Associate Dean). New faculty this year included Powell and Hall, and Kokoski was on maternity leave during the fall. The faculty selected several graduate students and two adjunct faculty (replacing Scott) to help support the unit's work. Carol Pierce was moved from a .50 FTE ECME clerical support position to support MSET full-time (formerly supported - as much as possible but inadequately - by the division administrative assistant). The unit met monthly as a whole and also monthly as individual disciplines to admit students, work on research and grant proposals, and deal with curricular issues. The year ended with the resignations of Norton and Scott, who accepted academic appointments elsewhere. One-year visiting positions are currently being searched to help replace the large gaps that their absence presents, and
searches will be requested to replace both positions. Kokoski was elected to be the program coordinator for the 1997-98 academic term. This program has a large undergraduate body and a significant graduate student population.

**SPECIAL ED:** The Special Education Program consisted this past year of 9 active faculty, one visiting professor (Keefe), one member on sabbatical (Luckasson), and another member on medical leave (Tafoya). Of the active faculty, one served as division director (Blalock), two as program co-coordinators (Nielsen and Sema), and one worked entirely with general education to integrate special needs information into undergraduate elementary and secondary cohorts (Ware). The program worked closely to integrate the undergraduate Dual Licensure degree (Elementary and Special Education) with all COE UG elementary education cohorts and to respond to the need for more special needs instruction for all COE graduates. At the graduate level, The program faces increasing demands at a time when its faculty number just more than half its capacity 5 years ago. With the 2 retirements anticipated for 1997-98 (Adamson and Smith), 8 faculty (including the division director and program coordinators) will be supporting approximately 100 undergraduate students, 225 graduate licensure and MA students, and 30+ doctoral students. The program has one state-funded secretary who primarily manages student records and collaborates with the Office of Graduate Studies to support student progress and graduation. Grant projects over the past several years allowed hiring of an additional clerk and accounting technician, but external funds are not as forthcoming for the future.

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**COE ACTION PLAN GOALS**

1. **To study, develop, practice, and disseminate innovative approaches to learning and teaching for a diverse population of learners.**

**ART ED:** Smith received a TAS grant to acquire and develop materials for teaching aesthetics for teachers and will teach a course around these topics during summer 1997. Since the Art Therapy emphasis was still in moratorium, Wix taught Individual Imagery/Media and Art & the Exceptional Child, branching into new areas in art education. Srubek strengthened his knowledge and linkage base with the most renowned porcelain centers in the world in preparation for developing his proposed Porcelain Center at UNM, through several activities:

- continuing teaching about 60 students each semester in porcelain instruction
- taking 16 advanced porcelain students to attend the International Ceramics Exposition in Japan in September 1996
- collaborated with his porcelain teacher Inoue Manji Sensei (National Living Treasure in Japan) who hosted the UNM group
- visited the 3 major porcelain institutions in Japan, all of whom offered to collaborate and conduct exchanges with UNM's emerging emphasis
- hosted Inoue Manji Sensei and his former student at UNM, where Inoue Sensei taught class sessions, demonstrated traditional porcelain creation, and held a solo exhibition of his art in the UNM Art Education Gallery, curated by Srubek
- consulted with Inoue Sensei about the plans for developing the porcelain center at UNM
Masley Hall Gallery continued an active program of exhibits, including:
- New Mexico Student Artists (Nov. 1996-Jan. 1997)
- Art Education Faculty (Jan.-Feb. 1997)
- Art Studio Retrospective (March-April, 1997)
- Art Education Program Graduating Students (April-May 1997)

**ECME:** 1996-97 marked a milestone for the new ECME program at UNM: 21 students graduated, many moving immediately into jobs. These graduates came from the first cohort of 25 who began 2 years ago (1 left, 3 will graduate in December). The preparation program boasts a personal, community-based approach that teaches students to become advocates and activists for children's, families', and teachers' rights. Cooperating teachers have both learned from and contributed to this mission. Two smaller cohorts (about 8 each) were admitted as Phase II of the 4-year plan, all completing year one in the program.

The ECME Program has been a study of innovation from its beginning 2 years ago, characterized as cross-disciplinary, active, community-centered, and personally enriching, where faculty and students made strong commitments to each other in their common pursuit. The faculty promised to be responsive, caring, progressive, and actively involved in the growth of the students as teachers, while students in turn agreed to throw out preconceived notions of teacher preparation and to be open to an early childhood way of learning and teaching. The first 2-year cohort of 25 students allowed formation of important personal and professional friendships. Team teaching by a faculty willing to share their knowledge and to collaborate very closely allowed block instruction of courses (7 credit hour courses are the norm) which in turn afforded more creative uses of time (field trips, teacher and principal panels, etc.) and more in-depth coverage of subject areas. Current and cutting edge approaches (e.g., that of the Italian Reggio Emilia Schools) were introduced whenever possible, assuring that students were equipped with special expertise. The students worked closely with community and school programs of all types, learning about diversity firsthand. The entire program emphasizes multiculturalism, not as a "sidebar discussion," from start to finish, with Engelbrecht offering particularly important expertise and opportunities toward that end.

**MSET:** Much of math and science education is connected, at both UG (large student body) and graduate levels. Spurlin received the prestigious UNM Outstanding Teacher Award! Madsen coordinated the large Lockheed Martin statewide grant for training students in math and science. She also agreed to serve as the undergraduate Elementary Education coordinator, efficiently organizing the various cohort emphases into order, and targeting enrollment management (numbers) as the next goal. The science education faculty worked with sciences faculty to refine and continue the collaborative natural sciences courses for entering students. In Technology Education, Norton completed the third year of her very successful Integrating Technology in the Schools (ITS) pilot program (a 4-semester intense MA program), but the College was unable to commit the resources needed to continue the program and turned away 40 students already admitted to begin in summer 1997. Hall worked diligently with all technology-related planning and instructional efforts and revised the multiple sessions of CIMTE 365/Microcomputers in the Classroom (required for all UG teacher prep
students) into better, more consistent format. In Environmental Education, Rubio taught extra courses at the branch campuses to meet their growing demand. Miko directed the Peace Corps Teacher Fellows Program, a national model. This emphasis has a large Master's degree student body and graduated a significant number of doctoral students.

- The first Science and Mathematics Elementary Education Program (UG) cohort of 33 graduated in spring 1997; two more SMEEP cohorts (23 and 19) have begun or been admitted for fall.
- The first Math/Science Master's degree cohort of 24 (also elementary education) graduated in spring 1997. The second MA cohort (20) began in fall 1996 and will finish spring 1998.
- At the secondary level, 22 Math and Science licensure (both UG and post-BA) students completed their licensure requirements in spring 1997, and 9 more will finish fall 1997.

**SPECIAL ED:** The Special Education faculty met the state's critical needs through instructional, scholarly, and service work in the following areas during 1996-97:

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Contributions</th>
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<tbody>
<tr>
<td>Adamson</td>
<td>(Professor)</td>
<td>Assistive technology (A.T.) preparation</td>
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<tr>
<td>Barrera</td>
<td>(Assoc.Prof)</td>
<td>Multicultural early childhood special education</td>
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<tr>
<td></td>
<td></td>
<td>Language development and disorders</td>
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<tr>
<td></td>
<td></td>
<td>Currently 3 federal grant projects in personnel preparation</td>
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<tr>
<td>Blalock</td>
<td>(Assoc.Prof)</td>
<td>Secondary special education methods and materials</td>
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<td></td>
<td></td>
<td>Career development/transition to work</td>
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<td></td>
<td></td>
<td>1 state grant project in personnel preparation/systems change</td>
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<td></td>
<td></td>
<td>Division director (2 course release per semester)</td>
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<tr>
<td>Keefe</td>
<td>(Visiting Asst)</td>
<td>Undergraduate Dual Licensure Program (Elementary/Special Education)</td>
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<td></td>
<td></td>
<td>Collaboration for inclusive education - training and research</td>
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<td></td>
<td></td>
<td>Severe disabilities</td>
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<tr>
<td>Luckasson</td>
<td>(Regents' Professor)</td>
<td>Children/adults with mental retardation</td>
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<td></td>
<td></td>
<td>Legal issues in special education</td>
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<td></td>
<td></td>
<td>Strong work in doctoral program</td>
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<td></td>
<td></td>
<td>COE Policy Center/initiative</td>
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<tr>
<td>Nielsen</td>
<td>(Assoc.Prof)</td>
<td>Students who are gifted/talented, high functioning students with mild disabilities</td>
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<td></td>
<td></td>
<td>Curriculum development for special needs students, at-risk course in Sp Ed</td>
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<td></td>
<td>APS/UNM Partnership - Special Education Intern Program Co-Director</td>
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<td></td>
<td></td>
<td>Special Education Co-Coordinator</td>
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<tr>
<td>Raborn</td>
<td>(Asst.Prof)</td>
<td>Bilingual/Multicultural Special Education teacher training program</td>
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<td></td>
<td></td>
<td>Math/science instruction for special needs learners</td>
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<td></td>
<td></td>
<td>APS/UNM Partnership - Special Education Intern Program Co-Director</td>
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<td></td>
<td></td>
<td>1 federal project in personnel preparation</td>
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<tr>
<td>Sema</td>
<td>(Assoc.Prof)</td>
<td>Students with mild/moderate behavioral disorders, at-risk students</td>
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<td></td>
<td></td>
<td>Strong work in doctoral program</td>
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<td></td>
<td></td>
<td>Special Education Co-Coordinator</td>
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<tr>
<td></td>
<td></td>
<td>1 federal project in postdoctoral research</td>
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<tr>
<td>Smith</td>
<td>(Regents' Professor)</td>
<td>Learning disabilities, applied behavioral analysis research methodology</td>
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<tr>
<td></td>
<td></td>
<td>Strong work in doctoral program</td>
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<tr>
<td></td>
<td></td>
<td>2 federal projects to prepare and support minority institutions and diverse</td>
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<td>faculty to write/submit personnel preparation proposals in Special Ed</td>
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</tbody>
</table>
MSET: These faculty initiated or continued several scholarly activities:

- multi-million dollar research project from Martin-Marietta
- state initiative in science and mathematics education
- integration of technology instruction in schools
- constructivist approaches to teacher education

SPECIAL ED: As a group, the Special Education faculty and graduate students reflect a focus on the broader context of education (schools, higher education, community agencies, families) and in concert with many reform efforts. Research and development activities during 1996-97 included:

- Mathematics and science instruction for exceptional learners from diverse cultural and linguistic backgrounds
- Family-centered multicultural approaches to early childhood education
- Community school-to-work transition teams
- Transitions to postsecondary vocational programs for young adults with developmental disabilities (urban and rural)
- Inclusive education efforts and their effect on student outcomes
- Classroom teacher/scholar program, with many areas of inquiry driven by the participants
- Alternative assessment strategies
- Recruitment and retention of diverse teacher trainees
- Supply and demand in higher education programs, particularly of faculty from diverse cultural or language backgrounds
- Development of multimedia instructional materials for training purposes

Every scholarship effort contributes directly to the COE’s purpose through emphasis on students, preparation of educators to serve those students, and connections with families and communities to support the educational process.

3. To foster and promote collaborative relationships with all constituencies vitally interested in the improvement of teaching and learning and dedicated to meeting the needs of all learners.

ART ED: The Art Education faculty worked with several groups this year to provide quality, relevant instruction to their students, including the Albuquerque Public Schools, community arts organizations such as Enabled Arts, and the N.M. Art Education Association. They requested to meet with several related programs in COE in order to enhance each other’s effectiveness and relevance, but programs had difficulty responding.

ECME: The early childhood program connected strongly with the larger early childhood community (local, state, and national) in order to help shape the field. Their teaching was linked to the best practices in the profession but also to the social and
political realities that constrain it. They learned from the teachers who serve the field so well, the parents whose knowledge has so often been undervalued, and the advocates who have given the field a presence in the media. Such collaboration enhanced their efficiency and effectiveness in creating a relevant and responsive program that values and acknowledges the strengths of children from all races and cultures, with and without exceptionalities.

**MSET:** Mathematics/science education faculty collaborated closely with districts and other universities in New Mexico in creating and enhancing innovative training efforts, at least partially supported by external funds. Technology instruction in the schools focused on Albuquerque, Penasco, and Santa Fe, and technology education faculty worked across the College to plan stronger support for integration of technology into all preparation programs. The Environmental Education faculty focused on outreach efforts in the Albuquerque community and around New Mexico through student projects, extra course instruction and significant support of the Peace Corps Fellows Program.

**SPECIAL ED:** The Special Education Program worked collaboratively in many instructional, research, and service activities with related constituencies and colleagues:
- Congress, U.S. Department of Education Division of Personnel Preparation, and numerous universities on preparation of special education teachers and leaders
- Other COE and UNM divisions and programs on teacher preparation and research
- Other universities on collaborative instructional and organizational activities
- Professional organizations in all related disciplines
- Advocacy organizations dealing with children, youth, adults, and families
- Pueblos, reservations, and villages on community and family issues
- Teachers and leaders in various districts in advanced professional development activities
- State supported schools and regional educational cooperatives
- State and local agencies on expanding services
- National and international networks examining supports for individuals with exceptionalities
- State advisory committees in related areas
- National consortium training districts in inclusive educational practices
- State coordinators of assistive technology across the country
- Distance delivery mechanisms at UNM and in nation

4. To prepare a greater number of educational personnel from traditionally underrepresented populations.

All division programs have committed efforts toward recruiting and supporting students from diverse backgrounds, particularly those representing cultures and languages from the Southwest. For example, ECME plans to start a cohort of Navaho Head Start teachers with instruction delivered in their native language, using traditional
<table>
<thead>
<tr>
<th>Tafoya</th>
<th>Assessment and diagnosis; coordinated Educational Diagnosis Program through Continuing Education Division Undergraduate Dual Licensure Program</th>
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<tbody>
<tr>
<td>VanEtten (Lecturer)</td>
<td>Coordinator/Instructor/Supervisor, Undergraduate Dual Licensure Program Reading instruction with special needs learners 1 federal project in multimedia course development</td>
</tr>
<tr>
<td>Ware (Asst. Prof)</td>
<td>Collaboration with general education for inclusive education - teaching and research Secondary issues in education, educational reform, qualitative research methods 1 state research project in inclusive service delivery models</td>
</tr>
</tbody>
</table>

Special Education graduated 28 Undergraduate Dual Licensure students and admitted 40 more for their residency year, which for the former group occurred at four sites: Puesta del Sol and Mark Twain Elementary Schools and Cleveland and Washington Middle Schools. Site administrators and teachers were full-fledged partners (site supervisors, mentor teachers, participants in advanced professional development activities) of this acclaimed teacher preparation program that produced BA graduates with both elementary and special education licensures.

The restructuring of the MA moved into implementation, while the doctoral program remains the next priority. Although positions were requested to support these changes (and to replace several retired faculty), no permanent special education positions were approved. One visiting assistant position assisted the program.

2. To strengthen the research activity in the College of Education and to identify research agendas that contribute to the purpose of the College.

**ART ED:** Art Ed faculty produced several scholarly works. Art and Academe, a journal on college-level art education, requested and has in press Smith’s paper on the problematic nature of the use of reproductions, including electronic images, in art classes, stemming from a presentation to the Liberal Arts and the Education of Arts conference in New York. The Penn State Press published Smith’s “Allan Kaprow and the Artist-in-the-Classroom” in 1997. Smith’s The History of Art Education was published in summer 1996, and Smith completed paintings for an invited one-person exhibit at Purdue University in fall 1998.

**ECME:** Bleiker and Erwin worked successfully on research, resulting in several submissions and some acceptances, all oriented to children’s learning and innovative preparation of early childhood educators. They are pursuing, with each other and with others, several additional manuscripts, and at least one other collaborative study is in the data analysis stage. Bleiker published four articles in the Monographs of the Society for Research in Child Development published in 1996. Their interest areas are unique, including aesthetics in education, contextually-based and constructivistic preparation of early childhood educators, the role of central conceptual structures in children’s cognitive development, and Faulkner’s view of rural schooling. Both have systematically prepared and offered numerous presentations at state, regional, national and even international conferences on aspects of child development and new directions in preparing early childhood educators.
Navaho or Dine models of teaching; they have started instruction in Taos and Belen.

All personnel preparation grants in Special Education, as well as the Dual Licensure Program, grant preference to students from cultures and languages of the Southwest in their admissions. All screening processes for graduate programs encourage their enrollment. In particular, the Bilingual/Multicultural Special Education Teacher Training Project and the Ventanas Project heavily recruit and support traditionally underrepresented students at a statewide level, and the Alliance 2000 Project and Project SUCCESS support faculty from diverse backgrounds at the national level. The Division is in the process of developing a data base that accurately reflects the composition of its student body.

5. To create and sustain helpful attitudes and structures to enhance the professional environment of the College of Education, for students, staff, and faculty.

Faculty in the Educational Specialties Division made significant commitments to the College and the University communities, through their active participation in several capacities: Faculty Senate, University committees, College of Education committees, program committees, student organization advisors, presenting at COE "Works in Progress", and numerous other contributions which are reflected in their merit applications and Annual Biographical Records. Significant sacrifices were made by the faculty from various programs toward the common good in order to repair earlier messes and move the College and programs forward.
Significant Developments

Two new programs joined the Division during this academic year. The Nutrition Program moved from the Division of Physical Performance and Development to the Division of Individual, Family, and Community Education. This realignment should foster the development of natural connections between this program and the Family Studies and Health Education Programs.

The Human Services Program moved from the Department of Psychiatry to become a concentration in the Family Studies Program in the Division of Individual, Family, and Community Education. The addition of this program to the College of Education led to a reformulation of several Family Studies courses and should provide Human Services students with a richer program of studies.

In addition to the incorporation of the two programs above, the Center for Family and Community Partnerships was created, in part out of the IFCE Division, with Pauline Turner, Professor in the Family Studies Program as Director. The Center's purpose is to foster the development of interdisciplinary projects funded by private, state, and local sources and designed to serve families and communities throughout New Mexico. A major grant from the Kellog Foundation has been submitted through the Center, with prospects for funding very high.

Several existing programs in the Division also achieved significant goals during the year. The Psychological Foundations of Education Program received the highest possible recommendation, "continue with commendations," from the distinguished external review committee that conducted its Graduate Program Review. As a result of years of planning, and with the support of the external review team, the University Senate approved a change in the name of this program to "Educational Psychology," effective in the Fall, 1997.

The Counselor Education Program completed an extensive self study in preparation for a certification site visit by the Council for Accreditation of Counseling and Related Programs (CACREP). The site visit team will be on campus in the Fall to complete the certification review. In addition, the Traverse Outreach Project, with Deborah Rifenbary as Principal Investigator, was formally incorporated into the partnership agreement between the Albuquerque Public Schools and the College of Education. This formal recognition marks another in a series of steps that continue to enhance the commitment of this program to school-based counseling.

The Family Studies and Nutrition Programs each developed and piloted new systems of Student Outcomes Assessment for their undergraduate majors as part of the University-wide effort in this area. These efforts will serve to provide required accountability measures for these undergraduate programs.

The Health Education and Family Studies Programs offered several courses each in cooperation with the Distance Education Center at UNM. These efforts expand the existing work of these programs to provide educational services to a broader range of students throughout New Mexico.

Finally, two faculty members in the Division received special honors during the academic year. Associate Professor Christine McCormick was named UNM Regents' Lecturer for 1996-1999, in recognition of her distinguished record of scholarship and teaching. Katia P. Goldfarb, Assistant Professor in the Family Studies Program, received a positive Code 3 evaluation based on an accomplished record of scholarship, teaching, and service.
Plans

Budget permitting, the Nutrition program hopes to open a search for two tenure track assistant professors in order to return their faculty up to the full complement needed to carry out their programs. The Educational Psychology Program hopes to search for an assistant professor with specialization in research design, statistics, and assessment to support state-wide needs for development in the area of assessment, and to ensure adequate resources in research methods and statistics for students throughout the programs of the College. Counselor Education hopes to search for a specialist in at-risk students to support the program’s increasing focus on and expansion of school-based counseling in critical need areas for the State.

An explicit goal for the Division over the next few years is to focus on obtaining external funding for research and training. Faculty in each of the five Programs of the Division have been extremely active during the late spring and early summer months in submitting many large requests to federal, state, and private funding sources. Many of these submissions are the product of collaborations across programs in the Division and across Divisions of the College.

Appointments

Sandra J. Bailey, Ph.D. accepted an appointment effective January, 1997 as Assistant Professor in the Family Studies Program. Dr. Bailey received her Ph.D. in Human Development and Family Science from Oregon State University.

Susan Lander, MSW, accepted an appointment effective August, 1997 as Lecturer in the Family Studies Program. Ms. Lander will continue her role as coordinator of field services for the Human Services concentration in Family Studies.

Separations

Wendy Sandoval, Ph.D., Associate Professor in the Nutrition Program, retired effective June, 1997 after 19 years of service to the College of Education.

Jan Naslund, Ph.D., Assistant Professor in the Psychological Foundations Program, was granted a one year leave of absence to work at Oklahoma State University in Stillwater, OK. She will return to the new Educational Psychology Program in August, 1997.

Selected Publications of Division Faculty


Selected Outside Professional Activities

Victor Delclos: Member, Ad Hoc Committee on Educational Psychology in Teacher Education, American Psychological Association, Division 15.

William Fishburn: Member, Board of Oral Examiners for the NM Board of Psychological Examiners; Nominee, Board of Directors, Division 29, American Psychological Association.

Jan Gamradt: Member, Board of Examiners, National Council for the Accreditation of Teacher Education (NCATE); Member, Board of Directors, American Anthropological Association Council on Anthropology and Education

Karen Heller: Birth Defects Prevention Task Force, NM Department of Health; Team Nutrition Summit Organizational Team, NM Department of Education and Health.

William Kane: State of NM, Department of Health, Prevention Advisory Committee; Executive Committee, International Union for Health Education and Promotion; Planning Committee, 16th International Health promotion Conference.

Christine McCormick: Editorial Board, Journal of Educational Psychology.

Virginia Shipman: President of the Eastern Educational Research Association (1997-99); Member, NM Partners in change; Proposal reviewer for the National Institute on Child Abuse and Neglect.

Joseph Stevens: Editorial Board, Journal of Educational Psychology; NM State Evaluation Advisory Committee; Advisor, NM State Comprehensive Student Assessment Project; Workshop and consultative services on assessment to Albuquerque Public Schools.

Pauline Turner: Board of Directors, NM Educational Retirement Board; Board of Directors, NM Educators Federal Credit Union; Work Group to develop proposed welfare reform legislation (Legislative Interim Committee on Health and Human Services).
Division of Language, Literacy and Sociocultural Studies Annual Report
July 1, 1996 - June 30, 1997
Leroy I. Ortiz, Division Director

Introductory Statement: During the 1996-97 academic year, the Division of Language, Literacy and Sociocultural Studies continued as one of six administrative units in the College with programs in Educational Linguistics, Educational Thought and Sociocultural Studies, Bilingual/ESL, Language Arts/Reading, Middle Level and Secondary Education. Leroy I. Ortiz served as the Division Director and was assisted by a support staff which included Paula Pascetii, Debra Schaffer, Mike Herrmann and Carol Catania. Eighteen full-time faculty, one adjunct, and one part-time faculty from African American Studies constituted the regular, working faculty of the division. The LLSS students represent a population that is ethnically and culturally diverse and includes undergraduates, non-degree, Masters’ and doctoral level students. Student enrollments in LLSS programs, particularly in the areas of bilingual/ESL, language and literacy, teacher education related courses and the ETSCS doctoral program, are high.

During the 1996-97 academic year, the LLSS division met bi-monthly to discuss and vote on issues of admissions, advisement, governance, long term planning, scheduling, curriculum development, personnel issues, faculty development, hiring and other issues related to its mission and goals.

Accomplishments/Highlights:
1. In December the move to Hokona Hall which consolidated all LLSS and other College of Education faculty in one physical location was an important step in increasing communication and collaboration across various academic programs in the College. A Blessing Way Ceremony performed by a Navajo Medicine Man and which was attended by a number of faculty and staff, accompanied the move to Hokona Hall.

2. The Middle School and Secondary Education Programs, including faculty members Dan Young, Kathryn Herr, Lyn Oshima, Bill Kline and Rose Mitchell were administratively moved to the LLSS Division for the 96-97 academic year.

3. Faculty Additions/Departures:

Luisa Duran retired after 25 years of exemplary service.

Elizabeth Saavedra indicated her desire to leave LLSS and affiliate with Education Administration effective August, 1997.

Jaime Grinberg was approved by the faculty to join LLSS beginning in August, 1997.
1086

Vera John-Steiner had a productive fall 1996 sabbatical.

Amy Atkins was officially approved as an adjunct Assistant Professor in LLSS.

Three new faculty will join LLSS for the 1997-98 academic year. These include Pamela Rossi in the area of Language Arts/Reading, Penny Pence in K-12 writing and Holbrook Mahn in ESL/Bilingual.


5. Graduate Assistants in LLSS for the 1996-97 academic year included Imelda Basurto, Jennie DeGroat, Julie Reichert, Lisa Sparaco, Betsy Saxton, Richard LoRe, Julia Motes, Anna Nolla and Anne Fairbrother. These students participated in a number of LLSS activities including research, teaching, supervision of student teaching and program development.

6. TA’s (teaching associates) in LLSS for the 96-97 academic year included Holbrook Mahn, Freddie Kustaa, Julie Reichert, Nicole Montague and Gary Stiler.

7. Imelda Basurto, an LLSS doctoral student, continued her second year as a Holmes scholar. Imelda supervised bilingual student teachers and is completing her dissertation.

8. Ten students who are recipients of Title VII Doctoral Fellowships continued their full time studies in Bilingual/ESL educational. These students under the direction of Leroy Ortiz meet regularly as a cohort group to support each other’s participation in course work and research activities.

9. Judy Vavrek, a doctoral student in bilingual education completed an Office of Graduate Studies tuition fellowship for the 1996-97 academic year.

10. **Outstanding Student Awards received by LLSS Students**

Saneum Foley and Mary Rita Esquibel received the outstanding undergraduate award for fall, 1996. Paula Boland received the same award for spring, 1997.

Paul Johnson received the outstanding MA student award for fall, 1996. Helen Kiser and Marion (Becky) Peters received the same award for spring, 1997.

Jeannette Haynes received the outstanding doctoral student award for spring, 1997.
11. **Program Development:** During the 1996-97 academic year, the LLSS Division engaged in a number of program development and policy decisions which included the following:

A new mid-point process for doctoral study was approved.

A policy on faculty load when classes are canceled because of low enrollment was approved.

A quorum and voting rights policy was revised and approved.

New guidelines on comprehensive exams for doctoral students were approved.

Significant work was done on developing new admission criteria and guidelines for doctoral students. The final draft of this policy will be presented at the first meeting in the fall semester.

**Plans for the Future:**

As the 1996-97 academic year came to a close, the LLSS Division has identified a number of goals for the up-coming year and beyond. These goals include:

1. The area of program development at all levels, undergraduate, Masters and doctoral will continue to require major attention in the immediate and long term future. The need to move the proposed LLSS doctoral program (replacing ETSCS as the overall organizer) through the approval process will be critical. This includes the approval of several core courses for the doctoral and MA level. Program Development in American Indian Education with a particular emphasis at the MA level and continued re-assessment of the Bilingual/ESL endorsement and MA emphasis will be goals for the up-coming year. With several new language/literacy faculty joining the division, it may be time to re-look and perhaps up-date reading/language arts curriculum at the undergraduate and graduate levels. The Middle School and Secondary Education Programs will require a re-examination with respect to admission requirements, curriculum, coordination and overall structure and function of the program. The division needs to find ways of strengthening the MA and Ph.D. emphasis in ETSCS by involving more faculty who are directly connected to its overall goals and implementation.

2. The need to establish and develop an effective database on LLSS students at all levels is an immediate need. Recruiting and retaining Native American students is a particular goal based on our student enrollment data.

3. The need to develop an effective advisement system at all levels with particular attention to the issues of equitable faculty loads is a serious need.
4. The need to establish and organize an LLSS Graduate Student Association is important for the up-coming year. The issue of student participation in LLSS meetings and activities needs to be clarified.

5. Given where LLSS has come in terms of its history and evolution, it may be time for the division to consider developing a 3-5 year plan which would outline a set of goals, mission, and a process (with a time line) by which to accomplish these goals. This idea should at least be explored at some length in one or more of an LLSS regular or special meeting.

Publications and Papers Presented of Individual Faculty and Staff:


Jaime Grinberg and Katia Goldfarb. (To be published). “Moving Teacher Education into the Community.” Theory into Practice.


Dan Young. “Understanding Ethical Dilemmas in Education.” Educational Horizons.

Dan Young. Brown Bag Presentation for Office of Research.


Other Professional Activities of Faculty and Staff:

Gary Anderson. 1996 Fulbright Award for technical assistance in Argentina, Summer, 1996 (Taught two seminars at The University of San Martin and provided professional development to The Ministry of Education).

Gary Anderson. Appointed Area Editor for The Education Review, an on-line journal focusing on reviews of recent books in Education. Editor for politics and policy area. (April, 1997).


Mary Belgarde. Graduate Admissions Application Committee.

Mary Belgarde. Co-coordinated the Blessing Ceremony of Hokona Hall, November, 1996.


Mary Belgarde. Chair of the American Indian/Alaska Native Special Interest Group of AERA.

Rebecca Benjamin. COE Graduate Committee, 1996-97.

Rebecca Benjamin. College of Education ESL faculty search member.

Greg Cajete. Director of the Poeh Cultural Center Indigenous Garden Project at Pojaque Pueblo.


Luisa Duran. Development of 1st and 2nd Language Development/Acquisition course.

Jaime Grinberg. Created a new undergraduate course entitled "Introduction to Education in New Mexico."

Rose Mitchell. Member of the COE Graduate Committee, 1996-1997.
Rose Mitchell. New Mexico Learning Community Project.

Rose Mitchell. World Class Teacher Project.

Ann Nihlen. Taught Practitioner Research on-site at Emerson Elementary and worked with PDS group of students, Fall 1996.

Ann Nihlen. Serve on the Rape Crisis Center Advisory Board and the Women's Studies and Feminist Research.

Elizabeth Noll. Grant from the National Council of Teachers of English and OFAC. Entitled: “The Role of Literature in Multicultural Classrooms: Beginning Elementary and Secondary Teachers' Beliefs and Practices.” Amount $9871.00

Leroy Ortiz was awarded the third year of a Title VII doctoral fellowship grant for 10 doctoral students. Amount $89,000.

Leroy Ortiz received notice that he was awarded a four year Title VII grant to provide scholarships for Bilingual and ESL undergraduate and graduate students. The grant will become effective September 1, 1997 and is funded for four years at a total of $570,000.

Anita Pfeiffer served as the COE liaison with Gallup and Valencia teacher education programs.

Dan Young. Membership on the Teacher Education Advisory Board, Elementary Education Cohort Program Committee.

INTRODUCTION

Currently the following programs reside in the Division of Physical Performance and Development:

- Physical Education - Professional (PE-P)
- Physical Education - Non-Professional (PE-NP)

During this past year, the Parks/Recreation and Environmental Education Program was moved to the Division of Education Specialties. The Nutrition/Dietetics Program was transferred to the Division of Individual, Family, and Community Education.

Three undergraduate majors reside in PE-P: Physical Education Teacher Education, Exercise Science and Athletic Training. Graduate concentrations with both Master's and Doctoral Degrees are: General Physical Education, Curriculum and Instruction, Sports Administration, and Exercise Science. A moratorium was placed on admitting students to the Ph.D. Sports Administration Program due to lack of replacements for retiring faculty.

Full time faculty included: Mary Jo Campbell, Joy Griffin, Leon Griffin, Ernie Lange, Gary Ness (sabbatical) Gloria Napper-Owen, Hemming Atterbom, Vivian Heyward (sabbatical), and Rob Robergs. Lecturers II, Erick Kozlowski, David Binder, and Pam Cox, instructed core courses in the Athletic Training Curriculum. Linda Kincaid was a one-year visiting professor who helped cover the responsibilities of Bill De Groot (retired July, 1996). Numerous parttime faculty and a few graduate students were hired to teach classes which were left uncovered from past faculty departures which have not been replaced. Teaching assistants (6.6 FTE) and numerous parttime faculty taught the PE-NP courses.

STUDENT DATA

Active Majors

Undergraduates - 203 (210 in 1995-96)
- PE-P Teacher Education - 83 (12 P.B.)
- Athletic Training - 66
- Exercise Science - 54

Graduates - 146 (122 in 1995-96)

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Graduation Statistics (Summer 1996-Spring 1997)

Undergraduates - 46
  PE-P Teacher Education - 17
  Athletic Training - 12
  Exercise Science - 17

Graduates - 41

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Graduate Inquiries, Applicants, Admissions

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PE-P # Students

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<tr>
<td>Fall 1996</td>
<td>371</td>
<td>330</td>
<td>216</td>
<td>917</td>
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<td>Spring 1997</td>
<td>295</td>
<td>210</td>
<td>201</td>
<td>706</td>
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PE-P Credit Hour Production

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<td>503</td>
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<td>Fall 1996</td>
<td>693</td>
<td>1005</td>
<td>752</td>
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<td>Spring 1997</td>
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PE-NP Credit Hour Production

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<td>Spring 1997</td>
<td>3561</td>
<td>3579</td>
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SIGNIFICANT ACCOMPLISHMENTS

- Maintained academic programs and credit hour production.
- Job placement of our students was excellent at both the undergraduate and graduate levels.
- Faculty were productive in publications, presentations, participation and leadership in professional organizations, and service to the university (see addendum).
• Graduate students were productive in publications and presentations (see addendum).
• Brett Christie, Ph.D. candidate in curriculum and instruction, won the American Association for Health, Physical Education, Recreation, and Dance Past President’s Graduate Scholarship for being the outstanding physical education graduate student in the nation.
• Dale Wagner, Ph.D. candidate in exercise science, won the National Strength and Conditioning Association Challenge Scholarship.
• The Athletic Training Program was reaccredited for five years through the Commission of Accreditation of Allied Health Education Programs.
• The Olympic swimming pool and therapy pool was renamed to the Armond H. Seidler Natatorium by UNM.
• The faculty completed the undergraduate student outcomes assessment plans for athletic training, exercise science, and physical education teacher education.
• The Sport Administration Program faculty evaluated the course content and offerings for the master’s and doctoral degrees, in preparation for seeking accreditation under the new guidelines from NASPE/NASSM.
• Revision of the undergraduate exercise science program was approved by the Faculty Senate.
• Two new courses were approved by the university - PE-P 468 (Worksite Wellness Programs), and PE-P 469 (Management Concepts in Sport and Fitness Settings).
• Our teacher education program continued its very successful collaboration with LaLuz Elementary, Kirtland Elementary, and Los Lunas Elementary Schools.
• The Athletic Training Program continued its successful collaboration with the Athletic Department.
• The Sport Administration Program continued its successful collaboration with the Athletic Department, APS, and the New Mexico Activities Association.
• Program faculty recruited students at the national convention for the American Association of Health, Physical Education, Recreation, and Dance and at the Southwest District Convention.
• The faculty continued to provide excellent advisement and mentoring for undergraduate and graduate students.
• Several faculty willingly accepted additional workloads which was necessitated by the decrease in the number of faculty.
• Dr. Joy Griffin received tenure and was promoted to Associate Professor.
• Participated in facility planning for Phase III of the Johnson Center Project.

SIGNIFICANT PROBLEMS

• Lack of faculty replacements during the past seven years.
• Lack of funding for the Basic Instruction Program (teaching assistants, parttime instructors, and supply budget).
FACULTY Publications

Hemming Atterbom

Joy Griffin

Vivian Heyward

Gloria Napper-Owen
Napper-Owen, G. Journey of the Flat People a fitness adventure. Teaching Elementary Physical Education, 7(3), 16-17.

Gary Ness

Rob Robergs


PRESENTATIONS

Joy Griffin

Watson, D., & Griffin, J., (1996, April). Addressing personal ethnic bias and prejudice. Presented at the 111th Annual AAHPERD Convention, Atlanta, GA.

Vivian Heyward
“Practical Assessment of Body Composition in Healthy and Clinical Populations” presented at the University of Vienna-Austria, September 9, 1996 (invited visiting scholar)

“Protein Requirements for Resistance-trained Athletes” presented at the University of Vienna-Austria, September 9, 1996 (invited visiting scholar)


Gloria Napper-Owen

UNIVERSITY SERVICE

Hemming Atterbom
Member, Faculty Concilium on Latin America (continuing).
Member, UNM International Affairs Committee (1994-1998).

Joy Griffin
COE Human Research Review Committee (First part of 1996).
UNM Admissions & Registration Committee.
UNM Speakers' Bureau.

Gloria Napper-Owen
College of Education Undergraduate Curriculum Committee
College of Education Planning Committee
College of Education College-wide Task Force on Teacher Education.

Ernie Lange
COE Merit Pay Committee
Chair - OFAC

STUDENT ACCOMPLISHMENTS

Christie, Brett (Curriculum & Instruction Ph.D. student) Winner of the American Association for Health, Physical Education, Recreation and Dance Past President’s Graduate Scholarship for being the outstanding physical education doctoral student in the United States. Christie, Brett (C&I) Made two presentations at the National Conference (AAHPERD)

Griffin, Sharon (Exercise Science M.S. Student) Finalist - M.A. Research Award for the Southwest Chapter of the American College of Sports Medicine.


Wagner, Dale (Exercise Science Ph.D. student) Winner of the National Strength and Conditioning Association Challenge Scholarship
Wagner, Dale (Ex.Sci) Finalist - Ph.D. Student Research Award for the Southwest Chapter of the American College of Sports Medicine
Wagner, Dale (Ex.Sci) Made four presentations - one at the State level, one at the regional level and two at the national level.
Wagner, Dale (Ex.Sci) Received three grants totaling $6610.

Rodriguez, Barbara (PE-P) Outstanding undergraduate student in PPD Division
Christie, Brett (C&I) Outstanding Doctoral Student in PPD Division
Resch, Todd (Spt.Admin.) Outstanding Master’s Student in PPD Division
Paulls, Ann (PE-P) UNM Student Representative to Southwest American Association of Health, Physical Education, Recreation and Dance Division
Leftwich, Steele (Ex.Sci) Outstanding undergraduate student


PRECISION OF NONINVASIVE METHODS OF BLOOD PRESSURE MEASUREMENT AT REST AND DURING EXERCISE, S.E. Griffin, R.A. Robergs, D. James, R. Quintana and D. Wagner, UNM 1479.


GENDER SPECIFIC DECREMENT IN VO2MAX WITH INCREASING HYPOBARIC HYPOXIA, R.A. Robergs, R. Quintana, D. Parker, and C.C. Frankel, UNM 777.

GENDER SPECIFIC CHANGES IN THE LACTATE THRESHOLD WITH INCREASING HYPOBARIC HYPOXIA, R. Quintana, R.A. Robergs, D. Parker, and C.C. Frankel, UNM, 774.

SOUTHWEST REGIONAL CHAPTER
American College of Sports Medicine
1996 Annual Meeting
November 1996

VALIDITY OF SPHYGMOMANOMETER DETERMINED BLOOD PRESSURES DURING REST AND EXERCISE, S.E. Griffin, R.A. Robergs, D. James, R. Quintana and D.R. Wagner, UNM, 12.


VALIDITY OF NON-INVASIVE BEAT-TO-BEAT BLOOD PRESSURE DEVICES DURING REST AND EXERCISE, R.A. Robergs, S.E. Griffin, D. James, R. Quintana and D.R. Wagner, UNM, 23.

EXPLAINING THE VARIABILITY IN THE HEART RATE RESPONSE TO INCREMENTAL
EXERCISE, R. Quintana, R.A. Robergs, C.C. Frankel, D.L. Parker and G. Dallam, UNM, 23.

HEART RATE THRESHOLD IS NOT A VALID ESTIMATION OF THLACTATE THRESHOLD, D.L. Parker, R.A. Robergs, R. Quintana, C.C. Frankel and G. Dallam, UNM, 22.

COMPARISON OF ENERGY EXPENDITURES DURING VARIOUS MODES OF EXERCISE AT SELF-SELECTED INTENSITY, C.C. Frankel, R.A. Robergs, L. Kravitz and V. Heyward. UNM, 22.

DEPARTURES
Mary Justus - Administrative Asst. I
Doris Livingston - Administrative Asst. I (Retired)
Sam Dixon - Teaching Assistant
Brett Christie - Teaching Assistant
Dennis Francois - Teaching Assistant
George Eckman - Teaching Assistant
Rich Roesky - Teaching Assistant
Alicia Sanchez - Teaching Assistant
Rich Cellini - Teaching Assistant
Veronica Franklin - Teaching Assistant
Shi Hui Chen - Teaching Assistant

ADDITIONS
Jackie Sumner - Administrative Assistant I
Heidi Grappendorf - Teaching Assistant
John Stratta - Teaching Assistant
Alicia Sanchez - Teaching Assistant
Farzaneh Ghiasvand - Teaching Assistant
Anne Farrell - Teaching Assistant
George Eekman - Teaching Assistant
Dennis Francois - Teaching Assistant
Physical Education - Non-Professional (Basic Instruction Program)
July 1, 1996-June 30, 1997

The Physical Education - Non-Professional Program provides activity courses for the UNM student population. Also, several of its courses are required for students majoring in physical education teacher education, exercise science, and fine arts. All of the courses are taught by teaching assistants and parttime instructors.

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<td>24</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>($16,859)</td>
<td>($17,592)</td>
</tr>
</tbody>
</table>

During the past six years there has been a drastic decrease in the PE-NP budget. Until the past two years the line item of 6.6 FTE for teaching assistants was supplemented by COE parttime money and Continuing Education money. During the past year, the budget problem has been diasterous for the program. Currently twenty-three classes are listed in the Fall, 1997 schedule of courses which are to be taught by parttime instructors at a cost of $16,859. As far as I know, only $5,500 is available for this need. Also, no money has been allocated for supplies to sustain this program.

RECOMMENDATION

There should be a line item in the budget for PE-NP which includes 7.5 FTE for teaching assistants, $37,000 for parttime instructors, and $7,000 for supplies, phones, etc.
<table>
<thead>
<tr>
<th>GRADUATION DATE</th>
<th>Student</th>
<th>Employment Site</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spring 1997</strong></td>
<td>Lori Butler</td>
<td>Teacher, Sandia Montessari</td>
</tr>
<tr>
<td></td>
<td>Derek Atencio</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Michael Anderson</td>
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<td></td>
<td>Melissa Trachi</td>
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</tr>
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<td></td>
<td>Kris Borland</td>
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</tr>
<tr>
<td></td>
<td>Theresa Scallen</td>
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</tr>
<tr>
<td></td>
<td>Mike Nesbitt</td>
<td>Teacher, Belen High School</td>
</tr>
<tr>
<td></td>
<td>Jaime Williams</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Corbet Newland</td>
<td>Teacher, Aztec Public Schools</td>
</tr>
<tr>
<td></td>
<td>Monica Romero</td>
<td>Teacher, Socorro High School</td>
</tr>
<tr>
<td></td>
<td>Robert Otero</td>
<td></td>
</tr>
<tr>
<td><strong>Fall 1996</strong></td>
<td>Matt Dixson</td>
<td>Teacher, Washington Middle School, Albuq.</td>
</tr>
<tr>
<td></td>
<td>Orlando Griego</td>
<td>Teacher, Rio Grande High School, Albuq.</td>
</tr>
<tr>
<td></td>
<td>Monika Sanchez</td>
<td>Teacher, Taos Mid School</td>
</tr>
<tr>
<td></td>
<td>Micah Trujillo</td>
<td>Teacher, Taos High School</td>
</tr>
<tr>
<td></td>
<td>Pam Whisonant</td>
<td>Teacher, Manzano Day School, Albuq.</td>
</tr>
<tr>
<td></td>
<td>Scott Williamson</td>
<td></td>
</tr>
<tr>
<td><strong>Summer 1996</strong></td>
<td>Brad Francione</td>
<td>Graduate School, Oklahoma</td>
</tr>
<tr>
<td></td>
<td>Jim Grecci</td>
<td>Teacher, Annunciation, Albuq.</td>
</tr>
<tr>
<td><strong>Spring 1996</strong></td>
<td>Phyllis Burns</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Christine Castillo</td>
<td>Teacher, Manzano High School - APE in APS</td>
</tr>
<tr>
<td></td>
<td>Alicia Duran</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kathy Hines</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jose Tabby Jr.</td>
<td>Teacher on reservation</td>
</tr>
<tr>
<td></td>
<td>Steve Pegador</td>
<td></td>
</tr>
<tr>
<td>GRADUATION DATE</td>
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</tr>
<tr>
<td>-----------------</td>
<td>--------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Fall 1995</td>
<td>Joe Gutierrez</td>
<td>Teacher, Santa Fe</td>
</tr>
<tr>
<td></td>
<td>Marc Hilton</td>
<td>Teacher, private school</td>
</tr>
<tr>
<td></td>
<td>Fred Jenkins</td>
<td>Teacher, Holy Ghost - Albuq.</td>
</tr>
<tr>
<td></td>
<td>James Kruger</td>
<td>Teacher, private school - Albuq.</td>
</tr>
<tr>
<td></td>
<td>Kara Stepp</td>
<td>Peace Corps</td>
</tr>
<tr>
<td>Summer 1995</td>
<td>Kevin Andersh</td>
<td>Tomasita Elementary - Albuq.</td>
</tr>
<tr>
<td></td>
<td>Francis Briseno</td>
<td>Graduate School - UNM</td>
</tr>
<tr>
<td></td>
<td>Todd Mock</td>
<td>APD Academy</td>
</tr>
<tr>
<td></td>
<td>Matthew Valett</td>
<td>Moved back to Washington</td>
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## ATHLETIC TRAINING GRADUATES

<table>
<thead>
<tr>
<th>GRADUATION DATE</th>
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</thead>
<tbody>
<tr>
<td>Summer 1995</td>
<td>Keith Karnes</td>
<td>East Texas Medical Center</td>
</tr>
<tr>
<td>Fall 1995</td>
<td>Amy Fetterhoff</td>
<td>A.T. Houston Public Schools</td>
</tr>
<tr>
<td></td>
<td>Cynthia Harger</td>
<td>A.T. - Humboldt, TX Public Schools</td>
</tr>
<tr>
<td>Spring 1996</td>
<td>Arron Beck</td>
<td>Sales Person</td>
</tr>
<tr>
<td></td>
<td>Karen Grace</td>
<td>A.T. - Denver Public Schools</td>
</tr>
<tr>
<td></td>
<td>Yvonne Martinez</td>
<td>Albuq. Clinic</td>
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<tr>
<td></td>
<td>Tara Stalmaker</td>
<td>Graduate Asst. - West Virginia</td>
</tr>
<tr>
<td></td>
<td>Ernest Tyler</td>
<td>Albuquerque Clinic</td>
</tr>
<tr>
<td>Summer 1996</td>
<td>Alicia Estrada</td>
<td>in Idaho</td>
</tr>
<tr>
<td></td>
<td>Arthur Romero</td>
<td>Post Bac for Teacher Endorsement</td>
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<tr>
<td>Fall 1996</td>
<td>Fredie Carabajal</td>
<td>GA UNM Athletic Dept.</td>
</tr>
<tr>
<td></td>
<td>Sean Eakin</td>
<td>A.T. - Cibola High School APS</td>
</tr>
<tr>
<td></td>
<td>June Higa</td>
<td>Clinic - Hawaii</td>
</tr>
<tr>
<td></td>
<td>Gay Imamoto</td>
<td>Grad Asst. - Fresno State</td>
</tr>
<tr>
<td>Spring 1997</td>
<td>Tim Baca</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dusty Cox</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Amy Harrison</td>
<td>PT Clinic - Los Alamos</td>
</tr>
<tr>
<td></td>
<td>Heather Humphrey</td>
<td>PT Clinic - Los Alamos</td>
</tr>
<tr>
<td></td>
<td>Michelle Moe</td>
<td>A.T. El Paso Public Schools</td>
</tr>
<tr>
<td></td>
<td>Amy Petersen</td>
<td></td>
</tr>
<tr>
<td>GRADUATION DATE</td>
<td>Student</td>
<td>Employment Site</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Summer 1996</td>
<td>Sacha Fraker</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risa Ott</td>
<td>Sport Admin. Graduate Student - UNM</td>
</tr>
<tr>
<td></td>
<td>Brad Page</td>
<td>Aspen, Co. - Fitness Center</td>
</tr>
<tr>
<td></td>
<td>Antonio Posa</td>
<td>Santa Monica Longevity Institute</td>
</tr>
<tr>
<td></td>
<td>Kevin Powers</td>
<td>Sport Admin. Grad Student - UNM</td>
</tr>
<tr>
<td></td>
<td>Sandy Shafer</td>
<td>Del Norte Sports &amp; Wellness</td>
</tr>
<tr>
<td>Fall 1996</td>
<td>Mark Littlejohn</td>
<td>Apply to graduate school</td>
</tr>
<tr>
<td></td>
<td>Mike Aguilar</td>
<td>Intel Wellness Center, Albuq.</td>
</tr>
<tr>
<td></td>
<td>Zoe Briggs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Denise Castellano</td>
<td>City Corps Wellness Center, Albuq.</td>
</tr>
<tr>
<td></td>
<td>Heather Erdman</td>
<td>Ethicon - Fitness, Albuq.</td>
</tr>
<tr>
<td></td>
<td>Robert Ward</td>
<td></td>
</tr>
<tr>
<td>Spring 1997</td>
<td>Rebecca Brooks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scott Jones</td>
<td>Fitness Center, Denver, Colo.</td>
</tr>
<tr>
<td></td>
<td>Steele Leftwich</td>
<td>Applying to PT School</td>
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<tr>
<td></td>
<td>Tracy Mallott</td>
<td>Pulmonary Rehab at Lovelace - Albuq.</td>
</tr>
<tr>
<td></td>
<td>Kim Sefcovic</td>
<td>Job in Texas</td>
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</tbody>
</table>
SUMMER 1996

M.S.
Shu-Fen Kuo  Sports Admin
Joseph Campbell  Sports Admin
Sondra Unkenholz  Sports Admin
Gwynne Dawdy  Sports Admin
Matt Jones  Sports Admin
Joe Gutierrez  Sports Admin
Bryan LaMontagne  Ex. Science

Ph.D.
Kathryn Kolankiewicz  Sports Admin
James Shelton  Sports Admin
Scott Ritzen  Sports Admin
Doug Van Everen  Sports Admin
William Kreger  Sports Admin
Linda Kincaid  Sports Admin
Blaine Gorney  Sports Admin
Mehmet Kocak  Sports Admin
Chang Seop Lee  Sports Admin

JOB PLACEMENT
Ph.D. Student - UNM
Sub. Teacher - St. Louis
Private School in NY
doing MS in Counseling
UNM Athletics
Teach - Northern N.M.
Denver, Fitness

FALL 1996

M.S.
Ellis Dawson  Sports Admin
Alejandra Munoz  Ex. Science
Darlene Galipeau  Curr & Instr.
Navot Milo  Gen. PE

Ph.D.
Larry Teis  Sports Admin
Sharon Himmelstein  Ex. Science

JOB PLACEMENT
Prof. BB - Orlando Magic Intern
Wellness Center - West Side - owner
Teacher - Clearwater, Fl public schools
Teacher - Israel

SPRING 1997

M.S.
Tommy Begay  Sports Admin
Donald Christman  Sports Admin
D'Anne Gross  Sports Admin
Kyung-Hwan Kang  Sports Admin
Melissa Loiacono  Sports Admin
Jimmy Martinez  Sports Admin
Alicia Meraz Sanchez  Sports Admin
Shari Weintraub  Sports Admin
Margaret Bell  Ex. Science
Ann Gibson  Ex Science
Sharon Griffin  Ex. Science
Susan Hoffman  Ex. Science

Ph.D.
Brett Christie  Curr & Inst
Sam Dixon  Curr & Inst
Richard Dow-Anaya  Sport Admin
Larry Feher  Sport Admin
Paula Kocina  Ex. Science

JOB PLACEMENT
High School teacher & coach - Arizona
Calif. - Ph.D.
Asst. Golf Coach - UNM
Arkansas - College and Trainor
High Sch. Teacher/Coach - Valley High APS
Ph.D. Student
Ph.D. Student/VA - research
Defined Fitness Management Position

Asst. Professor - Dominguez Hill, CA
Highlands - Tenured Asst. Professor
Ski Instructors & Administrator - Veil, Colorado
St. Joseph - Physical Therapy
Introduction

This was my first year as Director for the restructured Division of Teacher Education. As we discussed during my job interview, I would be responsible for helping organize and revitalize teacher education in the College of Education. In particular, my task was and is to work collaboratively with the Dean, the Associate Deans, Division Directors, and faculty to “organize, facilitate, and evaluate teacher education programs across the College.” Teacher education, in this context, is defined broadly and includes pre-service, graduate, and professional development programs. Here is a description of what I attempted to do this first year, how it went, and my plans for next year.

Major Accomplishments

My first priority this year was to gain a detailed understanding of the issues and problems in teacher education in the College. The two most problematic areas were the confusing and disorganized array of programs in elementary education, and the inconsistent nature of advising and admissions. I spent a great deal of time reading relevant reports; talking to administrators, faculty, students, and other knowledgeable individuals; and developed this list of crucial issues and needs:

- The organization and nature of the options within the elementary education program.
- Advising and admissions.
- Scheduling of courses.
- Communicating with & supporting students interested in or enrolled in our programs.
- Inequities and confusion in student teaching.
- Develop a College-Wide Advisory Board for Teacher Education.
- Integrate the various collaboratives and partnerships in ways that support all of teacher education efforts.
- Developing an effective enrollment management system.
- Enhancing the special education/bilingual/multicultural/health education/technology/experiences of all of the students in our licensure programs.
- Developing some consistent, creative, and performance-based measures to evaluate the effectiveness of our teacher preparation programs.
- Recruitment of top students with diverse backgrounds.
- Enhancing all of our licensure programs with judicious use of national reforms.
- Increasing UNM’s role in serving the educational needs of all of New Mexico.
- Increase COE’s participation in state and national discussions about teacher
preparation and education reform.

Here is what we accomplished during the 1996-1997 academic year:

• We have upgraded the Advising Center by hiring an additional student advisor, and by upgrading the Advising Center's computers. We have developed several centralized student data bases, and have clarified and implemented admissions and advising policies. In addition, we have worked with key staff from advising centers around the University to update our procedures and provide more training for our staff. I implemented an evaluation process for our advisors and the number of student complaints have declined dramatically. I feel that we have made the Advising Center a welcoming and helpful place for students. I have included copies from the relevant data bases as well as copies of revised advising and admissions information.

• We have established the College-Wide Advisory Board for Teacher Education which was recommended in the COE Teacher Education Task Force's report last year. We have been meeting throughout the year and the discussions are open and constructive. I have included a draft of an annual working paper, "Teacher Education in New Mexico: Current Results and Future Visions", that has come out of the College-Wide Advisory Board's work. This working paper contains a number of key discussions including those dealing with the kinds of standards we should use in evaluating the quality of our graduates.

• We have developed a framework that defines teacher preparation broadly from pre-service courses and experiences through advanced professional development and graduate work. This framework has provided us with a useful way of organizing the teacher preparation programs for the 1997-1998 academic year. Faculty have been very involved in the development of this framework. In particular, the Elementary Education program is organized, faculty are very involved, and students have a home. We have been able to plan for courses a year in advance. In addition, we are well-along in the process of placing student teachers for next fall.

• The Directors of LLSS, Education Specialties, and Teacher Education have developed a strong working relationship in terms of course schedules, part-time instruction and the other routines central to the teacher preparation programs. In addition, we are in the final stages of changing the course prefixes of CIMTE and into LLSS and Education Specialties.

• I spent a great deal of time working with APS/UNM Transition Team and the APS/UNM Partnership Board to find ways to ensure that the College's faculty are involved in designing the new APS/UNM Partnership, and that the Partnership is integrated with and supports the teacher preparation and the other core programs of the College.
• I have developed strong working relationships with the Dean and the Associate Deans, particularly in the areas of part-time budgets and scheduling of courses. I have also developed solid working relationships with people across the University, particularly with folks in Student Services, and Student Advising. In addition, I have developed good working relationships with key individuals in the Albuquerque Public Schools, and the New Mexico State Department of Education.

• I worked very hard to mentor new faculty. For example, I invited Rebecca. Benjamin and Elizabeth Noll to co-author a chapter in the upcoming *International Handbook of Literacy*. I also spent a great deal of time working with a number of other untenured faculty including Jamie Grinberg, Kathryn Powell, and Leslie Hall. In addition, the annual working paper developed by the College-Wide Advisory Board contains the beginning of a large-scale research agenda that focuses on the needs of New Mexico, and that could serve as the basis for a coherent research effort by the College of Education.

• I chaired four successful faculty search committees in the areas of early childhood/elementary education/language development; English as a second language; teaching of writing; and elementary education/language arts/dual licensure. I also served on the successful search committee for the new Dean of the College of Education.

**Challenges for Next Year**

The Division of Teacher Education faces a number of challenges next year. Many of these challenges are described in detail in "Teacher Education In New Mexico: Current Results and Future Visions." Some of the more pressing challenges include the following:

• To help organize, facilitate, and evaluate the quality of the graduate programs and professional development programs in teacher education.

• To work with the faculty in the early childhood, elementary, middle, secondary, health education, physical education, and art education programs in revising and strengthening the teacher education curriculum, especially in the areas of bilingualism, literacy, and student diversity.

• To work with the College’s administrators and faculty to integrate the College’s previous efforts (i.e., College’s Plan of Action, the Final Report of the Teacher Preparation 2000 Task Force, the College of Education’s Conceptual Framework), with the best work coming out of the current reforms in the area of standards and other national discussions surrounding teacher education.
To help ensure that all of the College's programs in teacher education (the on-campus programs, the partnerships, and the off-campus programs) are of high quality, appropriately governed, and receive adequate and equitable resources. In addition, we need to find ways to increase the collaboration among the teacher preparation programs across the College.

To help develop a clearer vision for the College of Education and strengthen its relationship to the University's vision as an institution as outlined in UNM's Strategic Plan: The University of New Mexico's Vision for the Year 2000.

To help ensure that we are preparing teachers to meet the critical-need areas of New Mexico, and the other states that hire our graduates. One of the top priorities, for example, is to help prepare more bilingual teachers who can work effectively with students classified as "at risk".

To help develop and implement an enrollment management system that ensures that our programs are of high quality, encourage diversity, and are responsive to the large numbers of students interested in becoming teachers.

To encourage more research and dissemination on the key qualities and characteristics that make the University of New Mexico unique, including the diversity of the state, and the ways that the University - public school partnerships are working together in teacher preparation and professional development.

Faculty Accomplishments

Here is a list of my publications and national presentations for the 1996-1997 academic year:


GOALS FOR THE YEAR

I. Promotion of Latin American Programs in Education in Latin America
   ♦ Processing of development programs for Latin American educators both directly and through state agencies.
   ♦ Development and actualization of promotional materials.
   ♦ Host visitors from educational, governmental, public and private organizations from Spanish speaking countries.
   ♦ Meetings with governmental and educational sectors in official trips to Latin America and other Spanish speaking countries

II. Organization, coordination and implementation of classes and programs for Latin American educators.
   ♦ Short term programs.

III. Strengthening of relations between the University of New Mexico, College of Education, Latin American Programs in Education and institutions in Latin American countries and Spanish speaking countries throughout the world
   ♦ Visits to Latin American countries
   ♦ Review of State of agreements

IV. Continuation of collaborative efforts
   ♦ with the Latin American Institute, and its Office of International Technical Assistance, as well as other units on UNM campus
   ♦ Albuquerque Public Schools
Important developments during 1996-1997

1. Intensive program in Educational Innovation and Reform for 15 Paraguayan educators from July 7 to July 27, 1996. This program was funded by the participants. Almost all the participant teachers came from El Colegio de San Agustin in Asuncion, Paraguay.

2. Intensive program in Educational Reform, Evaluation and Mediation for 21 educators from Chile September 29 to November 5, 1996. This program was funded by the Institute of International Education and the Fulbright Commission-Chile. Teachers from the elementary and secondary levels attended this certificate program.

3. Training program for three groups of 30 teachers each of English as a Second Language from Colombia. Funded by the city of Santa Fe de Bogota, the first group was in Albuquerque from June 12 to August 9, 1996. The second group was in UNM from August 29 to October 26, 1996, and the third group attended UNM from October 18, 1996 to January 25, 1997. A total of 90 teachers from the city of Santa Fe de Bogota were certificated to develop the new curriculum of English as a Second Language in elementary education in Colombia.

4. Visit to Equatorial Guinea with a UNM team (Dr. Guillermina Engelbrecht, Education; Geoffrey Bannister, Anderson School of Management; and Mario Rivera, Public Administration) to establish initial relations with the Government and the National University. At the request and upon formal invitation from the government on Equatorial Guinea, a team of UNM representing the College of Education, the Latin American Institute and the Department of Public Administration visited the country and, particularly, the National University of Equatorial Guinea from July 28 to August 4, 1996.
5. Visit to Equatorial Guinea as a representative of UNM to receive a donation of $150,000 from the Mobil Company. As a follow up of the first visit, I was invited to the ceremony of inauguration of the Zafiro oil field where a donation of $150,000 would be granted to UNM. I visited the country to represent UNM at the ceremony and received the check from October 27 to October 30, 1996.

6. Hosting the Magnifico Rector of the National University of Equatorial Guinea Federico Edjo and the Excelentisimo Embajador Pastor Micha Ondo Bile. As a preliminary step to the arrival of the group of Equatoguineans who will attend UNM during June and July, 1997, The Magnifico Rector Federico Edjo and the Excelentisimo Embajador Pastor Micha Ondo Bile visited the university from March 4 to March 7, 1997. During their visit, several issues concerning the agreement were discussed.

7.- Establishment of an agreement with the Autonomous University of the State of Morelos, Mexico to exchange students, staff, and faculty. Thanks to a promotional package sent by LAPE in 1995, the rector of this Mexican university, M.C. Gerardo Avila, and the Director of International Relations, Arturo Ornelas, visited UNM to establish an agreement by which UNM and the University of Morelos will exchange students, faculty and staff. To begin with that agreement, 50 UNM teachers and students were given scholarships to study Spanish in Cuernavaca, Mexico this Summer 1997.

8. Visit to Cuernavaca, Mexico to promote the Spanish Master's program in Educational Foundations among representatives of Mexican universities. I met with representatives of several Mexican universities during the first week of April 1997 to promote our Spanish Master's programs and to discuss the possibilities of developing conjunct projects.
9. Hosting the Rector of the Autonomous University of the State of Morelos and other high directives to discuss scholarships and interchanges between both universities. During the first days of May, 1997, the Rector and the Director of International Relations of the University of Morelos visited for the second time UNM to discuss the possibility of sending Mexican teachers to the LAPE MA program.

10. Participation in the Special Annual Meeting of the ANUIES (Mexican Association of Universities) held in UNM. As Director of LAPE, I participated in the Annual Meeting of the ANUIES celebrated for the first time out of Mexico. It was held at UNM from May 2 to May 4, 1997. Significant relations were established between LAPE and Mexican universities.

11. Renewal of the LAPE Advisory Committee. A new Advisory Committee for LAPE was designated by the Dean of the College of Education on request and proposal from LAPE. The new members of the Committee are Dr. John Mondragon, Dr. Elizabeth Noll, Dr. Paul Miko, Dr. Jaime Grinberg, and myself ex-officio. All members are Spanish speaking faculty with experience in Latin America. This committee will function as a consultant body for LAPE activities.

12. Writing of a proposal for a Master's program in Educational Administration with emphasis in Leadership for Colombian educators.


14. Development of a Master's program in Educational Foundations with emphasis in Educational Administration to be offered in Spanish for the Fall 1997 semester.
15. Writing of three proposals through the Institute of International Education, New York and the Fulbright Commission-Chile for educators from Chile. Those are two short-term programs and one ten-month diplomado. As a result of our experience with the Institute of International Education, UNM, and LAPE in particular, were highly regarded and positively evaluated by the Chilean participants mentioned above. Therefore, we were requested for more proposals to work with the Fulbright Commission-Chile for the Fall 1997 and Spring 1998.

16. Design and distribution of a new brochure to promote the English as a Second Language Training Program for Latin American teachers of English. This brochure has been distributed in every occasion I have met with Latin American directives such as the ANUIES meeting in Albuquerque, the Cuernavaca Meeting in Mexico, and my visits to Equatorial Guinea.

17. Creation and distribution of the bulletin entitled LAPE Newsletter to inform the academic community in UNM the activities on LAPE with Latin American educators. Its purpose is to inform the College of Education faculty about the several initiatives and programs LAPEcarries out with Latin American educators and to promote the involvement of the COE departments and divisions with LAPE programs.

18. Coordination of the admissions process to the Master's programs through the LAPE Admissions Committee and the Office of International Technical Cooperation.

19. Participation in the Annual Congress of Ethnography held in Ciudad Juarez, Mexico.
20. Establishment of relations with the General Consulate of Argentina to promote the Master's programs in Spanish and to verify the candidates' academic credentials.

21. Inauguration of a LAPE Brown Bag Colloquium Series. The objectives of the Series are: 1) to provide opportunities for LAPE students to become familiar and interact with UNM faculty and 2) to provide opportunities for UNM bilingual (Spanish/English) faculty to present and discuss their work with the UNM and Albuquerque communities.

22. Training program for three groups of 30 teachers each of English as a Second Language from Colombia. Funded by the city of Santa Fe de Bogotá, the first group was in Albuquerque from May 17 through July 2, 1997. The second group was at the UNM from July 19 through September 3, 1997, and the third group attended the UNM from October 18 to December 2, 1997. A total of 90 teachers from the city of Santa Fe de Bogotá were certified to develop the new curriculum of English as a Second Language in elementary education in Colombia.

23. Development of project to deliver part of the LAPE curriculum through Distance Learning. Met with Dr. William Bramble, Director UNM Distance Education, to discuss possibilities for implementing the plan.

24. Training program for professors and administrators from the Universidad Nacional de Guinea Ecuatorial from June 16 through July 31, 1997. The objective of the program was to equip the participants with the basic tools to establish an institutional structure for the new Universidad Nacional de Guinea Ecuatorial.
THE ANNUAL REPORT OF THE
NEW MEXICO RESEARCH AND STUDY COUNCIL
JULY 1, 1996 - JUNE 30, 1997
John B. Mondragon, Ed.D., Director.

STAFF MEMBERS (F.T.E. = 2.75) Employment Separation Date

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>John B. Mondragon, Ed.D., Director</td>
<td>07-01-94</td>
<td></td>
</tr>
<tr>
<td>Patricia L. Tolley, Administrative Assistant</td>
<td>04-02-79</td>
<td></td>
</tr>
<tr>
<td>Eric Whitmore, Program Specialist III</td>
<td>10-30-95</td>
<td></td>
</tr>
<tr>
<td>Patricia L. Fletcher, Clerical Specialist V</td>
<td>11-27-95</td>
<td>10-18-96</td>
</tr>
</tbody>
</table>

Work-study and student employees are normally hired by the Council. This fiscal year, NMRSC was allotted two twenty hour per week work study positions.

BOARD OF DIRECTORS July 1, 1996 - June 30, 1997

Officers:
Janel M. Ryan, President (Superintendent, Truth or Consequences Municipal Schools)
Joe Lopez, Vice President (Superintendent, Cuba Independent Schools)
Linda Coy, Secretary-Treasurer (Superintendent, Hatch Valley Municipal Schools)

Other Board Members:
V. Sue Cleveland, Ed.D., Superintendent, Rio Rancho Public Schools
Hank Dominguez, Superintendent, Pecos Independent Schools
Maria Fuentes-Leas, Ph.D., Superintendent, Quemado Independent Schools
Mike Grossman, Superintendent, Belen Consolidated Schools
Richard Heath, Headmaster, Sandia Preparatory School
Bobby Richardson, Superintendent, Corona Public Schools
Mary Robinson, Superintendent, Jemez Valley Public Schools
Alan Morgan, State Superintendent of Public Instruction, State Department of Education
Evalynne Hunemuller, Executive Director, New Mexico Coalition of School Administrators
Pete Eissele, Executive Director, New Mexico School Boards Association
Peggy Blackwell, Ph.D., Dean, College of Education, University of New Mexico
John B. Mondragon, Ed.D., Director, NMRSC

Nominating Committee for Election of Officers for 1997-98:
Janel Ryan, Superintendent, Truth or Consequences Municipal Schools
Linda Coy, Superintendent, Hatch Valley Municipal Schools
<table>
<thead>
<tr>
<th>Name</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard Baca</td>
<td>Albuquerque Public Schools</td>
</tr>
<tr>
<td>Nelle Guinn (Ret)</td>
<td>Albuquerque Public Schools</td>
</tr>
<tr>
<td>Teresa Tate</td>
<td>Albuquerque Public Schools</td>
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<tr>
<td>Alfredo Armijo</td>
<td>Belen Consolidated Schools</td>
</tr>
<tr>
<td>James Gutierrez</td>
<td>Belen Consolidated Schools</td>
</tr>
<tr>
<td>Ramon Torres</td>
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<tr>
<td>Aubrey Tucker</td>
<td>Belen Consolidated Schools</td>
</tr>
<tr>
<td>Edwin Valdez</td>
<td>Bernalillo Public Schools</td>
</tr>
<tr>
<td>Pat Lucero</td>
<td>Central Consolidated Schools</td>
</tr>
<tr>
<td>Yolanda Bingham</td>
<td>Central Consolidated Schools</td>
</tr>
<tr>
<td>Mike Miller</td>
<td>Cobre Consolidated Schools</td>
</tr>
<tr>
<td>Sue Barbooa</td>
<td>Cuba Independent Schools</td>
</tr>
<tr>
<td>Florence Martinez</td>
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</tr>
<tr>
<td>George Cline</td>
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</tr>
<tr>
<td>Vickie Bryant</td>
<td>Grants/Cibola County Schools</td>
</tr>
<tr>
<td>David Medina</td>
<td>Grants/Cibola County Schools</td>
</tr>
<tr>
<td>Al O'Campo</td>
<td>Hatch Valley Municipal Schools</td>
</tr>
<tr>
<td>Steve Manning</td>
<td>Hatch Valley Municipal Schools</td>
</tr>
<tr>
<td>Robert Truitt</td>
<td>Jemez Mountain Public Schools</td>
</tr>
<tr>
<td>Phil Branch</td>
<td>Jemez Mountain Public Schools</td>
</tr>
<tr>
<td>Juan Chavez</td>
<td>Jemez Valley Public Schools</td>
</tr>
<tr>
<td>Dennis Gallegos</td>
<td>Jemez Valley Public Schools</td>
</tr>
<tr>
<td>Michael Erwin</td>
<td>Jemez Valley Public Schools</td>
</tr>
<tr>
<td>Jerry Lane</td>
<td>Jemez Valley Public Schools</td>
</tr>
<tr>
<td>Emily Vigil</td>
<td>Los Alamos Public Schools</td>
</tr>
<tr>
<td>Sally Fitzgibbons</td>
<td>Los Alamos Public Schools</td>
</tr>
<tr>
<td>Louise Harper</td>
<td>Los Alamos Public Schools</td>
</tr>
<tr>
<td>Tom Keane</td>
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</tr>
<tr>
<td>Bobby Lopez</td>
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<tr>
<td>Carl Max</td>
<td>Los Alamos Public Schools</td>
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<tr>
<td>Sandy Paciotti</td>
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<td>Warapha Prime</td>
<td>Los Alamos Public Schools</td>
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<td>Jeff Sargent</td>
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<td>Yolanda Trujillo</td>
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<tr>
<td>Maria Lovato</td>
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<td>Pete McFarlane</td>
<td>Mountainair Public Schools</td>
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<tr>
<td>Willie Owens</td>
<td>Sandia Preparatory</td>
</tr>
<tr>
<td>Ernie Polansky</td>
<td>Sandia Preparatory</td>
</tr>
<tr>
<td>Maggie Cordova</td>
<td>Santa Rosa Cons. Schools</td>
</tr>
<tr>
<td>Lorraine Madrid</td>
<td>Santa Rosa Cons. Schools</td>
</tr>
<tr>
<td>Art Salcido</td>
<td>Santa Rosa Cons. Schools</td>
</tr>
<tr>
<td>Lorraine Anglin</td>
<td>Silver Consolidated Schools</td>
</tr>
<tr>
<td>Sandi Clark</td>
<td>Silver Consolidated Schools</td>
</tr>
<tr>
<td>Tony Gonzalez</td>
<td>Socorro Consolidated Schools</td>
</tr>
<tr>
<td>Gene Romero</td>
<td>Socorro Consolidated Schools</td>
</tr>
<tr>
<td>Francisco Sinners</td>
<td>Socorro consolidated Schools</td>
</tr>
<tr>
<td>Lucy Cruz</td>
<td>Taos Municipal Schools</td>
</tr>
<tr>
<td>Bridget Gallegos</td>
<td>Taos Municipal Schools</td>
</tr>
<tr>
<td>Pauline Mondragon</td>
<td>Taos Municipal Schools</td>
</tr>
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<td>Pauline Vargas</td>
<td>Taos Municipal Schools</td>
</tr>
<tr>
<td>Judy Montoya</td>
<td>Tularosa Municipal Schools</td>
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<tr>
<td>Brenda Rollerson</td>
<td>Tularosa Municipal Schools</td>
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<tr>
<td>Virginia Chavez</td>
<td>Zuni Public Schools</td>
</tr>
<tr>
<td>Marlene Nastacio</td>
<td>Zuni Public Schools</td>
</tr>
<tr>
<td>Orlando Sandoval</td>
<td>Zuni Public Schools</td>
</tr>
<tr>
<td>Joseph Solomon</td>
<td>Zuni Public Schools</td>
</tr>
<tr>
<td>Ronald Yatsattie</td>
<td>Zuni Public Schools</td>
</tr>
</tbody>
</table>
FOREWORD

The contents of this report fully explain the operations and activities of the New Mexico Research and Study Council for fiscal year 1997.

The New Mexico Research and Study Council has an intense and productive workload that is challenging and ever changing. The many different programs involved in the day-to-day activities require flexibility and a willingness to leave one project unfinished to take care of another at a moment's notice, and time contributions beyond the norm to meet the many deadlines. Special recognition is given to the staff this year. In order to bring the budget into balance, vacant positions were not filled, creating additional responsibilities for remaining staff. Program Coordinator Pat Tolley and Purchasing Coordinator Eric Whitmore are commended for their diligence and hard work to make this year's programs successful. We also recognize the non-staff persons who contributed to the success of these programs: the NMRSC Board of Directors, the Quality Education Awards Program judges, the school district personnel who served as evaluators and advisory committee members with the Cooperative Purchasing Program, and the many business people who contributed time and money to benefit schools and school children in New Mexico, through NMRSC. We very much appreciate and recognize the greater involvement and support of the Educational Administration Department (College of Education, UNM), and the Chair, Dr. Breda Bova.

-John B. Mondragon, Ed.D.
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THE NEW MEXICO RESEARCH AND STUDY COUNCIL
(THIRTY-NINE YEARS OF COOPERATIVE ACTION)

The New Mexico Research and Study Council adopted its first Constitution on January 14, 1959; seventeen (17) school districts became charter members of the Council at that time (see Appendix A).

Each school district, private school and agency designates an administrator as its official voting member. The University of New Mexico supports the Council by providing one-quarter time of a professor to be the Council's executive director; UNM also provides the services of the Payroll, Human Resources, and Purchasing Departments as well as office furniture and facilities utilized by the Council's staff. The Council's revenues are produced primarily by membership dues and Cooperative Purchasing Program service fees. The dues and service fees are assessed on sliding scales based on each school system's enrollment.

The Board of Directors of the Council is composed of members from participating school systems; the Dean of the College of Education at the University of New Mexico; the director of the NMRSC; and representatives from the New Mexico State Department of Education, the New Mexico Coalition of School Administrators, and the New Mexico School Boards Association.

The Board of Directors acts as an administrative committee to the executive director and recommends policies for the membership. The president and other officers are elected by the Board members.

Membership in the New Mexico Research and Study Council is open to any school system and educational organization in New Mexico and its bordering states.

Purpose of the Council

The New Mexico Research and Study Council is an organization designed specifically to facilitate cooperative study, research, solution of educational problems, and a cooperative purchasing program. Through the assistance of member school districts and the State Department of Education, the Council and the University of New Mexico provide the resources, direction and assistance necessary to successfully complete its projects and activities.
The Council's 66 members are: 54 New Mexico public school districts, 3 Colorado public school districts, 4 private/parochial schools, and 5 organizations (UNM, NMCSA, NMSBA, NM MESA, and SDE). Many other educational organizations join them for special projects and events.
The New Mexico Research and Study Council Constitution and Bylaws, revised June 8, 1995, states the purpose of the Council as follows:

"The New Mexico Research and Study Council (hereinafter called the Council) is a not for profit administering agency created by New Mexico public school districts and the University of New Mexico for promoting their mutual education purposes. The Council encourages, sponsors, and engages in service, research, workshop sponsorship, individual and group study, and cooperative purchasing in order to improve management and instruction in elementary and secondary education in New Mexico. Projects and activities undertaken to fulfill this purpose are joint and cooperative in support, execution, and dissemination of findings. The University of New Mexico is the sponsoring institution; it provides the Council in-kind contributions such as office space, University facilities and services, and a part-time director."

The structure and functions of the Council are depicted in Figure 2.

**The Work of the Council**

Ideas for Council projects come from a number of different sources. Most projects develop as a result of discussions and concerns relative to common problems by member districts that are voiced during discussions at general meetings and Board of Directors' meetings. Some come from ideas generated by the executive director and the NMRSC staff. Other ideas come from a variety of sources such as professional readings, teachers' concerns, national educational topics, etc.

The executive director and staff are responsible for the necessary arrangements for completing projects. Personnel from member districts often provide leadership and expertise in planning and conducting projects. Input from the various departments and volunteer assistance from the University of New Mexico, and other expert assistance is often utilized. The Council utilizes the resources of as many institutions as necessary to accomplish the Council's goals and objectives.
Dues Structure for 1996-97

The last increase in dues on April 27, 1995 established the following dues structure:

<table>
<thead>
<tr>
<th>District Enrollment (ADM)</th>
<th>Dues</th>
</tr>
</thead>
<tbody>
<tr>
<td>299 or less</td>
<td>$385</td>
</tr>
<tr>
<td>300 - 999</td>
<td>$605</td>
</tr>
<tr>
<td>1,000 - 1,499</td>
<td>$715</td>
</tr>
<tr>
<td>1,500 or more</td>
<td>$825</td>
</tr>
</tbody>
</table>

Cooperative Purchasing Program Service Fees

A service fee was created in 1976 to provide the council with an ongoing method for computerized operation and continued improvement of the Cooperative Purchasing Program. The fee was raised from 78 cents per ADM in 1990-91 to 86 cents in 1995-96. These fees are the Council's major income.
FIGURE 2.

ORGANIZATION OF THE
NEW MEXICO RESEARCH AND STUDY COUNCIL

MEMBER SCHOOL DISTRICTS,
AGENCIES AND INSTITUTIONS

BOARD OF DIRECTORS

UNIVERSITY OF NEW MEXICO

COLLEGE OF EDUCATION

DIRECTOR

EDUCATIONAL ADMINISTRATION

ADMINISTRATIVE ASSISTANT

OFFICE STAFF

QUALITY EDUCATION AWARDS

BOARD & MEMBERSHIP MEETINGS

COORDINATING PURCHASING PROGRAM

COOPERATIVE PURCHASING PROGRAM

INSTITUTE OF EDUCATION ACTIVITIES

FINANCIAL SERVICES

CONSULTATION SERVICES

EDUCATIONAL EMPLOYEE DISCOUNT SERVICE

PURCHASING DISCOUNT SERVICE

SEMINARS CONFERENCES WORKSHOPS

NEWSLETTERS

RECOGNITION ACTIVITIES

FEATURE MEMOS & BOOKLETS

ADVISORY RESEARCH
COUNCIL FINANCES
FINANCIAL REPORT FOR JULY 1, 1996 TO JUNE 30, 1997

Note: This financial report is compiled from NMRSC and University of New Mexico Records received as of June 13, 1997, the date of this report. Figures for the month of June are estimated based on previous records.

REVENUES:
- CPP Service Fees (0790) $57,904
- Membership Dues (0791) 32,328'
- Vendor Fees/Workshop Fees/Registration Fees/Other 50,215'
TOTAL REVENUE $140,447
Less Minus Carryover Balance from FY 1996 - 7,036
NMRC'S TRUE REVENUE (less minues Carryover Balance) $133,411

EXPENDITURES:
- Salaries, Wages, and Benefits $58,375
- Supplies and Expenses 40,500'
- Printing and Photocopying 11,500
- Communications 2,600
- Equipment 3,300
- Travel 6,058
- Consultants 4,952
TOTAL EXPENDITURES $127,285
CARRYOVER BALANCE $ 6,126
Less Amount Belonging to DELI-SELI Class: $ 3,416

TRUE NMRSC CARRYOVER BALANCE $2,710

1 $4,180 of this amount is FY 98 membership dues paid in FY 97.
2 $9,600 of this amount was received for ED ADMIN DELI/SELI Classes.
3 $6,184 of this amount were ED ADMIN DELI expenses.

Note: NMRC was the fiscal agent for the FY 97 District-Wide Educators Leadership class and will be the fiscal agent for the FY 97 District-Wide Educators Leadership class and the Site-based Educators Leadership class.

$9,600 was received in FY 97 ($8,400 for FY 97 and $1,200 received was for FY 98. Expenses for classes were $6,184.00.)
COUNCIL PERSONNEL

John B. Mondragon, Ed.D., College of Education, again this year directed the New Mexico Research and Study Council. The Council work force this fiscal year consisted of two full-time employees: a program coordinator, and a purchasing coordinator. 1 A half-time clerical specialist V completed the staff until October 18, 1996, when she transferred to another UNM position. To save funds, the position was not filled for the remainder of the year. Student (work-study) employees were a necessary addition to the staff. Position titles and descriptions were updated as part of a university-wide effort to restructure the Human Resources system.

Patricia L. Tolley, an 18½ year employee, had her position upgraded from Administrative Assistant to Program Coordinator in recognition of her wide range of responsibilities. She coordinated the activities and supervised the staff efficiently to meet the many deadlines. Eric Whitmore’s position was changed to Purchasing Coordinator, his primary job being the Cooperative Purchasing Program. He contributed much to this program and assisted school districts with the computerized ordering process. Patricia Fletcher ably served the Council as Clerical Specialist V on a .50 basis, until October 18, 1996, when she moved to Santa Fe and University of New Mexico, Santa Fe.

It is the practice of the Council to hire work-study students who are graduates of its member schools. This year’s work study students, Diana Maestas, Roberta Barajas, and Caprice Pino of Albuquerque were vital, contributing members of the Council staff. They learned the programs and operations and gained skills and knowledge which not only benefited the Council, but enhanced their college educations.

1) Under the UNM PACT, in February 1997 jobs were analyzed resulting in the reclassification of the two current full time positions, Administrative Assistant to Program Coordinator, and Program Specialist III to Purchasing Coordinator.
SERVICE ACTIVITIES

The Council engaged in five service activities during 1996-97:
I. Governance
II. Professional Development
III. Recognition
IV. Purchasing
V. Research

I. Governance

A. Annual Membership Meeting

The annual membership meeting was held June 6, 1997, at the Holiday Inn Pyramid Hotel, Albuquerque. To save members' travel costs, it was held during a New Mexico School Boards Association conference. Annual meeting minutes are mailed to the full membership within two weeks after each meeting.

B. Board of Directors Meetings

Several Board meetings were conducted during 1996-97. The minutes of these meetings are distributed to all board members and, when significantly pertinent, to all member school systems' chief administrators. (Minutes of all Board meetings conducted since the inception of the Council in 1959 are retained in the Council offices and are available for review by the membership, or any interested party.)

II. Professional Development

The Council's annual In-Service Education Program is designed to address the efforts and educational and training needs of common interest to its members. This program focuses on immediate, as well as long-range, needs. The Council, through specifically planned workshops and similar services, acts as a catalyst for cooperative programs and staffing.
A. Professional Development Day for Office Workers

On August 2, 1996, to serve a need for training for office workers throughout the state, a Professional Development Day for Office Workers was held at the Pinnacle Four Seasons Hotel, Albuquerque. One hundred two persons attended. Excellent presenters on a variety of topics contributed to the success of this event.

B. Joint NMRSC/ASBO Workshop

The 14th Annual Fall Conference, sponsored jointly by the New Mexico Research and Study Council and the New Mexico Association of School Business Officials, was held in Taos Ski Valley, New Mexico, September 25, 26, and 27, 1996. The conference theme was "Conquering Mountains of Change." The program featured simultaneous meetings for superintendents, business managers, and support personnel on subjects of interest. Two hundred twenty-four persons attended the conference. Terry Pearce, Author, International Speaker, and Consultant on Leadership Communications, spoke on "Leading Out Loud." Reba Keele, Ph.D., spoke on "Setting Boundaries Around Our Idealism: Preventing Burnout."

Other topics were:

1. New Superintendents' Training
2. New Business Managers' Training
3. Leadership and Followship
4. Nonprofit Training--Fund Raising Skills
5. Lost in Space--Adapting to Change
6. Students and Athletes' Rights
7. Leadership for Change
8. Grantsmanship and Proposal Writing
9. Common Cents--Budgeting Skills
10. New Transportation Rules and Regulations
11. School District Bonds in New Mexico
12. Update on Benefits from NMPSIA
13. Update on Retirement Issues
14. Speaking and Presentations--Make Your Case With Ease

Andrew Gallegos, Superintendent, Taos Municipal Schools served as banquet master of ceremonies. The entertainment provided by Taos High School's "Mariachi El Tigre Band" was outstanding.
C. Legislative Seminar

Two hundred thirty persons attended NMRSC's 21st Annual Legislative Seminar at the La Fonda Hotel, Santa Fe, February 19, 1997. Attendees included 42 legislators, 108 school administrators, 12 UNM representatives, 7 school board members, and 41 business representatives, spouses, and other guests. Educational organizations which joined NMRSC to sponsor this event were Cooperative Educational Services; Eastern New Mexico University School Research Council; New Mexico Mesa, Inc.; Northern New Mexico Network for Rural Education, and Project LEAD. Businesses lending support were: Colonial Life & Accident Company; New Mexico Educators Federal Credit Union; Metropolitan Life Insurance Company; and Principal Financial Securities.

This event offers educators the opportunity to interact with legislators and, in turn, gives legislators the opportunity to learn the needs of educators and school children from all parts of the state.

D. Professional Development for District Wide Educational Leaders Institute

The Professional Development Institute for District-wide Education Leaders began this year. This is a series of classes for school leaders and aspiring superintendent level leaders. This Institute was a joint effort of the Education Administration Department of the College of Education, the New Mexico Coalition of School Administrators, and NMRSC. The group of 25-30 participants met for six seven-hour sessions. Participants paid tuition for this Institute, and professional development credit was available. This activity will continue next year and will be offered to school leaders.

E. Professional Development Coalition

The Professional Development Coalition is a group of organizations that provide professional development to school districts across the state. The NMRSC executive director co-chaired the group with Dr. Breda Bova, Chair of the Educational Administration Department. The group met five times this year and worked closely with the State Department of Education to coordinate efforts on professional development. Some of the organizations participating are NMCSA, NMSBA, Project Lead, NM Network, BOEPAD, and the North Central Association.
III. Recognition

I. Quality Education Awards Program

The fourteenth annual Quality Education Awards Program was conducted in the fall and winter of the 1996-97 school year. This activity is particularly important in that it furthers the quality work that students, teachers, and administrations produce. Project summaries were distributed to all school districts to share information about successful programs. Awards were presented December 13, 1996 at a noon luncheon at the Sheraton Old Town Inn, Albuquerque. A team of 15 judges (college professors and other educators) selected "the best of the best." First, second, and third place winners received engraved plaques and cash awards. Plaques were presented to administration winners.

First Place winners included: "The Early Grade Collaborative Learning Program," Carlos Gilbert Elementary, Santa Fe Public Schools; "Vista Team 6NC Dig Day," Vista Middle School, Las Cruces Public Schools; "Ballet Folklorico Del Norte," Del Norte High School, Albuquerque Public Schools; "A High Tech Approach to Vocational Education," Cuba High and Middle Schools, Cuba Independent Schools, and the administration winner, "The Accelerated Schools Project," Katherine Gallegos Elementary, Los Lunas Public Schools.

Second Place winners were: "Theater in the Round," Mesa View Elementary, Grants-Cibola County Schools; "Clowns," Ernie Pyle Middle School, Albuquerque Public Schools; both "Integrating Technology In the Classroom," Cuba High School, Cuba Independent Schools, and "American Studies Humanities," Sandia High School, Albuquerque Public Schools, tied in the High School category, and "La Fiesta De Hondo," Hondo Valley Public Schools, was the Second Place District winner.

Third Place award winners were: "Let the Games Begin," Pecos Elementary School, Pecos Independent Schools; "Start a Party," Mountain View Middle School, Rio Rancho Public Schools; "Teen Issues," Taos High School, Taos Municipal Schools; and the Third Place District winner, "Environmental Studies, Mentoring, and Wilderness Survival," Madison Middle School, Albuquerque Public Schools.
Honorable Mentions are awarded only when an entry's score is within one point of the third place winner. This year, two elementary school programs tied for this honor: “Arts Immersion Program,” Acequia Madre Elementary School, Santa Fe Public Schools, and “Ohiyesa (O-We-Essay) - The Winners,” Whittier Elementary School, Albuquerque Public Schools.

Donors for Winners' Cash Awards and/or Plaques:

- Brodart, Inc.
- Factory Outlet Carpet and Tiles
- KDC, dba Dyma Engineering
- Lescher and Mahoney, Architects
- Met Life
- Principal Financial Securities, Inc.
- Project LEAD
- School Equipment, Inc.
- Security First
- Virco Manufacturing
- Western Paper/Unisource Paper Distributors

Golf Scholarship Donors:

- A/A Architects
- American Fidelity Assurance Company
- Carl Warren and Company
- Colborn's School Supply Company
- Ethridge Tire Center and Auto Repair
- Honeywell, Inc.
- Lescher and Mahoney Architects
- Rauscher Pierce Refsnes, Inc.
- Southwest Securities
- Security First Group
1996 Quality Education Award Program Judges:

Carlos Abeyta, Graduate Student, University of New Mexico
Milton Baca, Principal, West Mesa High School, Albuquerque Public Schools
Breda Bova, Ph.D., Director, Educational Leadership and Organizational Learning, College of Education, University of New Mexico
Jane Blumenfeld, Ph.D., Retired Educator
Margaret Dike, Retired Educator, President New Mexico Association of University Women
Lloyd Bert Garcia, Join a School Coordinator, Albuquerque Public Schools
C. Eugene Pegues, Ph.D., Professor Emeritus, University of New Mexico
Robert Romero, Director of Student Affairs, Rio Rancho Public Schools
V. Vita Saavedra, Ph.D., Program Director, Educational Leadership and Organizational Learning, College of Education, University of New Mexico
Roberta Smith, Ph.D., Program Director, College of Education, University of New Mexico
Jane Swift, Retired Educator, Albuquerque Public Schools
George Stoumbis, Ph.D., Professor Emeritus, College of Education, University of New Mexico
Barbara Voss, Educational Volunteer
Beverly Weinstein, New Mexico Congress of Parents and Teachers and Educational Volunteer
James Whitlow, Professor Emeritus, former Band Director, Department of Music, University of New Mexico

2. Scholarship Awards

Scholarships to the state universities listed on the next page were given as grand award prizes. First-place winning districts received scholarships. Other scholarships given were 1) a $1,000 "Educator of the Year" scholarship to the University of New Mexico. This scholarship honored James William Lackey, "Educator of the Year" and 2) the Annual Golf Tournament Scholarship of $200 to each QEAP first-place winner.

NMRSC/ASBO Golf Tournament Scholarship Committee

Dr. Richard F. Tonigan, Professor Emeritus, UNM, and President, Richard F. Tonigan & Associates Ltd.

Tom Thigpen, General Manager, Colborn's School & Office Supply Company
Distribution of Scholarships:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>New Mexico Institute of Mining and Technology (four-year/tuition)</td>
<td>Albuquerque Public Schools</td>
</tr>
<tr>
<td></td>
<td>(Student: Robin King)</td>
</tr>
<tr>
<td>New Mexico State University (four-year/tuition)</td>
<td>Albuquerque Public Schools</td>
</tr>
<tr>
<td></td>
<td>(Student: Joseph Warren)</td>
</tr>
<tr>
<td>Eastern New Mexico University (Presidential four-year/tuition)</td>
<td>Las Cruces Public Schools</td>
</tr>
<tr>
<td></td>
<td>(Student: Leona Marie Miller)</td>
</tr>
<tr>
<td>James William Lackey, Educator of the Year Scholarship to the University of New Mexico ($1,000)</td>
<td>Albuquerque Public Schools</td>
</tr>
<tr>
<td></td>
<td>(Student: Deszarae Nunez)</td>
</tr>
<tr>
<td>University of New Mexico (one-year/tuition)</td>
<td>Santa Fe Public Schools</td>
</tr>
<tr>
<td></td>
<td>(Student: Ryan Garety)</td>
</tr>
<tr>
<td>New Mexico Highlands University (four-year/tuition)</td>
<td>Cuba Independent Schools</td>
</tr>
<tr>
<td></td>
<td>(Student: To Be Announced)</td>
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<tr>
<td>NMRSC/ASBO Golf Tournament $200 to each first-place winner</td>
<td>Las Cruces Public Schools</td>
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<tr>
<td></td>
<td>Central Consolidated Schools</td>
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<td></td>
<td>Albuquerque Public Schools</td>
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<td></td>
<td>Belen Consolidated Schools</td>
</tr>
<tr>
<td></td>
<td>Santa Fe Public Schools</td>
</tr>
</tbody>
</table>

(Note: A rule of the Quality Education Awards Program: All monies received by winners are to be used to enhance the award-winning programs.)

Scholarship Golf Tournament Donors:

Every year a scholarship golf tournament is held at the NMRSC-ASBO Fall Conference to raise funds for Quality Education Awards Program scholarship. This year the proceeds were divided equally among the first-place winners to be used for professional development. Our sincere appreciation goes to Tom Thigpen of Colborn's School & Office Supply Company, Albuquerque, and to Dr. Richard F. Tonigan, Ed.D., President, Richard F. Tonigan and Associates, for co-chairing this tournament for the past several years.
IV. Purchasing

During the 1996-97 school year, the Council operated three purchasing programs: the Cooperative Purchasing Program, the Purchasing Discount Service, and the Educational Employees Discount Service. Brief descriptions follow.

1. Cooperative Purchasing Program

The Council's major program is the operation of the Cooperative Purchasing Program for its members. The program consolidates the annual school supply and equipment needs of all participating member schools, and then receives bids and makes awards on these compiled quantities. Substantial savings are realized for the schools.

The Cooperative Purchasing Program has been in operation for 39 years and, as a result, the savings to state schools and taxpayers over the years has amounted to millions of dollars. Members who participate in the program typically save at least 30% in reduced prices for both goods, and personnel and related costs associated with purchasing.

2. Combined Vendors/School Advisory Committee Meeting

Representatives of schools and businesses participating in the Cooperative Purchasing Program met September 6, 1996, at the UNM Continuing Education Conference Center to discuss concerns about the previous year's program and to give input and suggestions for the coming year. Topics discussed included bid conditions, an overview of goals and procedures, the computer program, product dilution ratios, school payments to vendors, and late deliveries.

3. Member Schools' Advisory Committee

Following the Combined Vendors/School Advisory Committee Meeting, an advisory committee of purchasing agents, business managers, teachers, superintendents, and other member school personnel met to evaluate new product specifications and revise catalogs. Most committee members also participated in the bid evaluations on April 15 and 16, 1997, giving their time and expertise to evaluate samples, technical data, and bids in recommending awards for 3,883 items.
4. Vendor of the Year Awards

Allied School & Office Products was voted by the school districts as "Vendor of the Year." Second place was Western Paper/Unisource (now Unisource Worldwide). Fleming Chemical Supply and Hammond & Stephens Co. tied for the third place Vendor of the Year honor. Awards were announced at the NMRSC Annual Membership Meeting on June 6, 1997.

5. Cooperative Purchasing Program Cycle

The annual cycle begins in late fall when member schools receive "Inventory Order Catalogs" for 3,883 items in 11 product categories, and indicate the quantities of each item they intend to purchase. The NMRSC office compiles this information and supplies these quantities, along with item specifications, to vendors, who then submit bids. Following bid evaluations in mid April, the schools receive award information in order to print purchase orders to the successful vendors. Maintenance items are to be delivered in June; delivery of remaining items occurs prior to the start of the fall term in each district. Items are updated annually.

6. Purchasing Commitments (Table I)

The total dollar volume of awards made in the Spring 1997 program was $2,032,621.47.

7. School System Savings (Table II)

In addition to savings on products, participants save personnel costs and material expenses for bid documents and processing. Moreover, the operations of the purchasing program provide exceptional staff development activities for participating district personnel.

8. Cooperative Purchasing Program Participation

Forty-six New Mexico and Colorado public and private schools participated in the 1996-97 Cooperative Purchasing Program.

9. Vendor Awards (Table III and IV)

In 1997, 67 companies bid in the 11 categories. Thirty-one out-of-state vendors and 33 in-state vendors for a total of 64 received awards for supplies and equipment on behalf of Council members. Total vendor awards ranged from a low of $196.04 to a high of $356,308.93.
TABLE I- TOTAL SCHOOL COMMITMENTS
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## TABLE II
**SPRING 1997 NMRSC COOPERATIVE PURCHASING PROGRAM SAVINGS TO MEMBER SCHOOLS**

<table>
<thead>
<tr>
<th>School Name</th>
<th>Amount Ordered</th>
<th>Estimated Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archuleta School District #50</td>
<td>$59,746.51</td>
<td>$17,923.95</td>
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<tr>
<td>Aztec Municipal Schools</td>
<td>$26,694.49</td>
<td>$8,008.35</td>
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<tr>
<td>Bayfield Municipal Schools</td>
<td>$38,291.04</td>
<td>$11,487.31</td>
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<td>Belen Consolidated Schools</td>
<td>$61,048.32</td>
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<td>Central Consolidated Schools</td>
<td>$66,621.00</td>
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<td>Cimarron Municipal Schools</td>
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<td>Cobre Consolidated Schools</td>
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<td>Corona Public Schools</td>
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<td>Estancia Municipal Schools</td>
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<td>Fort Sumner Municipal Schools</td>
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<td>Grants/Cibola County Schools</td>
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<td>Hatch Valley Municipal Schools</td>
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<td>Zuni Public Schools</td>
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$2,028,569.22 $608,570.77
## TABLE III - VENDORS' TOTAL AWARDS (Highest to Lowest)

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TABLE IV
VENDOR AWARD INFORMATION
FOR SPRING 1997

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Number of Vendors Receiving Awards</th>
<th>Value of Lowest Award</th>
<th>Value of Highest Award</th>
<th>Value of All Awards</th>
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<tr>
<td>1997</td>
<td>64</td>
<td>$196</td>
<td>$356,309</td>
<td>$2,032,621</td>
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</table>

10. Purchasing Discount Service

The Purchasing Discount Service was a 1982-83 innovation designed to supplement the Cooperative Purchasing Program. This program allows member schools to buy items which cannot be legally purchased without advertising for bids at discounts ranging from 3% to 50% below retail.

11. Educational Employees Discount Service

This program provides a discount service to Council members' employees. For FY 97, 42 businesses extended discounts of up to 40% to these employees. Membership cards and a purchasing guide are sent annually to members for reproduction and distribution to their employees.

V. Research

The Council has reported on three doctoral dissertations completed this past year. They are:

1. Dr. Analee Maestas, Restructuring at an Elementary School: Collaboration, Coordination and Team Work.

2. Dr. Gil Sena, A Study of a School District’s Efforts to Produce Lasting Systems Change by Impacting Leadership Roles.

3. Dr. Mary Rose C de Baca, An Electronic Student Information Management System as a Tool for Improving Instruction.

These three are excellent pieces of research by local educational leaders, done here in our own state. Dr. Maestas is Principal in one of the Albuquerque Elementary Schools. Dr. Sena is working with Project Re: Learning, and Dr. C de Baca is an administrator with the Bernalillo Public Schools.
GOALS FOR 1997-98 FISCAL YEAR

Goals and priorities for the New Mexico Research and Study Council in 1997-98 include:

1. With the Board of Directors, assess the Council’s budget and the services provided to member schools and districts.

2. Continue the District-Wide Leadership Institute for superintendents and other district leaders with the Education Administration Department and the New Mexico Coalition of School Administrators.

3. With the Education Administration Department and the New Mexico Coalition of School Administrators provide professional development for school-based administrators.

4. Working with the College of Education Professional Development Credit Council, provide a process for providing professional development for credit to school districts utilizing College of Education as well as public schools faculty.

5. Continue to support the College of Education Professional Development Coalition.

6. Based on an assessment of the Board of Directors and the membership, the Legislative Seminar will be restructured to better inform educators about pending educational legislation.

7. Develop a plan of action after meeting with the new board of directors in early fall.
APPENDIX A

Directory of Past Participants

Charter School Members

1. Albuquerque Public Schools
2. Belen Consolidated Schools
3. Bernalillo Public Schools
4. Estancia Municipal Schools
5. Grants/Cibola Municipal Schools
6. Jemez Valley Public Schools
7. Magdalena Municipal Schools
8. Moriarty Municipal Schools
9. Socorro Consolidated Schools
10. Vaughn Municipal Schools

Charter Institutional Members

1. New Mexico State Department of Education
2. The University of New Mexico

Past Executive Directors

1. Dr. Paul Petty, 1959-62
2. Dr. Devoy A. Ryan, 1963-66
3. Dr. Paul Petty, 1967
5. Dr. Herbert H. Hughes, 1969
6. Dr. Richard F. Tonigan, 1970-74
7. Dr. William Runge, Acting, 1975 (while Dr. Tonigan was on sabbatical)
8. Dr. Richard F. Tonigan, 1976 to June 30, 1987
9. Dr. Eugene P. LeDoux, July 1, 1987 to August 2, 1990
10. Dr. Richard F. Tonigan, August 5, 1990 to June 30, 1991 (Interim)
11. Dr. David L. Colton, July 1, 1991 to August 15, 1992
12. Dr. Paul A. Pohland, August 17, 1992 to June 30, 1994
13. Dr. John B. Mondragon, July 1, 1994 to Present

Past Presidents

<table>
<thead>
<tr>
<th>Superintendents</th>
<th>District</th>
<th>Year</th>
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<tbody>
<tr>
<td>J. Placido Garcia, Sr.</td>
<td>Socorro</td>
<td>1959-61</td>
</tr>
<tr>
<td>Manuel B. McBride</td>
<td>Grants</td>
<td>1962</td>
</tr>
<tr>
<td>Oliver Ortiz</td>
<td>Vaughn</td>
<td>1963</td>
</tr>
<tr>
<td>George Thompson</td>
<td>Magdalena</td>
<td>1964</td>
</tr>
<tr>
<td>Alfonso J. Garde</td>
<td>Belen</td>
<td>1965</td>
</tr>
<tr>
<td>Frank B. Lopez</td>
<td>Pojoaque</td>
<td>1966</td>
</tr>
<tr>
<td>William Dwyer</td>
<td>Jemez Springs</td>
<td>1967</td>
</tr>
<tr>
<td>Phillip Gonzales</td>
<td>Cuba</td>
<td>1968</td>
</tr>
<tr>
<td>Bernard Baca</td>
<td>Los Lunas</td>
<td>1969</td>
</tr>
<tr>
<td>Canuto Melendez</td>
<td>Pecos</td>
<td>1970</td>
</tr>
<tr>
<td>Pete Santistevan</td>
<td>Bernalillo</td>
<td>1971</td>
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### APPENDIX A (continued)

<table>
<thead>
<tr>
<th>Superintendents</th>
<th>District</th>
<th>Year</th>
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<tbody>
<tr>
<td>John S. Aragon</td>
<td>Belen</td>
<td>1972-74</td>
</tr>
<tr>
<td>Horace Martinez</td>
<td>Questa</td>
<td>1975</td>
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<tr>
<td>E. V. Arvizu</td>
<td>Grants</td>
<td>1975-76</td>
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<tr>
<td>Eloy J. Blea</td>
<td>Pecos</td>
<td>1977</td>
</tr>
<tr>
<td>Mary B. Sanchez</td>
<td>Belen</td>
<td>1978-79</td>
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<tr>
<td>Jack Ward</td>
<td>Bloomfield</td>
<td>1980</td>
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<tr>
<td>Scott Childress</td>
<td>Gallup</td>
<td>1981-4/30/81</td>
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<tr>
<td>Silas Lopez</td>
<td>Las Vegas City</td>
<td>1981-82</td>
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<tr>
<td>Gordon L. King</td>
<td>Aztec</td>
<td>1983</td>
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<tr>
<td>Melvin Cordova</td>
<td>Zuni</td>
<td>1984</td>
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<tr>
<td>Dr. Howard Overby</td>
<td>Grants</td>
<td>1/1/85-6/30/85</td>
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<tr>
<td>Felix L. Duran</td>
<td>Penasco</td>
<td>7/1/85-12/31/86</td>
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<tr>
<td>H. B. Martinez</td>
<td>Mora</td>
<td>1987</td>
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<tr>
<td>Casey Martinez</td>
<td>Pojoaque</td>
<td>1988-6/30/89</td>
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<tr>
<td>Juan Aragon</td>
<td>Taos</td>
<td>1989-91</td>
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<tr>
<td>Charles Ward</td>
<td>Santa Rosa</td>
<td>1991-93</td>
</tr>
<tr>
<td>Susanna Murphy</td>
<td>Tularosa</td>
<td>1993-1995</td>
</tr>
<tr>
<td>Janel Ryan</td>
<td>T or C</td>
<td>1996 to Present</td>
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### University of New Mexico/NMRSC Graduate Assistants

<table>
<thead>
<tr>
<th>Graduate Assistant</th>
<th>Years</th>
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<tbody>
<tr>
<td>Dr. John Barrett</td>
<td>1959-61</td>
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<tr>
<td>Dr. Lloyd Cockrell</td>
<td>1960-61</td>
</tr>
<tr>
<td>Dr. Emmett Shockley</td>
<td>1962-64</td>
</tr>
<tr>
<td>Dr. Donald Lange</td>
<td>1962-63</td>
</tr>
<tr>
<td>Dr. Roger Harrell</td>
<td>1963-64</td>
</tr>
<tr>
<td>John Harris</td>
<td>1964-65</td>
</tr>
<tr>
<td>Dr. John Grable</td>
<td>1965-67</td>
</tr>
<tr>
<td>Carl Buckner</td>
<td>1965-66</td>
</tr>
<tr>
<td>Dr. Arnold Brown</td>
<td>1967-68</td>
</tr>
<tr>
<td>David Sanchez</td>
<td>1967-68</td>
</tr>
<tr>
<td>Leonard Bearking</td>
<td>1968-69</td>
</tr>
<tr>
<td>Dr. Jose Perea</td>
<td>1969-71</td>
</tr>
<tr>
<td>Dr. Bob Hall</td>
<td>1970-71</td>
</tr>
<tr>
<td>Dr. Dennis McCabe</td>
<td>1971-72</td>
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<tr>
<td>Harold Gordon</td>
<td>1972-73</td>
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<tr>
<td>Dr. J. Placido Garcia, Jr.</td>
<td>1973-75</td>
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<tr>
<td>Ismael Valenzuela</td>
<td>1975</td>
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<tr>
<td>Dr. George F. Harrison</td>
<td>1976-79</td>
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<tr>
<td>Dr. John Thorpe, Fall 1980</td>
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<tr>
<td>Daniel R. Garrison</td>
<td>1979-81</td>
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<tr>
<td>Kurt Knorschild</td>
<td>1980-84</td>
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<td>Dr. Carol Massanari</td>
<td>1980-81</td>
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<tr>
<td>Dr. Beatrice L. Davis</td>
<td>1981-83</td>
</tr>
<tr>
<td>Dr. Nancy Schilling</td>
<td>1983-84</td>
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<tr>
<td>Judy Stevenson</td>
<td>1983-84</td>
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<tr>
<td>Harold Sloan</td>
<td>1984-85*</td>
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<tr>
<td>Peter Harter</td>
<td>1984-87*</td>
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<tr>
<td>Dr. David A. Lepre</td>
<td>1986-89</td>
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<tr>
<td>Sandra Kass</td>
<td>1987-88*</td>
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<tr>
<td>Dr. Susan T. Holderness</td>
<td>1988-90</td>
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<td>Paul Narbutas</td>
<td>1989-90</td>
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<tr>
<td>James R. Waddick</td>
<td>1990-91</td>
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<tr>
<td>Kevin J. Williams</td>
<td>1990-91</td>
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<tr>
<td>Susan K. Stratton</td>
<td>1991-92*</td>
</tr>
<tr>
<td>Mark A. Ortega</td>
<td>1991-92</td>
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<tr>
<td>Celia Hardekopf</td>
<td>1992-93*</td>
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<tr>
<td>Elwyn Hulett</td>
<td>1992-1995*</td>
</tr>
</tbody>
</table>

*Doctorate in process; all who have the title "Dr." performed the majority of their work on the degree while employed as NMRSC graduate assistants. Those designated by a * have not yet completed their doctorates. Most have completed all class work, but have not completed their dissertations.
### APPENDIX B

1996 - 1997 Members of the New Mexico Research and Study Council
FY July 1, 1996 - June 30, 1997

<table>
<thead>
<tr>
<th>Public School Members</th>
<th>Representative(s)</th>
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<tbody>
<tr>
<td>1. Alamogordo</td>
<td>Mary Scott, Supt.</td>
</tr>
<tr>
<td>2. Albuquerque *</td>
<td>Dr. Peter Horoschak, Supt.</td>
</tr>
<tr>
<td>3. Archuleta (CO)</td>
<td>Terry Allen, Supt.</td>
</tr>
<tr>
<td>4. Aztec</td>
<td>Jim Magee, Supt.</td>
</tr>
<tr>
<td>5. Bayfield (CO)</td>
<td>Tommy Brown, Supt.</td>
</tr>
<tr>
<td>7. Bernalillo *</td>
<td>Dr. Gary Dwyer, Supt.</td>
</tr>
<tr>
<td>10. Central</td>
<td>Dr. Stanley Bippus, Supt.</td>
</tr>
<tr>
<td>13. Corona</td>
<td>Bobby Richardson, Supt.</td>
</tr>
<tr>
<td>15. Deming</td>
<td>Carlos Viramontes, Supt.</td>
</tr>
<tr>
<td>17. Estancia *</td>
<td>Carolyn Allen-Renteria, Supt.</td>
</tr>
<tr>
<td>18. Floyd</td>
<td>David Lock, Supt.</td>
</tr>
<tr>
<td>25. Las Vegas City</td>
<td>Marge Vallejos, Supt.</td>
</tr>
<tr>
<td>26. Las Vegas West</td>
<td>David Salazar, Supt.</td>
</tr>
<tr>
<td>27. Lordsburg</td>
<td>Phillip W. DeFoor, Supt.</td>
</tr>
<tr>
<td>28. Los Alamos</td>
<td>Dr. James Anderson, Supt.</td>
</tr>
<tr>
<td>29. Los Lunas</td>
<td>Dr. Fred Pomeroy, Supt.</td>
</tr>
<tr>
<td>30. Magdalena *</td>
<td>Tim McCoy, Supt.</td>
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<tr>
<td>31. Maxwell</td>
<td>Roman García, Supt.</td>
</tr>
<tr>
<td>32. Mesa Vista</td>
<td>Vernon Jaramillo, Supt.</td>
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<tr>
<td>33. Mora</td>
<td>Leonard Aragon, Supt.</td>
</tr>
<tr>
<td>34. Moriarty *</td>
<td>Dr. James Murlless, Supt.</td>
</tr>
<tr>
<td>35. Mountainair</td>
<td>Lloyd Sellers, Supt.</td>
</tr>
<tr>
<td>36. Pecos</td>
<td>Hank Dominguez, Supt.</td>
</tr>
<tr>
<td>38. Quemado</td>
<td>Dr. Maria Fuentes-Leas, Supt.</td>
</tr>
<tr>
<td>39. Questa</td>
<td>Steve Archuleta, Supt.</td>
</tr>
<tr>
<td>40. Reserve</td>
<td>Crandall Young, Supt.</td>
</tr>
<tr>
<td>41. Río Rancho</td>
<td>Dr. V. Sue Cleveland, Supt.</td>
</tr>
<tr>
<td>42. Roy</td>
<td>Ken Shaw, Supt.</td>
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<td>43. Ruidoso</td>
<td>Mike Gladden, Supt.</td>
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<tr>
<td>44. San Jon</td>
<td>Harold Sloan, Supt.</td>
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<td>45. Santa Fe</td>
<td>Lee Vargas, Supt.</td>
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24
## Public School Members (continued)

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<thead>
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<th>Number</th>
<th>Location</th>
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<tr>
<td>46.</td>
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<td>Silver</td>
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<td>Springer</td>
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<td>Taos</td>
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<td>51.</td>
<td>Trinidad (CO)</td>
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<td>Truth or Consequences</td>
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<td>53.</td>
<td>Tucumcari</td>
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<td>54.</td>
<td>Tularosa</td>
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<td>55.</td>
<td>Vaughn</td>
</tr>
<tr>
<td>56.</td>
<td>Zuni</td>
</tr>
</tbody>
</table>

## Private School Members

1. Armand Hammer United World College
2. Menaul School
3. St. Therese School
4. Sandia Preparatory School

## Educational Agencies and Institutes

1. NM Coalition of School Administrators
2. NMRSC, University of New Mexico
3. NM School Boards Association
4. NM State Department of Education *

## Representatives (continued)

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Dan Flores</td>
<td>Supt.</td>
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<td>Dr. Elna Stowe</td>
<td>Supt.</td>
</tr>
<tr>
<td>Joanne Salome</td>
<td>Supt.</td>
</tr>
<tr>
<td>E. J. Robbins</td>
<td>Supt.</td>
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<tr>
<td>Andrew Gallegos</td>
<td>Supt.</td>
</tr>
<tr>
<td>Dr. David Van Sant</td>
<td>Supt.</td>
</tr>
<tr>
<td>Janel M. Ryan</td>
<td>Supt.</td>
</tr>
<tr>
<td>Ray Swinney</td>
<td>Supt.</td>
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<tr>
<td>Michael Dorame</td>
<td>Supt.</td>
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<tr>
<td>Art Blea</td>
<td>Supt.</td>
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<tr>
<td>Jose Nevarez, Interim Supt.</td>
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### Representatives

<table>
<thead>
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<th>Position</th>
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<tbody>
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<td>Dr. Philip O. Geier</td>
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<td>Richard Esler</td>
<td>Pres.</td>
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<td>Antoinette Crump, Principal</td>
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<td>Richard L. Heath, Headmaster</td>
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<td>Evalynne Hunemuller, Exec. Dir.</td>
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<td>John Mondragon, Ed.D., Director</td>
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<td>Peter Eissele, Exec. Dir.</td>
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<td>Alan Morgan, State Supt</td>
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APPENDIX C

1996-97 NMRSC PUBLICATIONS

Educational Employees Discount Service Purchasing Guide, July 1996
Purchasing Discount Service Booklet, July 1996
Professional Development Day for Office Workers Report, August 1996
Annual Report, September 1996
Council News, September 1996
Summary of Quality Education Entries, December 1996
Council News, January 1997
Abstract, Restructuring at an Elementary School: Collaboration, Coordination, and Team Work, Dr. Annalee Maestas, January 1997
Abstract, A Study of a School District's Efforts to Produce Lasting Systems Change by Impacting Leadership Roles, Dr. Gil Sena, January 1997
Council News, May 1997
Abstract, An Electronic Student Information Management System as a Tool for Improving Instruction, Dr. Mary Rose C de Baca, May 1997
Quality Education 1996 Awards Program Booklet, June 1997
APPENDIX D

1996-97 NMRSC MAJOR MEETINGS

August 2, 1996, Professional Development Day for Office Workers, Pinnacle Four Seasons Hotel, Albuquerque

September 6, 1996, Cooperative Purchasing Program Vendors/School Advisory Committee Meeting, UNM Continuing Education Conference Center, Albuquerque

September 25, 26, and 27, 1996, NMRSC-ASBO 14th Annual Joint Conference, Taos Ski Valley Conference Center, Taos Ski Valley

September 27, 1996, Board of Directors Meeting, Taos Ski Valley Conference Center, Taos Ski Valley

November 13, 1996, Quality Education Awards Program Judging, UNM Conference Center, Albuquerque


December 13, 1996, Quality Education Awards Program Luncheon, Sheraton Old Town Inn, Albuquerque

February 19, 1997, Board of Directors Meeting, La Fonda Hotel, Santa Fe

February 19, 1997, 21st Annual Legislative Gathering, La Fonda Hotel, Santa Fe

March 21, 1997, Cooperative Purchasing Program Bid Opening, 119 College of Education, University of New Mexico, Albuquerque

April 10, 1997, NMRSC-ASBO Planning Committee Meeting, Holiday Inn Pyramid Hotel, Albuquerque

April 15 and 16, 1997, Cooperative Purchasing Program Bid Evaluation Committee Meetings, College of Education, University of New Mexico

April 19, 1997, Vendors’ Viewing of Bid Awards, Room 124, College of Education, University of New Mexico

June 5, 1997, Board of Directors Meeting, Holiday Inn Pyramid, Albuquerque

June 5, 1997, NMRSC-ASBO Planning Committee Meeting, Holiday Inn Pyramid, Albuquerque

June 6, 1997, Annual Meeting of the Membership, Holiday Inn Pyramid, Albuquerque
Significant Developments

The following factors are seriously impacting the Nutrition Program at UNM.

1. The faculty search for the Nutrition Education position was frozen due to budget cuts within the University and College. The program has been granted funding for five part-time instructors to cover classes this person would have taught.

2. Dr. Wendy Sandoval has retired from the Nutrition Program effective 7/1/97. Money to fill the position for the upcoming academic year was removed by Dean Blackwell and her position will be unfilled for Academic Year 97-98.

3. For the 4th consecutive year, Dr. Kathy Kohler has been granted a full leave from the Nutrition Program for the Academic Year 1997-98. It is possible/likely she will be granted two more years of full leave. Her salary is available for the Academic Year 97-98 to cover classes in the Nutrition Program.

4. Dr. Karen Heller is the only remaining tenure track faculty member in the Nutrition Program. Two instructors, J. Beary and J. Vanderhoof, have signed contracts for the upcoming academic year to cover required classes for the undergraduate and post-bachelors supervised practice (Dietetic Internship) programs.

5. As a result of the factors outlined, two courses (NUTR 320, NUTR 535) have been canceled for next year. The undergraduate class will be substituted with a Health Education class, while the graduate class will not be offered. In addition, we have reduced both the number of sections of the introductory nutrition courses as well as the size of the classes. This will seriously impact credit hour production, possible by one-third to one-half the usual production of 1500 -1600.

Significant Plans

1. A moratorium has been placed on graduate admissions (M.S. Degree) effective in Spring 1997, with the exception of 14 students. These students were in the process of being accepted into the Dietetic Internship (9), former students seeking readmission (3) and 2 students currently in the process of fulfilling prerequisites for the M.S. degree.

2. The focus for the upcoming academic year will be on determining support for the nutrition program within the College of Education and the University. This support will include conducting and successfully filling two tenure track
1150 faculty positions for the 98-99 academic year. If these two positions are not filled, a moratorium will be placed on undergraduate admissions.

In addition, a moratorium will be placed on admissions to the Dietetic Internship, and inactive status will be applied for with the accrediting body. At that time a decision would need to be made regarding the future of the program such as finding a different administrative location within the University or phasing out the program.

3. Continue to inform/advise students of the uncertain future of the Nutrition Program at UNM.

Appointments and Separations

All of the following were mentioned under Significant Developments

1. Dr. Wendy Sandoval is retiring at the end of Academic Year 1997-98.

2. Jenni Beary and Joy Vanderhoof will be visiting instructors for Academic Year 1997-98.

3. Dr. K. Koehler will be on 100% leave for the 4th year. She is entering a post-doctoral program and will most likely be on leave for two additional years.

Publications


Outside Professional Activities

W. Sandoval
American Dietetic Association, Chair Nominating Committee

K. Heller
New Mexico Dietetic Association Education Chair and Board Member
Birth Defects Prevention Task Force, NM Dept. of Health
Hunger Task Force, NM Public Health Association

Sponsored Research

K. Heller, Community Nutrition Researcher
Pathways: Prevention of Obesity Among Navajo Youth. Center for Health Promotion and Disease Prevention, Dept of Pediatrics, UNM. Funded by National Institutes of Health, National Heart, Lung and Blood Institute.
Introduction

The Office of Research Services was relocated during the fall 1996 term from Mesa Vista Hall to the new faculty office building in Hokona Hall. All files related to Human Subject Research Review and all necessary equipment and support staff were also moved. Theresa Gonzales remained the office secretary and Mr. Lloyd Vigil, a doctoral candidate in Counseling Education, was hired part-time as the Project Assistant. With the exception of possibly two days for the actual move the office continued to serve the faculty and their research needs. This report highlights some of the activities and accomplishments of the office during the 1996-1997 academic year.

The office is scheduled to be administratively reassigned under the appropriate Associate Dean for the 1997-1998 academic year. The position of director that I held for the last two years has been eliminated. I was honored to serve the college in this capacity. I return to full-time faculty status with the health education program on May 17, 1997.

Works-In-Progress Brown Bag Seminars

The office continued to sponsor and run the college research seminars during the year. We solicited faculty to present their current "works" using an informal, sharing type setting. A listing of these works were sent to all college faculty, Deans and Division Directors at the start of each semester. Additionally, we posted numerous color copied fliers around each college building informing everyone of the presenter and the topic. We were even successful at contacting Campus News and getting them to publish the announcement each week. In general, each of these were well attended with a range of approximately 7 to upwards of 30 faculty, students and others in
the UNM community participating over the noon lunch hour. Hopefully these brown bags can be continued. There was strong and consistent accolades for the office for their effort in arranging these meetings. It is surely a viable and cost-efficient way to get faculty engaged in intellectual as well as programmatic discussions. Supplement A contains materials related to the Works-In-Progress for this academic year. Supplement A also contains fliers from other college-wide brown bags which appear to have emerged as a result of the "Works" series. Art Education and Psychological Foundations both sponsored such scholarly meetings during the spring term.

Overhead Funds Allocation Committee (OFAC)

This committee met once during the fall term (October 22) and twice during the spring term. The committee elected Professor Lange as Chair. I spoke with Ramona about how much OFAC money was available for these small seed-type faculty research efforts. She estimated that there was approximately $8000 available. The committee agreed on criteria for awarding these funds and sent out a call for proposals in the spring. Only 6 faculty responded to the call due to the timing (spring recess). The committee then met to evaluate the proposals and eventually awarded the monies. Supplement B contains documents related to the Overhead Funds Allocations Committee for this academic year.

Overhead Accounts, College of Education

Theresa Gonzales continued to work with Ramona on these accounts. On March 5 a letter was sent to each Division Director informing them of the status of the overhead earnings for each of the Principal Investigators in their division. This work I assume will continue with Ramona monitoring these earnings and Theresa keeping the data base and back up disks. Supplement C contains the letter sent to Divisions and a list of faculty awards.
Human Research Review Committee (HRRC)

This committee continued to review human research applications from faculty and graduate students. The Chair of the committee (Professor Shipman) stopped inviting me to their meetings so I've only limited information on their activities. The Office of Research Services, however, has attempted to keep a record of the review process. The following is our best approximation of this activity:

Total number of visits to the ORS: 800+
Total number of phone requests: 750+
Total applications sent/picked up: 400+
Total number of HRRC applications processed: 130
  Breakdown: Faculty:23, Dissertations:40, class projects:47, other:20
Total number of revisions processed: 67
Total number of HRRC applications processed for APS: 17

Theresa continued to provide the Chair with ongoing secretarial assistance regarding the typing of letters, related correspondence and needed errands (pick up of finished letters). The ORS in conjunction with the committee also revised the cover letter for the application packet. Review dates for HRRC review and notification were also included on the application packet to better inform faculty and students of the expected turnaround time. Supplement E contains materials relevant to the work of the ORS with the HRRC.

One point of contention between the Chair of the HRRC and myself continues. The Chair’s notification letters still periodically contain statements questioning whether the dissertation is eligible to be a dissertation. I have tried without success to convince her that such statements are not only insulting to the student and the dissertation chair but also beyond the HRRC’s purview. She has continued to insist that she has the authority to make such statements and hold up the students approval until such time as the question is addressed. I have asked Associate Provost Ahmed to try to resolve this situation. My view is that statements, judgements about
dissertation eligibility is the responsibility of the dissertation chair and
ultimately the Dean of the Office of Graduate Studies, not a research review
committee. Each approved dissertation is eventually signed by the Dean of the
Graduate School not the Chair of HRRC. This issue needs to be resolved as soon
as possible.

Faculty Development Opportunities, Resources

A major thrust of the ORS for the past two years has been regular
dissemination of professional opportunities, resources to the faculty. Grant
competitions, RFP's, call for papers, conference announcements as well as
workshops and research summaries have been sent to the COE faculty. Supplement
F contains a selection of these materials. A series of papers were also sent
to faculty regarding Federal Guidelines for Protection of Research
Participants. Even a follow up memo was sent to faculty asking for anyone who
failed to receive the guidelines to please contact ORS. Due to the length of
these documents they are not included.

Although we have not kept track of which opportunities were acted on by
individual faculty one grant application known as "VillageLink 2000" was
pursued by Dr. Terence Jones (Asst. Adjunct Prof., Health Education) and
myself through the Department of Commerce. The total cost of $750,000.00 will
be used to connect the "pocket of poverty" communities of Albuquerque's south
valley area to the internet. Such an award if realized would be an exemplar of
how professional opportunities and faculty collaboration can come to enhance
the well-being of disadvantaged populations.

Record of ORS Activities

I have tried to keep a running record of the central work / activities
of the office during the past two years. For the current academic year these
documents are presented in Supplement G. Also included are the periodic activity reports from the Project Assistants for the year, Angela Westavino and Lloyd Vigil. I felt it was important to have the Project Assistants keep such logs even though much of their work involved answering phone questions, following up on various logistic needs of the faculty and myself (photocopying, errands, corresponding with HRRC applicants) and are thus not captured in their reports.

Related Work

In addition to the above, I have served on the following committees, working groups. Some of these came about as a function of my position with ORS and some were not so related.

*** Tireman Library Committee; COE Outreach Committee; APS Research Review; Administrative Council; Research Policy Committee; Research Administrators Network; Albuquerque Learning Network; Art Education Search Committee; North Central Accreditation Team to Gallup.

I also was invited by various faculty to speak about research review, research ethics and grant writing (even theory applications) with their students. Professors: Colton; Serna; Ganradt; Noll; Nielsen. Supplement J contains documents related to these efforts.

Conclusion

It has been my extreme pleasure and honor to serve the college as Director of the Office of Research Services the past two years. I have learned a great deal about administration and research bureaucracy in both the college and the university. I’ve even learned a significant amount about politics and diplomacy within large academic units such as COE. It has all been most enlightening. You as the Dean have been supportive and helpful during my two years. Though many faculty have voiced concern that the office is to be returned to an Associate Dean, I think your decision is both a cost-efficient and wise one. I thank you for allowing me this experience.
Finally, for what it may be worth, I would like to suggest that Theresa Gonzales continue in her capacity as the secretary for this branch of the college regardless of its eventual configuration. She knows the HRRC process extremely well, she is good with faculty and students alike and she knows how to get things done in an expedient manner. Though our numbers related to HRRC applications are somewhat reduced from those reported last year, there were almost double the number of students who visited Theresa, Lloyd and myself for various informal consultations. Since we received very few complaints (and those we did receive were related to the Chair of HRRC) we assume our consultations were effective and appreciated.

Sincerely,

Elias Duryea
May 1997.
Office of Research Services
Supplements

Supplement A: Works-In-Progress documents
Supplement B: Overhead Funds Allocation Committee documents
Supplement C: Overhead Transfer & Listing of Faculty Grants
Supplement E: Human Research Review Committee documents
Supplement F: Selected communications for faculty professional development & opportunities
Supplement G: Summary Reports of the ORS to the Dean
Supplement J: Funding sources found for Tireman Library, faculty letters
Organizational Learning and Instructional Technologies
Annual Report
1996-1997

Submitted by:
Hallie Preskill
Program Coordinator/Graduate Advisor

Major Accomplishments

1. University approval of the following program changes:
   • name change from TLT to OLIT
   • changes in 593 courses to courses with numbers
   • changes in number of credits for Master's degree (from 36-42)
   • change in structure of the MA program

2. The hiring and mentoring of two new assistant professors in the area of multimedia technology. Both of these faculty members (Dr. Plass and Dr. Salisbury) have proven to be excellent teachers, scholars and participants in the University and local communities.

Other Accomplishments

The OLIT faculty have made substantial contributions to the professional practice and research communities this year. The full-time faculty (P. Boverie, C. Gunawardena, H. Preskill, M. Salisbury, C. Taylor, J. Plass, and associate faculty, J. Gramradt) have accomplished the following during the 1996-1997 academic year (the faculty's names are in bold print). It should be noted that Dr. Gunawardena has been on sabbatical outside of the country since January, 1997 and therefore, all of her work is not represented here.

Books


Book Chapters


Refereed Journal Articles


Monographs:


Conference Proceedings:

Coleman, A.J. and Boverie, P.E. Employee efficacy generalization of basic skills. The Proceedings of the 1997 Academy of Human Resource Development, April, Atlanta, GA.


Book Reviews


World Wide Web Documents


Gamradt, J. The electric scholar (www.unm.edu/~gamradt/scholar.htm)

Gamradt, J. The mind's eye project III: visualizing education (www.unm.edu/~gamradt/mep.htm)

Gamradt, J. Pedagogical notes and suggestions for students (www.unm.edu/~gamradt/jkgbib.htm)

Gamradt, J. Jan Armstrong Gamradts Home Page (www.unm.edu/~gamradt/jkg.htm)
National and International Presentations


Coleman, A.J. and Boverie, P.E. Employee efficacy generalization of basic mathematical skills. Paper presented at the 1997 Academy of Human Resource Development, April, Atlanta, GA.

Boverie, P. Teaching at a distance: Transforming courses and instructors. Paper presented at the 1997 Distance Education Designing for Success Conference, May, Seattle, WA.

Boverie, P., Mosely, M., & Nagel, E. Effect of group size on decision quality using the stepladder technique. Paper presented at the 1997 Western Psychological Association Meeting, April, Seattle, WA.


Plass, J. Learning with multimedia and individual differences". Full Paper accepted for presentation at the World Conference for Educational Hypermedia and Multimedia (ED-MEDIA) in June 1997 in Calgary, Canada.


Local/State Presentations

Boverie, P., Mosely, M., & Stein, S. Reducing barriers of participant perceptions of a mandatory training program. Paper presented at the 1997 Western Psychological Association Meeting, April, Seattle, WA.

Plass, J. Educational use of multimedia", Talk at NAIFE, Native America's International Film Festival, Santa Fe, NM, September, 1996.

Plass, J. Interface design in educational multimedia" Presented at ISPI Fall Conference, Albuquerque, NM, November, 1996.

Salisbury, M. Computer-Based training in the aviation industry. Presented at ISPI Fall Conference, Albuquerque, NM, November, 1996

Software Titles (CD-ROM):


The majority of these articles, chapters and presentations focus on linkages between theory and practice, effective teaching and learning, organizational change and learning, technology and learning and multicultural perspectives on learning.

Other:

Taylor, C., Planned and conducted the Leadership Development Initiative (LDI) for six weekend sessions. The LDI is run through the Community College Leadership Project.

Taylor, C., Planned, organized and conducted the LDI conference in Ruidoso for LDI participants from 1994-95, 1995-96 and 1996-97.

Taylor, C., Co-directed the Community College Faculty Conference.

Taylor, C., Curricular revision of OLIT 421 and 521 reflect new technological advances.

Taylor, C., Total renovation of technology equipment in COE 201 (no financial assistance)

Grant Activity:

Boverie, P. Co-Investigator, Federal Star Schools Evaluation Grant for OSU/NAU Star Schools Distance Education Programs.
Boverie, P. Awarded RAC Grant, UNM, "Learning Styles, Learning Strategies, Emotional Intelligence and Social Presence as Predictors of Distance Education Student Satisfaction."

Boverie, P. Submitted new Star Schools Grant for $989,000, May 1997.

Plass, J. Awarded $2200 RAC grant and $500 TAS grant. (University grants)

Dr. Gunawardena's Star Schools Project has continued to contribute to the program's ability to involve graduate students in research and evaluation activities. In addition, her work has been applauded by other evaluators and the contract officers in Washington, D. C. Dr. Boverie, who assumed responsibility for the grant in January, 1997 while Dr. Gunawardena has been on sabbatical, has also received high praise for her work.

The OLIT faculty have continued working as a team this year. We have met frequently, chosen our yearly goals together, handled crises together, and planned for our future. Our efforts to support collaboration and communication resulted in our publishing two newsletters and hosting one party for Division faculty and OLIT students. In addition, we have maintained a student Listserv and posted job openings and professional development advertisements on our bulletin boards. We invite our students to collaborate on research and keep them informed about new initiatives in the College of Education. Finally, the majority of the OLIT faculty have participated in several COE and University-wide committees and task forces this year.

**Applicants to the OLIT Program**

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**OLIT Students:**

We estimate that approximately 70% of the TLT students work in private businesses, government, healthcare, the military and non-profit organizations. About 20% are K-12 educators in public and private schools. Another 10% are employed by post-secondary institutions.
How many graduated:

Fall 1996  8 Master’s  
           3 Doctoral  

Spring, 1997  17 Master’s  
            2 Doctoral  

Summer, 1997  4 Master’s  

Totals:  29 Master’s  
          5 Doctoral