



Vol. 6, August 1990  
1990 NEWSLETTER

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## GREETINGS

We owe many of you a great deal of gratitude! Many of you supported our department by taking the time from your busy schedules to write and to let us know your whereabouts and what you were doing. You also sent personal messages to some of our faculty, whom you remembered as being special or particularly helpful during the time you spent in Biology, and they appreciate this very much. Some of you were able to contribute financially to our program and you can be certain that your donations played an increasingly important role in our continued development and achievements.

This has been a busy year in Biology. Much of the year was spent recruiting and hiring 2 outstanding new faculty members, Dr. Ann Evans from the University of Chicago and Dr. Mary Anne Nelson from the University of Wisconsin. Ann is a population geneticist interested in plant adaptations to environmental heterogeneity and will join our faculty in August 1991; Mary Anne is a molecular geneticist interested in gene expression--she will join us in January 1991. I am confident you will learn a lot about the accomplishments of these 2 young scholars in future Newsletters. Some of the other activities during the past year in which we take pride include: distributing our departmental video to all of the high schools in the major metropolitan areas of New Mexico; hosting our Second Annual Biology Graduation Ceremony; increasing the scope of our Long Term Ecological Research (LTER) site (see inside); securing start-up funds from the National Science Foundation (NSF) to begin construction of a permanent field research station on the Sevilleta National Wildlife Refuge, our LTER site; learning that 2 more of our young assistant professors, Drs. Bruce

Milne and Margaret Werner-Washburne, have received Presidential Young Investigator (PYI) Awards from NSF (more later); and just the day-to-day joy in the many accomplishments of our faculty, students and staff. I hope that you will share some of our excitement and our pride as you read our 6th Annual Newsletter. Enjoy!

Donald W. Duszynski  
Professor and Chairman

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## FACULTY HIGHLIGHTS

Our Department now enjoys the singular success of having 3 of its Assistant Professors selected as Presidential Young Investigators. This is a tremendous honor for the faculty members, Drs. Diane Marshall, Bruce Milne, and Maggie Werner-Washburne, for the Department, and for UNM. Last year Diane was selected for her studies on the mating patterns in plants and their implications for selection--research that addresses basic questions about plant reproduction. This year, Maggie and Bruce were selected as 2 out of approximately 200 scientists and engineers nationwide to receive the prestigious NSF-PYI Awards for 1990.

The awards, which fund research by faculty members near the beginning of their careers, are intended to help universities attract and retain outstanding young Ph.D. scientists who might otherwise pursue non-teaching careers. Each PYI may receive up to \$100,000 a year for 5 years, but only in a 1:1 combination of federal and private matching funds.

the Technion University in Haifa, Israel, to conduct research in the area of connective tissue biology. While in Haifa she will work with Professor Alice Maroudas, an international expert in cartilage biomechanics. Kate herself is an internationally recognized scholar, having received a prestigious Research Career Development Award by the National Institutes of Health in 1982; she also has served in the Cell Physiology Study Section for the NIH, was Chairperson of Women in Cell Biology, a committee of the American Society for Cell Biology, and she was named a UNM Presidential Scholar from 1984-1986.

Returning from their sabbatical leave in Australia are Dr. David Ligon, his wife Sandy, who is a Lecturer in our freshman biology program, and their 2 sons. Dave was a Visiting Research Fellow at the University of New England in Armidale, New South Wales, and he and Sandy conducted field studies dealing with the phenomenon of cooperative breeding in birds, a subject they earlier researched in Kenya. The 2 boys truly enjoyed the school year in the new environment and the entire family found day-to-day life in Australia to be exceedingly pleasant.

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## DEPARTMENT NEWS:

### Sevilleta LTER Continues Growth

One hundred years ago, biologists in New Mexico were attempting to identify and catalog the impressive diversity of plant and animal life they found flourishing in our state. Problems with potential global impact such as the greenhouse effect, acid rain, and ozone depletion were not a major concern. In general, the time required to complete a study and publish the results was more a function of the time available to the researcher for data analysis rather than how long it took for planetary climatic patterns to complete their normal cycles and whether funds for the research could be generated from non-university sources. Today, UNM biologists are still concerned with biodiversity, not only in New Mexico, but throughout the world. The scope of their research, however, has expanded to include scales from the molecular and micro to global and time periods that range from days to decades. The exceptional variation that

generated excitement in biologists working in our state 100 years ago may well play a major role in helping to provide answers to some of the world's most serious environmental problems today.

Our Department's LTER Program has grown considerably in its 2nd year of operation. With major funding from NSF, 18 UNM biologists are continuing their studies on global climate warming and its effects on a variety of New Mexico ecosystems. The primary study site is the 400 square mile Sevilleta National Wildlife Refuge, located between Belen and Socorro. The Sevilleta lies in the transition zone between 4 major biomes, and contains extensive areas of short-grass prairie, Chihuahuan Desert, Great Basin shrub-steppe and piñon-juniper woodland. As a result of its location at the junction of these ecosystems, the Sevilleta is exceedingly rich in plant and animal species. By studying the responses of these diverse communities to fluctuations in annual climate regimes--particularly the "El Niño-La Niña" rainfall cycles--UNM researchers hope to evaluate and predict biotic changes brought about by the anticipated warming of the Earth's climate.

In addition to the Sevilleta, the LTER Program has recently expanded its study sites to include the cottonwood "bosque" ecosystem at Bosque del Apache National Wildlife Refuge and the subalpine forests/meadows of the Magdalena Mountains in Cibola National Forest. Inclusion of these ecosystems in the LTER study makes the area covered by our LTER nearly the size of Rhode Island--by far the largest and most biologically diverse of the network of 17 LTER sites funded by NSF. More importantly, the inclusion of these ecosystems will allow UNM scientists to compare the effects of climate dynamics on biotas from a wide variety of New Mexico's habitats, ranging from dry, hot deserts to moist, cool forests.

An extensive network of weather stations monitors climate dynamics on the Sevilleta so that UNM researchers can correlate biotic responses to changes in weather conditions. Among the numerous studies on the LTER are those on nutrient cycling (Drs. Jim Gosz, Carl White), population dynamics of plants (Drs. Diane Marshall, Charles Wisdom, Ann Evans), small mammals (Drs. Jim Brown, Jim Findley), reptiles (Dr. Howard Snell), arthropods (Drs. Cliff Crawford, Bob

querque and serves as President of the New Mexico Herpetological Society.

Steven J. Traub (BS/BA 1974) received a DDS in 1978 from Creighton University. He is an oral and maxillofacial surgeon in Albuquerque, and serves on the Advisory Board of the American Institute of Oral Biology. He adds, "This group meets annually in Palm Springs, CA, and any interested person should contact me regarding attendance at this meeting."

Sue Tornquist (BS 1980, MS 1987) received her DVM degree from Colorado State University in 1985 and is in private clinical practice and part-time research at Veterinary Diagnostic Services at the New Mexico State Veterinary Lab in Albuquerque. She has a 3-year-old daughter, Miranda, and enjoys traveling, canoeing and running.

Leslie Jean Wall (BS 1985, MBA 1986) is working for the Central Intelligence Agency and is active at the Smithsonian.

William R. (Dick) Widner (MS 1948, PhD 1952) was awarded the first PhD in Biology from UNM in 1952. Since then he has worked for the Atomic Energy Commission for 3 years and then went back to teaching. He retired from the Navy as Captain USN Ret. in the Medical Service Corps and also retired from the Biology Department at Baylor University as Emeritus Professor of Biology on May 31, 1989. His interests are hunting, traveling, photography and gardening.

Daniel E. Williams (MS 1968, PhD 1971) is now a Professor of Zoology at California State University in Turlock, CA. He directs a research project sponsored by the US Bureau of Land Management, California Department of Fish and Game, US Fish & Wildlife Service, and the Nature Conservancy on the "Effects of livestock grazing on an endangered community dominated by giant kangaroo rats (Dipodemys nigens)." Others involved include Dr. David J. Germano (PhD 1989), who is serving as field supervisor of research.

Glenn L. Wilson (BS 1971) is a Professor in the Department of Structural and Cellular Biology at the University of South Alabama College of Medicine.

Richard A. Wilson (BS 1980, MD 1987) is a third year resident in anesthesiology at Texas

Tech Regional Academic Health Center, El Paso, TX. His interests are scuba diving, skiing, sailing and mountaineering.

#### Other Friends and Supporters of the Society and the Department:

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## 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.

The Society is authorized to receive 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.

Your gift can be earmarked for specific purposes! 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, and awards for teaching excellence.

In addition, we have 6 other accounts that may have special interest to you.

### L.D. Potter Endowed Chair in Plant Ecology.

For the last 5 years we have been building an endowment from private donations and other sources to create the 1st Endowed Chair in Biology. When Loren Potter retired in June, 1985, it seemed appropriate to honor his teaching and research efforts in field plant ecology not only because of his personal contributions to the discipline and to our Department over the years, but because we recognize the importance of plant ecological studies as they pertain to our natural resources. Thus, the idea of an Endowed Chair in his honor was conceived and a goal of generating funds to support that chair was set. To date we have about \$125,000 in our endowment and we hope, at least, to double that amount by the time the 1st Potter Chair is awarded on July 1st, 1991.

### Melinda Bealmear Scholarship.

Melinda Bealmear was a dedicated and beloved staff member in our main office, who died in a tragic car accident in October 1986. Our graduate students, faculty and staff, along with help from her parents Dorothy and Dale, established a scholarship fund in her memory. The fund now has about \$2,500. We would like to accrue enough principal, say \$50,000, so that the annual interest could be used to support the program of a needy graduate student in Biology.

### Museum of Southwestern Biology-Mammals.

The purpose of this Museum account is to support any and all aspects of mammalogical and field research conducted by faculty and graduate students in Biology at UNM.

### Presidential Young Investigator Matching Funds

As noted earlier in this newsletter, we are working against time to help our 3 PYIs generate the private funds they need to qualify for matching funds from NSF. Remember that donations can be in kind (i.e., building materials, vehicles, laboratory equipment, etc.). Won't someone try to sponsor a PYI?

### Faculty Excellence Fund

We recently started this fund to support faculty travel to professional meetings at which they are presenting the results of their work. We have only \$475 in this fund--

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

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

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DETACH AND MAIL -- If you haven't responded before, we'd really like to hear from you and learn about what you're doing. Thanks for your continued support and interest!

Name \_\_\_\_\_ UNM Degree(s) \_\_\_\_\_ Year(s) \_\_\_\_\_

Other Degrees \_\_\_\_\_

Complete Current Mailing Address \_\_\_\_\_  
\_\_\_\_\_

Phone No. \_\_\_\_\_

Current Occupation \_\_\_\_\_

Activities and interests:

Please respond even if you can't contribute. But if you can help us financially, or with donations in kind, let us know how you want your contribution used:

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Potter Endowed Chair	_____	(\$20)	
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Museum of Southwestern Biology	_____		
PYI Account	_____		
Faculty Excellence Fund	_____	Total Amount	
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Other	_____		