



the Biological Society
of New Mexico

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1 9 8 7 N E W S L E T T E R

GREETINGS

We've heard from a number of you over the last year and we'd like to thank you for staying in touch and for your support. We thought that you would be interested to know what some of your Biology contemporaries are doing today, so we intend to make this a regular part of our annual Newsletters. In future Newsletters, we'll do our best to keep you informed about the activities and whereabouts of your classmates and other Biology Department alumni and friends.

Lora Belle (Hughes) Cole (M.S., 1958) and her husband George now live in Los Alamos. Lora is a retired librarian.

George Kennedy (B.S., 1968) received a D.V.M. from Washington State and a Ph.D. from Kansas State. Dr. Kennedy is now a veterinary pathologist at Kansas State University.

Richard Storey (B.S., 1968) spent a few years teaching at Manzano High School after graduating from UNM. Richard then went on to earn his Ph.D. in plant physiology from the University of Oklahoma and did a year postdoc at the Kettering Lab in Ohio. He is now an Associate Professor of Biology at The Colorado College in Colorado Springs.

Don E. Wilson (M.S., 1967; Ph.D., 1970) is currently a zoologist with the National Museum of Natural History in Washington and is also the current President of the American Society of Mammalogists.

Steven W. Walker (B.S., 1969) received a Master's of Public Health at UC Berkeley in 1970 and today is the Manager, Air Pollution Control Division, in Albuquerque. He and his wife Patricia just couldn't stay away from the Duke City.

Rebecca (Daniels) Kush (B.S., 1975) received her Ph.D. from the University of California - San Diego. She and her husband Steve are now living in Tokyo, Japan, where Dr. Kush is working as a medical research consultant.

Paul Labarrere (B.S., 1974) was once a star football player for UNM. He is now teaching high school biology in Upland CA, and, you guessed it, he also coaches varsity football and track.

Sam R. Lehman (B.S., 1970) went on to earn his M.D. and is now a neurologist practicing in Odessa TX.

Paul R. Mahl (B.S., 1979) is the Production and Technical Sales Coordinator for CVI Laser Corporation in Albuquerque.

John R. Nelson (B.S., 1978) received his M.D. from the University of Louisville in 1982. He is currently a Fellow in Cardiology involved in exercise physiology research. Dr. Nelson and his wife Zarrin live in Fresno CA.

Carol Parpart (B.A., 1976) now lives in Gallup where she works as a clerk in a pharmacy.

Kenneth Reese (B.S., 1970) and his wife Gale live in Albuquerque. Ken is a successful independent insurance agent and owns his own agency.

Richard W. Seeley (B.S., 1971) is also an independent insurance agent who now lives in Ruidoso NM.

Edward H. Soenke (B.S., 1975) is a self-employed businessman (E.H.S. Enterprises) in Los Alamos NM.

Thomas W. Swetnam (B.S., 1977) finished an M.S. at the University of Arizona and is now completing his Ph.D. there as well. Tom is a forest ecologist/dendrochronologist looking at disturbances to trees (fire, insect outbreaks) for the Laboratory of Tree-Ring Research at the U.A. in Tucson.

Stephen Wagner (B.S., 1970) received his D.D.S. from the University of Southern California and now practices dentistry in Albuquerque. Dr. Wagner has an avid interest in ants and is involved in building a display for the Natural History Museum in Albuquerque.

Theodore E. Yaeger (B.S., 1973) went on to earn his M.D. in 1981 and is now a staff radiotherapist at Halifax Hospital in Ponce Inlet FL.

Fred Youberg (B.S., 1974) has remained at UNM and is now the Senior Buyer in the Purchasing Department for the University. He and his wife Sherra have two new girl babies (3¹/₂ and 1).

Carter Zudick (B.S., 1977) also lives in Albuquerque and works for Sperry Flight Systems as an electronics technician.

Karen Dahl McKenzie (B.S., 1983) has one of the most important jobs, and often one of the most thankless, of all our former graduates: she is a mom and housewife. Karen and her husband Kenneth live in Encino NM.

Diana M. Gonzales-Pacheco (B.S., 1984) works for the Bureau of Land Management and lives in Santa Fe NM.

Melissa McCray (B.S., 1984) is a Microbiology Lab Assistant at St. Joseph's Hospital here in Albuquerque.

Patricia Mehlhop Cifelli (Ph.D., 1981) had been working as an ecologist for the Wildlife Resources Center in Delmar, NY. Recently, however, her husband Rich accepted a position with the Stovall Museum at the University of Oklahoma, so they now live in Norman.

Janice K. Moore (Ph.D., 1981) went to the University of Texas as a Lecturer after leaving UNM. She then spent about 1 1/2 years at Florida State as a Research Associate before being hired as an Assistant Professor of Zoology at Colorado State University in August 1983. Janice is also a recent recipient of a prestigious Young Presidential Investigator Award.

Claudia J. Schmidly (B.S., 1982) has become a world traveler...as a lieutenant in the U.S. Navy.

Other Friends and Supporters of the Society and the Department

Dorothy & Dale Bealmear, Albuquerque NM	Loren D. Potter, Albuquerque NM
Mr. & Mrs. L.I. Bealmear, Tulsa OK	Raymond & Janis Prudhomme, Albuquerque NM
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Kathryn Fitzwater, Albuquerque NM	John & Ellie Trotter, Albuquerque NM
Cheryl Fossum Graham, M.D., Rockville MD	Robert M. Weaver, Albuquerque NM
Grafton Houston, Ft. Collins CO	Gary & Joan Zahm, Los Banos CA
Eugene & Letitia Peirce, Albuquerque NM	

Once again we'd like to bring all of you up to date on events and activities in the Department of Biology. In this edition we've decided to concentrate on two topics we hope you will find interesting: 1) how we use building space, and 2) significant happenings in the professional lives of a few UNM biologists. Then we conclude with some comments about planning for our own increased visibility and viability.

SPACE USE AND THE BIOLOGY ANNEX

Back in 1967, when we first moved into what is now the Potter Wing of Castetter Hall, space was embarrassingly available. The old-timers among us often had several large research labs at our disposal. Now newly recruited faculty members often wait a year before we can create new lab space for their research and teaching.

Twenty years ago our chairman had a secretary, a little typing help, and less than 15 faculty members. We still have a chairman (who now requires the services of an assistant chairman), but the secretary is now an office manager, and by Fall Semester there will be 34 faculty members. The office manager, by the way, answers to an administrative coordinator -- who runs the department on a day to day basis -- and directs the activities of a burgeoning office and extra-office staff. Mary Alice Root fills this role -- superbly.

Now, in 1987, our operations -- with one major exception -- are still confined to the space that was available two decades ago, not withstanding

extensive personnel additions and despite the fact that nearly all of the faculty hired in the interim are extremely active, space-consuming researchers. The major space exception is the Biology Annex and therein, as they say, lies a tale.

The Annex was built in 1948, at a cost of about \$106,000, and once housed the College of Pharmacy. It is a squarish, single story building about 75 meters west of the original Castetter Hall. Constructed in the traditional UNM "pueblo" style, its picturesque murals graced classrooms and labs used for years by pharmacy students. Then, in the early 70's, Pharmacy crossed Lomas Avenue and merged physically with the College of Nursing. One of our longtime faculty members, Dr. Earl Bourne, has an office there and teaches several courses, including a rigorous year of human anatomy and physiology.

In the polite scramble that followed Pharmacy's exodus, Biology managed to acquire that College's former home, which we promptly renamed the "Biology Annex." Dr. James Gosz had joined our faculty by then and desperately needed space for the water and soil chemistry portions of his watershed studies in the Sangre de Cristo Mountains above Santa Fe. In theory, the Annex was the perfect solution. However, all those chemicals used by all those pharmacy students had taken their toll on its plumbing. Dr. Rex Cates, a chemical ecologist, had also come on board by that time. He needed a special lab to house his new gas liquid chromatograph (GLC) and plenty of other sensitive equipment. Well, we got to work, and one year and about \$140,000 later, the murals were gone but a functional waste system was in place.

At this point you might wonder about the cost-effectiveness of such a renovation. Good point. By way of an answer consider that Jim Gosz, since coming to UNM in 1970, has been awarded \$3 million in outside grants. And Rex Cates, before he left, had added another \$1.5 million. Without the Annex that wouldn't have been possible. And a lot of jobs at UNM would never have been created and funded. (Rex Cates, we should add, left a few years ago to take a job he couldn't turn down at Brigham Young University. He and Jim still share a large NSF grant, however.)

Right now we're into a third phase of Annex remodelling. Newcomers Drs. Charles Wisdom and Bruce Milne will have offices there, as will Dr. Carl White, who received his Ph.D. a few years ago under the direction of Jim Gosz. Carl now has his own \$133,000 NSF grant to study variation in soil terpenoids and nitrogen transformation processes. Two postdoctoral scholars will soon share another office there, and special equipment and computer rooms are being built into what was once a large classroom. These changes and a storage extension on the northeast corner will come to over \$200,000.

Seems like a lot, doesn't it? But if our past success in gaining extramural funds is any indication, the expense should be compensated in fairly short order by federal grants. In fact, if you consider the dollars brought in by another Annex resident, Dr. Cliff Dahm (who's been at UNM for only 3 years), the overhead from his partly-shared \$984,000 in grants to date has already gone a long way toward paying for the construction now in progress.

Finally, cost-effectiveness at an educational center like UNM isn't the whole story. It's nice to break even, financially, but we trade in a currency even more important than money in the long run: information. An illustration of such currency's use involves the Annex and the one Annex resident we haven't mentioned. Dr. Manuel Molles has his own little (southeast) corner of this venerable structure. Manuel, who has been with us for over a decade, is an aquatic ecologist. He used to study reef fish communities; now it's mostly stream organisms. He even has an artificial stream, which he built himself, in his lab. It holds trout and aquatic insects. And nearby are rearing tanks containing hundreds of rare and endangered Socorro isopods. Manuel developed the rearing procedures himself. Although he does command regular outside funding, it's relatively small stuff compared to the big bucks generated by his Annex colleagues. However, unlike them, Manuel teaches very large freshman classes -- plus advanced courses. Thus, he touches the minds of hundreds of impressionable young people nearly every day. He's also one of our key undergraduate advisors. So well thought of is Manuel, both as a teacher and a researcher, that he was recently awarded a Fulbright Fellowship for a year of study in Portugal. Now he can lecture in Portuguese.

That, in a nutshell, is the tale of the Annex. There's no telling what the future holds for it. More horizontal growth is difficult to envision. Greater intellectual growth is another matter.

BIOLOGISTS IN THE NEWS

Personnel changes

Although the University was unable to generate many new faculty positions last year, Biology did remarkably well, despite one important loss. Still, our consistent dual position is that (1) we are at about half strength as far as representing the life sciences is concerned (relative to other universities of similar size), and (2) we need much better representation in cellular and molecular biology than we now have. The correctness of this position can be verified by examining biology faculty:student enrollment ratios in most other major universities, nationally and internationally. UNM suffers badly by comparison, especially in the cellular and molecular area. So we keep on presenting our case to the UNM administration, and last year our arguments were relatively successful, considering a general freeze on new hires.

Our single loss was a big one. Dr. John Wiens, our Distinguished Professor of Ecology, left to take a similar position at Colorado State University. A major consideration in his departure was the creation of a new position at CSU for his wife, Dr. Bea Van Horne. CSU also pays its faculty members better than does UNM, as do most major U.S. universities, a fact of life not lost on many UNM academicians faced with offers from elsewhere. John Wiens made an immense contribution to our graduate program and to the department in general. He will be sorely missed. His replacements will be Dr. James Brown and his wife, Dr. Astrid Kodric-Brown, who jointly took a large cut in salary at the University of Arizona to join us next fall. We'll have more to say about them in next year's newsletter.

Three new assistant professors arrived, last August, as replacements for Drs. Loren Potter and William Degenhardt, who both retired a year ago. Here's an introduction to the new people, two of whom we've already mentioned.

Dr. Bruce Milne came to us after a year as a lecturer in ecology at Harvard University's School of Graduate Design. Holder of a Ph.D. in botany and plant physiology from Rutgers University, Bruce is a pioneer in the study of scale-independent (fractal) methods of analyzing landscape patterns. The National Science Foundation recently awarded him nearly \$150,000 to pursue his novel ideas in the Southwest. Bruce's course assignments cover freshman biology, general botany, introductory ecology, and advanced courses in ecology. Most large universities confer less extensive teaching loads on their active researchers.

After a year as an assistant professor at Memphis State University, Dr. Howard Snell came to UNM at the same rank to be Curator of Herpetology. Howard's background and current interests lie in evolutionary aspects of population ecology. His focus, both at Colorado State University where he received the Ph.D., and at Texas Christian University where he did a one year post-doctoral stint, has been on reptiles -- particularly the land iguanas of the Galapagos Islands where he's done research for years. Howard is a consultant to the Charles Darwin Research Station there, and was recently awarded a Fulbright Grant to continue his research in those famous islands. He teaches introductory biology and advanced courses in his field.

Dr. Charles Wisdom held a postdoctoral position at UCLA before moving to UNM. His Ph.D. is from the University of California, Irvine, and his interests range from physiological plant ecology to plant-herbivore interactions. Charlie, now teaching a new course in the latter area, has looked closely at evolution and quantitative variation in chemical defenses of desert shrubs against insects. He brings to the department's ecological arm a strong background in organic chemistry and quantitative genetics, in addition to an expertise in physiology, ecology, and evolution. He will have a major instructional role in the botany program, and will teach the general botany course regularly.

Miscellaneous Achievements

Recognition in a variety of forms came to many UNM biologists during the past year. Here is but a small sampling:

Dr. Scott Altenbach's work with bat flight remains highly visible. Winner of a 1983/84 UNM Outstanding Teacher Award, Scott's international reputation in flight mechanisms and bat photography is evident from recent TV films (e.g., BBC's "Life on Earth," the Canadian Broadcasting System's "The Nature of Things," several National Geographic Society productions, and the Smithsonian Institutions's "On the Wing" last June). National magazines, newspaper writeups, and a mammalogy textbook have also featured his contributions.

Dr. Oswald Baca, Associate Dean of Graduate Studies and a highly recognized investigator of pathogenic rickettsial organisms, was invited to be a visiting scientist this summer at the Laboratoire de Bacteriologie-Serologie-Virologie in Marseilles, France. Oz, whose research is regularly supported by NSF and NIH, has also been asked by the National Research Council to serve on the Evaluation Panel in the Physical and Life Sciences, Mathematics and Engineering for the Ford Foundation's Postdoctoral Fellowships for Minorities Program.

Scott Gardner, a doctoral student, was recently awarded a grant by the National Science Foundation to pursue his dissertation research on zoogeography and coevolution of rodents and their helminth parasites in Bolivia. Scott has been a Teaching Assistant here since 1983, during which time he has received research support from the American Museum of Natural History, the American Society of Mammalogy, and UNM's Latin American Institute.

Dr. Eric S. Loker, better known as "Sam," is one of our important links between cell and molecular biology and ecology/evolution. Coming to UNM from a faculty position at Virginia Commonwealth University several years ago, Sam's doctoral work in parasitology at Iowa State University preceded postdoctoral training in immunology at Oregon State University; this experience allows him to interact easily with a broad assortment of biologists. His research centers on the biology of snails that serve as intermediate hosts for blood flukes causing schistosomiasis, one of the world's major diseases of humans. Recent large grants from the Agency for International Development (AID) and the National Institute of Allergy and Infectious Diseases enable him to carry on this work here and in Kenya.

Dr. Gary Miller, who completed his dissertation here on the ecology of bighorn sheep last semester, is now in Antarctica studying the behavioral dynamics of nest site selection in Adelie penguins. Gary will spend two field seasons in the Antarctic in collaboration with a colleague at the University of Otago, New Zealand. An NSF fellowship was awarded to Gary for this work.

Robert Sullivan, now working toward his Ph.D. in our department, has been extremely successful in procuring outside funding for his dissertation research on the historical biogeography of Southwest montane mammals. Support over the years has come from six research grants from agencies outside the university, plus an NSF Dissertation Improvement Grant. Earlier this year, NSF awarded Bob and Dr. David Hafner a very large grant to broaden and pursue a joint study on pikas. The grant will be administered through the New Mexico Museum of Natural History, where former UNM doctorate recipient Hafner is Curator of Vertebrates.

Dr. Randy Thornhill, known internationally for his research on sexual selection, last year was accorded UNM's most prestigious faculty recognition, the Annual Research Lectureship. Randy's continuous support from NSF is currently shared with Dr. David Ligon in an intriguing study using the evolutionary antecedent of chickens, namely the red jungle fowl. Among the questions asked by Randy and Dave are: Why are males so elaborately ornamented? How much do females care about this? Do intestinal parasites have any influence on the ornamentation? If you stop and think about it, these questions have broad application.

Dr. Kate Vogel, who was awarded a coveted UNM Presidential Lectureship from 1984-86, continues to be a key player at all levels in department activities. A former NIH Career Development Award winner, and current principal investigator on two NIH grants dealing with the metabolism and molecular structure of connective tissue, Kate was recently elected Chair of the American Society for Cell Biology's sub-group on Women in Cell Biology.

Dr. Terry Yates, also a 1984-86 Presidential Lecturer, is Curator of Mammals in our Museum of Southwestern Biology (MSB). The Mammal Museum, with its 60,000 specimens valued at three million dollars, is on a completely computerized information retrieval system, thanks to Terry and his associates. It ranks in the top 10 such organizations in the United States. An NSF grant to Terry and MSB director Dr. James Findley has helped in updating and reorganizing the Museum. Terry also has NSF grants for a genetic survey of Bolivian mammals and shares an NIH-MBRS grant with chairman Don Duszynski on a genetic study of mammalian hosts with respect to their coccidian (protozoan) parasites.

Teaching Awards

Central to the mission of any institution of higher education is the communication and critical assessment of facts and ideas. Teaching and research are the basic, albeit overlapping ingredients of this endeavor. So far in this newsletter we've emphasized research accomplishments. Good teaching may be harder to document, but there is solid evidence that UNM biologists do it well.

Each year UNM awards \$1,000 prizes to a small number of "Outstanding Teachers of the Year." In 1985 Dr. Scott Altenbach (see above) received one of these. In 1987 Dr. Paul Kerkof was awarded another. Long known as a gifted teacher, Paul's courses in cell biology invariably get "outstanding" ratings in official student evaluations. His scores are seldom topped anywhere on campus.

Others have received teaching recognition as well. For example, electron microscopist Dr. Robert Chiovetti was nominated (along with Scott Altenbach) for a Burlington Award last year. A dozen or so faculty members and graduate teaching assistants fall into the official "excellent" category each semester. And our TAs are well thought of at the highest university levels. Thus, Tina Haynes, who obtained her M.S. degree last spring, was one of UNM's two "Outstanding Teaching Assistants." (Prior to that she had also been given the Biological Society of New Mexico's "Outstanding Teaching Assistant" award.) Shawn Wright, a doctoral student, made UNM's "Honorable Mention" category. Since the UNM Foundation, Inc. gave out a total of four of these campus-wide awards last year, we were very pleased that one-half of them went to Biology graduate students.

PLANS FOR VISIBILITY

UNM is in a financial "crunch" for the fifth consecutive year. That raises an important question: How do vigorous, high-standard units like the Biology Department maintain momentum and deliver excellence in the face of such cuts?

Clearly, we have to take charge of our own destiny if maintenance and delivery are to be assured. To this end, we in Biology plan to wage a continuous public-relations campaign to inform New Mexicans of our educational efforts, and to attract more students to UNM in general and Biology in particular. Here's how we plan to do these things.

First, we anticipate making direct contact with friends and alumni like yourselves, and the public at large. We're thinking, right now, about a "phonathon" as one means of accomplishing this. Simply stated, we'll ask for contributions -- and say why we need them. Another form of contact -- in which we'll solicit students, not money -- is by having our most persuasive teachers visit each Albuquerque, Las Cruces and Los Alamos high school annually, explaining why UNM is a good university to attend, and why Biology is a smart area to major in. We're developing a career-related brochure for that purpose.

Second, we are asking in this very letter for volunteers among you to be members of a new Biology Alumni Development Committee. This committee's main responsibility will be to help us come up with novel ways to raise funds on an annual and long term basis. If we are successful, with your help our Department will be able to achieve some insulation from the financial vagaries of the University. Do let us know if you are interested in helping us. Proceeds from donations would go to such worthy causes as local seminars and symposia, graduate fellowships (very few are available at UNM) to confer upon our best graduate students, and travel funds (very little is available at UNM) to support faculty and graduate student travel to professional meetings. As in other professions, regional, national, and international conferences are key sites for information exchange, student and faculty recruitment, and contacts regarding all sorts of scholarly activity. Biology at UNM is on the international map in part because most of us travel -- most often using personal funds -- to such meetings. It's embarrassing to be invited to participate in an international conference and to be unable to go because your university can't give you travel money; this has happened here - no joke!

So if you'd like to help us in any way: by direct donation (see below), by volunteering to help us raise funds, and certainly by making suggestions for positive action, we'll be very grateful indeed. If nothing else, we want you to remember your academic "roots" and to be proud of them.

THE BIOLOGICAL SOCIETY OF NEW MEXICO

Organization

The Biological Society of New Mexico is a tax-exempt organization under the New Mexico Nonprofit Corporation Act and the United States Internal Revenue Code. The object of the Society is to establish and maintain endowments, trusts, and foundations and to administer grants and other funds, all for the purposes of encouraging, fostering, and pursuing excellence in education in the Department of Biology at the University of New Mexico. Such purposes shall be pursued directly through sponsorship of educational programs, support of education-related research, and any other activities, academic processes, or programs that benefit our primary goal of excellence.

The Society is authorized to receive, disburse, and administer funds, grants, stipends, honoraria, property, or any other interests for educational purposes. Tax-exempt gifts may be given with designation to be used for specific purposes, e.g., student fellowships, research support, or whatever, as long as the purpose fits the objectives of pursuing excellence in biological education and research at UNM. The funds will be administered by the Board of Directors under the laws of New Mexico governing non-profit corporations and the federal laws governing tax-exempt educational organizations approved by the U.S. Internal Revenue Service.

Membership

1. Any person contributing an annual fee, on a calendar year basis, of \$15 or more is appointed a member of the Society and will receive the Newsletter. As with membership in all professional societies, this is a tax deduction.

2. Any person contributing \$25 will be appointed a member and on request will receive a T-shirt or tank top of excellent quality with the logo and name of our Society.

3. Any person or organization contributing a lump sum of one thousand dollars or more is appointed a Patron of the Society. Patrons are entitled to membership benefits for life and will receive a Certificate of Patronage. Anyone contributing \$10,000 or more will be considered a "Patron Saint" of the Society.

4. All memberships and contributions are tax exempt.

5. Please mail memberships and contributions by check payable to "The Biological Society of New Mexico" to:

Secretary-Treasurer, Biological Society of New Mexico
Biology Department
The University of New Mexico
Albuquerque, New Mexico 87131

DETACH AND MAIL -- Even if you can't help financially, we'd really like to hear from you and learn about what you're doing. Thanks.

Name _____ UNM Degree _____ Year _____
Other Degrees _____

Current Mailing Address _____

Current Occupation _____

Other Activities _____

Enclosed check \$ _____

If \$25 or more and you desire a shirt, check appropriate boxes:

T-shirt Blue Small Large
Tank top Cream Medium