Several noteworthy events have occurred since the last BSNS newsletter. One of them was the decision by Don Duszynski to step down as Chair of the UNM Department of Biology. Don gave us nearly 10 years of leadership, during which time he produced many significant accomplishments. One of these is the founding of The Biological Society of New Mexico and its annual newsletter, which has given you the opportunity to read about the many good things that our faculty and graduate students have done during Don’s tenure.

I am Don’s successor as Chair. For those of you who do not know me, let me give a brief sketch of my background and interests before providing a very brief overview of our Department from a new Chair’s perspective. I came to UNM in 1968 as the first ornithologist to be hired at this university. (Do any of you remember the Skin-Ins vs. Skin-Outs football game of 1968, with Bud Riedesel on the trombone? Coaching the Skin-Outs to a convincing victory over the physiologists, etc., remains one of my early departmental accomplishments!)

Thus, although I am the new Chair, I am also an old-timer in this Department. My 23-year career at UNM has been highlighted by the life-long friends I have made, both among my faculty colleagues and among many of the graduate students who have come and gone over the years. Other noteworthy professional endeavors include a long-term (1975-1984) field project in Kenya and, more recently, a year’s sabbatical of research and writing in Australia. These foreign ventures were conducted with my wife, Sandy (Husar), who received an M.S. degree from our Department in 1973 and who was appointed as a Lecturer here in 1979. To sum up, Sandy and I have long ties with the Department and with many of the people affiliated with it.

As you probably already know, our Department has become quite visible at a national level. This recognition is based on various professional accomplishments by our faculty and graduate students. In last year’s newsletter, you read about three Presidential Young Investigators and the Long-Term Ecological Research program on the Sevilleta National Wildlife Refuge. The area of biology broadly labeled “cell-molecular” is also beginning to gain momentum here in a way not seen...
before. It would take a great deal of space to describe the scholarly publications, the grants obtained, and the other professional successes enjoyed over the past year by our very productive faculty. So I will simply say that if you are a current or former member of this Department, you can be very pleased with the professional development and the national and international recognition that the faculty has earned over the past two decades.

Based on just about any measure, the Department of Biology has become a real success story at UNM. For example, we are now one of the largest departments in the College of Arts and Sciences, we lead all other science departments in obtaining competitive grants and contracts, and we teach a great many students. Given this generally happy situation in a perennially resource-limited environment, I am confident that we will continue to contribute to the educational mission of UNM, both through teaching and research, and that we will have good news to share with you each year into the indefinite future. For me personally, it is a privilege to serve as Chair of this group of faculty, and my goal is to help them attain their professional goals.

Finally, I want to say thank you for your interest and support.

The Sustainable Biosphere Initiative

Dr. Jim Gosz will become the first Program Director for the Sustainable Biosphere Initiative (SBI) in January, 1992. The SBI is a new, multi-year, multi-disciplinary program of the Ecological Society of America. It will focus on the necessary role of ecological science in the wise management of Earth's resources and the maintenance of Earth's life support systems. SBI will focus on three priority areas: global change, biological diversity, and sustainable ecological systems within this framework.

SBI's plans include basic research for the acquisition of ecological knowledge, applied research to understand environmental problems, communication of that knowledge to citizens, and incorporation of that knowledge into policy and management decisions.

The research recommendations of SBI will: 1) examine the ways that ecological complexity controls global processes; 2) address both the importance of biological diversity in controlling ecological processes and the role those processes play in shaping patterns of diversity at different scales of time and space; and 3) establish a major, integrated program on the sustainability of ecological systems in natural and human-dominated ecosystems so that restoration and management recommendations regarding Earth's ecological systems can be made.

Jim's role as Program Director will be to develop and hold workshops on these topics to formulate a research strategy, and to work with different agencies to develop an integrated plan and support for the necessary research. He will also help with briefings to Congress on SBI issues, plans and progress.

The SBI office will be located in Washington, D.C. Initial funding has been provided by the National Science Foundation (NSF), with subsequent support provided by a number of federal agencies. Jim expects to direct SBI for one year with the aim of the federal government then setting up a permanent office.
Biology's First Endowed Chair

As alumni and friends who have followed our activities over the last five or six years, many of you are aware that we have been building an endowment called the Loren D. Potter Chair in Plant Ecology since June, 1985. The details and the history of this endowment can be found in earlier editions of our newsletter.

At the Biology Department's Commencement this past May, our Provost, Dr. Paul Risser, announced that Dr. DIANE MARSHALL is the first recipient of the Potter Endowed Chair. As Chair, part of the annual interest on the principle of the Potter Endowment is available to Diane for research purposes in each of the next five years.

Diane joined the Biology Department in August, 1985, after having spent a year as an Assistant Professor at Earlham College and two years as a Research Scientist at the University of California at Riverside. Diane has clearly distinguished herself in every way possible since joining our faculty. She has established herself as a leader in her chosen area of study, plant reproductive biology. She has published prolifically (25 papers) in the best refereed journals in ecology, presented nearly 30 papers and posters at professional meetings worldwide and another 27 invited seminars at major research universities, is the principal or co-principal investigator on five major NSF grants since coming to UNM, and in 1989, she was one of only four young ecologists in the United States to receive a Presidential Young Investigator (PYI) Award from NSF. At the time, her's was one of only two PYIs ever to be received by a faculty member at UNM and the first one in the College of Arts and Sciences. In November, 1990, she was appointed a Regents' Lecturer for three years, one of the most prestigious awards with which UNM can honor its faculty for outstanding achievement.

In the classroom, the results are the same. She has taught five different courses since joining our department, and students and faculty who have witnessed her teaching find it praiseworthy. In the Spring of 1990, she was nominated for the UNM Outstanding Teacher Award by the students in her classes.

Both at the departmental level and at the university level, she is a tireless committee worker and a departmental citizen par excellence. Given her area of interest and her enormous contributions, Diane is the appropriate and well-deserving person to be the recipient of Biology's First Endowed Chair: the L.D. Potter Chair in Plant Ecology. Congratulations, Diane, and thank you for your hard work!

-D. Duszynski

New Department Chair: J. David Ligon

You will notice as you read this newsletter that we have had many beginnings in this past year. Among these changes is a new Department Chair elected by the faculty, staff and graduate students. Dr. J. DAVID LIGON took over the reins from Dr. DON DUSZYNSKI, who stepped down in August after more than nine years in office. Working with David will be four Assistant Chairs: Drs. Kathryn Vogel, Clifford Crawford, Howard Snell and Sam Loker.

David received his Ph.D. in Zoology from the University of Michigan in 1967, and joined the UNM Biology faculty in 1968. He is married to Sandy Husar Ligon, who is a lecturer in our Department, and they have two pre-teen sons.

David's areas of special interest are behavioral ecology of birds and mammals; avian cooperative breeding systems; and sexual selection. In the past five years, he has taught courses in animal behavior, general vertebrate zoology, ornithology, conservation biology, behavioral ecology and graduate seminars on avian and mammalian social systems.

As some of you may recall from last year's newsletter, David and his family spent a year in Australia in 1989 while on sabbatical as a Visiting Research Fellow at the University of New England, Armidale.

In addition to his new duties, David is in the process of writing a book on "The Evolution of Avian Mating Systems."
Insect Research in Japan

Dr. Randy Thornhill was in Japan from May 15-August 30, 1991, conducting field research on scorpionfly mating behavior. His research was sponsored by a Fellowship of the Japan Society for the Promotion of Science. Randy, who has done research on scorpionflies in Australia, New Zealand, Europe and Mexico, remarked that "Japan turned out to be the easiest foreign country for my research that I have worked in." Studies of insects tend to be logistically difficult (the habitat must be located, specific equipment must be secured, research facilities are needed, etc.), but due to the highly organized arrangements made by his Japanese hosts in Nagoya University, Shinshu University and Kyoto University, he found that the time spent in Japan "was one of the most productive three and a half months of my career."

In addition to his studies, Randy visited several universities where he gave lectures and spoke with other scholars in his field. He reports that there is a wide range of animal behavior studies being conducted in Japan, and that Japanese interest in this area of research is comparable to that of Western Europe, the U.S. and Canada.

Randy also studies human behavior, and found two aspects of Japanese culture particularly intriguing. One is the great emphasis on formal social politeness, and the other is the manner in which they present their country's history (mythologically vs. scientifically as in the West, according to Randy).

Randy so "enjoyed everything about the country" that he intends to spend a few months each year doing research in Japan beginning in 1993.

Keeping Up with the Browns

Dr. James H. Brown has been doing experiments on a 20-ha. site in the Chihuahuan Desert of southeastern Arizona for the last 13 years. These studies have shown that kangaroo rats are "keystone" animals, and that their removal causes dramatic changes in vegetation and other kinds of animals. Jim was named an UNM Regent's Professor for 1990, and was awarded a John Simon Guggenheim Fellowship to write a book entitled, Macro Ecology: The Interface of Ecology, Biogeography and Evolution, while on sabbatical in Australia (August, 1991-January, 1992).

Also on sabbatical in Australia, Dr. Astrid Kodric-Brown will be studying the behavior, ecology and biogeography of Australian desert fishes. Astrid's work is supported by a Mid-Career Fellowship from the Biotic Systems and Resources Division of the NSF. The springs of central Australian deserts provide one of the few remaining opportunities to study the ecology of endemic desert fishes under natural conditions. Astrid will compare the behavior, morphology and ecology of these fishes with those of their North American counterparts to assess the extent of convergent evolution. The results of her study should aid in the preservation of these relatively undisturbed fish faunas and spring ecosystems.
New Faculty Activities

Dr. Mary Anne Nelson (molecular genetics and molecular biology) came to UNM from the University of Wisconsin in Madison, where she was a Post-doctoral Fellow. When she arrived here after an ice storm hit NM (around Christmas, 1990), she heard locals grumbling about the weather, but she found it “fantastic” and “a great relief” compared to Wisconsin’s.

Mary Anne spent her first spring semester at UNM writing papers for publication and grant proposals for funds needed to run her laboratory. The latter was an eye-opening experience: “I had no appreciation for how long it would take to find all the necessary items, and indeed how many items are found in molecular biology laboratories.” During the summer, Mary Anne was able to start using her laboratory, working closely with one graduate student and two undergraduates.

In the Fall of 1991, Mary Anne began teaching Introductory Genetics with more than 100 students. It was the first time she had taught such a large class, and she learned a lot about teaching as the students were “aggressive about letting me know when I did things poorly, and when I did things well.” She has been “favorably impressed with the caliber of UNM students—they are very intelligent and also extremely interested in the subject. I really enjoy most of my students.” Mary Anne’s one problem with teaching has been the consequent lack of time available to spend in her laboratory. Fortunately, two “great lab assistants” have kept things going for her.

Since joining our faculty this fall, Dr. Ann Evans (ecology and evolution) has been busy getting settled in. In addition to purchasing equipment for her newly renovated lab facilities, Ann has submitted a paper for publication and a NSF proposal for research support. Her proposed research will use a local genus (Townsendia, of the sunflower family) to examine the genetic basis of physiological adaptations to different soils, including gypsum. The newly completed greenhouse (see p. 10) will provide Ann with great facilities to conduct this research. Ann has also participated in developing two NSF educational grants, one for undergraduate course development and one for undergraduate research in conjunction with the Sevilleta LTER. She is sponsoring one senior undergraduate honor’s thesis, and finds it “particularly rewarding to work with an enthusiastic student who is gaining her first research experience.” She will teach her first course, Advanced Ecological Genetics, in the upcoming spring semester.

Appointments and Elections

On July 24, 1991, Governor Bruce King announced the appointment of Dr. Carleton S. White to the Member-at-Large position on the New Mexico Water Quality Control Commission. Carl was asked to serve a four-year term. The Commission acts as the state’s water pollution control agency, and works to develop a comprehensive water quality control program.

Carl was also appointed to the Curriculum Development Committee for the Master of Water Resources Administration program and now serves as a member of that faculty.

Dr. Timothy K. Lowrey has been elected the Chairman of the Systematics Section of the Botanical Society of America.
UNM's Hemispheric Initiative Advisory Committee recently presented the first draft of the University's proposal for future projects with Latin American countries for research, teaching and cooperative exchanges. The Department of Biology has an established record of research and teaching ties to countries throughout Latin America. The past decade has seen these associations increase rapidly, especially in the prominent fields of biodiversity, conservation and global climate change. The Department currently has active collaborations with institutions in Mexico, Ecuador, Bolivia, Argentina, Paraguay and Chile, and is rapidly becoming a global center for the study of Latin American biology. No other program seems as well positioned to address questions in biodiversity and global change between hemispheres as does UNM's Biology program. Some of the most notable and most recent interactions between UNM Biology and Latin America are:

**BOLIVIA**

Dr. Terry L. Yates has received a three-year renewal of a research project he began in 1984 on mammalian diversity in Bolivia. This award, in collaboration with the American Museum of Natural History in New York and funded by the National Science Foundation, totals $210,000 and will support research centered in the Yungas and Valles of Central Bolivia. Dr. Scott L. Gardner, who recently received his Ph.D. in Biology from UNM and who is now on the faculty at the University of California at Davis, will join this research effort and has secured an additional grant of $206,000 from the NSF to conduct parallel studies of the parasites of the mammals being examined in Terry's study. We currently have convenio's with universities and museums throughout Bolivia, and Terry has a graduate student, Jorge Salazar-Bravo from Bolivia. Dr. Sam Loker also has a new Bolivian student, Maria Gabriela Perotti (Jorge's wife), starting in the Spring of 1992. Terry taught a course in field biology in Bolivia last summer, and submitted and received a grant from a gold mining company in Bolivia to conduct environmental research there.

**ECUADOR**

Dr. Howard Snell has received considerable support for his research in the Galápagos Islands of Ecuador. Most recently, he received a $36,000 award from the U.S. Man and the Biosphere Program for research entitled "The Galápagos Islands Biosphere Reserve: An Analysis of Biological Diversity and Human Impact." Howard also received a $30,000 Fulbright Scholarship in 1987 for research on "The Conservation and Ecology of Endangered Galápagos Reptiles." Through another grant to Howard, 13 Ecuadorian biologists recently visited the UNM campus to learn new research techniques. Also, the major research bulletin for the Charles Darwin Research Station is published at UNM. Finally, Dr. Donald Duszynski recently received a small seed grant from UNM's Latin American Institute to initiate his study on the parasites of endangered reptiles on the Galápagos Islands. Don worked with Howard in the Galápagos during August, 1991.
ARGENTINA

Lee Fitzgerald, a UNM graduate student in Biology, has been leading a research effort in Argentina for a number of years. His research on the biology of Argentinean reptiles was supported with a $120,000 grant from the World Wildlife Fund. Lee also has worked in similar research projects in Venezuela. Several UNM biologists presented invited seminars at an international conference in Buenos Aires last June at which an Argentine member of the U.S. National Academy of Sciences, Dr. Oswaldo Reig, publicly urged attendees to explore cooperative research projects with the UNM Biology Department. We have a formal convenio with several institutions in Argentina, and Dr. Adrian Montjeau of the Institute Bariloche, Bariloche, Argentina, paid a formal visit to the UNM campus in May of this year.

PÁRA圭AY

Two former UNM graduate students, Adia Luz Acquino and Carl Shuster, both of whom received their Master's degrees in Biology at UNM, are now in charge of the Biological Survey of Páraguay. Dr. Norman Scott, an Adjunct Professor in Biology, also conducts research in this country.

MÉXICO

UNM has a major convenio with UNAM, México's largest university, and a number of collaborative projects in biology are named in that document. The current Rector of that institution, Dr. Jose Seruchan, is a biologist who visited the UNM campus in October. Another UNAM Biology faculty member, Dr. William Lopez-Formet, spent the fall semester in the UNM Biology Department and taught a course on the biology of mammals for us. Dr. Gerardo Ceballos, who received his Ph.D. with Dr. James Brown of our Department, is also on the UNAM faculty in the Institute of Ecology. Dr. Rudolfo Dirzo of UNAM is a member of the doctoral committee of Kristina Ernest a UNM Ph.D. student in Biology. Numerous faculty in the UNM Biology Department have research interests in México and we teach part or all of several of our courses in many different localities in México. Dr. Charles Wisdom currently has a graduate student from México City.

CHILÉ

UNM Biology has recently begun collaborative work in this country, and the potential appears high for the future. Dr. James Brown was an invited speaker at the InterAmerican Conference on the Impact of Global Change on Western America in Las Serena, Chilé, last December. This was sponsored by the AAAS, Canadian Academy of Sciences and the Chilean Academy of Science. Both Pablo Marquet, a Ph.D. student of Jim's, and Eduardo Palma, a Ph.D. student of Dr. Terry Yates', are from Chilé. A well-known cytogeneticist, Dr. Milton Gairardo, also from Chilé, plans to visit the UNM Biology Department during the coming year.
Traditionally, commencement speakers exhort the graduates to go out and do good, and to assume the mantle of responsibility for leading the country and the world onto better things. I won't neglect that duty, but since you are all biology graduates, I have an obligation to point out the very special responsibilities of one with a biological education.

I intend to do this by making you listen to one last biology lecture because, according to my teaching philosophy, your education is not quite complete. My teaching philosophy came not from a college of education, but from the U.S. Army. As a young man of 18, I was fortunate enough to attend a free four-month course in infantry tactics at the Infantry Replacement Training Center at Camp Gordon, GA. There, I received the only formal guidance in teaching I've ever had.

The educational doctrine of the Army was simple:

"Tell 'em you'll tell 'em. Tell 'em. Tell 'em you told 'em."

We biology professors have spent the last few years telling you a bunch of things about biology. Now I'm going to finish the job by telling you what we told you.

Here it is:

Life on Earth began about four billion years ago. The Earth was raw and young, and the first life forms developed in a warm, organic soup and ate organic molecules and each other.

About a billion years later, the descendants of some of these organisms learned to capture the Sun's energy.

In another billion years, because of this photosynthetic activity, oxygen began to accumulate in the Earth's atmosphere.

By a half-billion years ago, as a result of speciation and adaptive changes, as a benefit of the oxygen-rich atmosphere, the descendants of these first organisms filled the world's oceans with incredible numbers of individuals and species.

In another 100 million years, they had invaded the land. Terrestrial and marine life forms, plants, animals and
protistans evolved to practice a rich diversity of modes of making a living and of interacting with one another.

As a result of their continued speciation and diversification, each of the millions of kinds of organisms that managed to survive developed a unique and efficient set of strategies for capturing and holding materials and nutrients. The combined biomass of the Earth came to represent a vast reservoir of biological compounds and chemical energy.

By interacting with the physical environment, this biota modified the atmosphere, the waters, the rocks, soil and temperature in such a way that the whole surface of the Earth became a more suitable habitat for life. Indeed, some contemporary biologists take the view that, in its ability to control and modify its environment, the entire biosphere is very like a gigantic organism, which has been named Gaia, after the ancient Grecian goddess of the Earth.

Despite the fact that the universe is running down, despite the fact that the galaxies are growing ever dimmer and more distant from one another, and despite the fact that the Second Law of Thermodynamics dictates that entropy will accumulate and that time must have a stop, life here on Earth provides a refuge from this inexorable domain of physical laws.

Here energy accumulates, things grow and reproduce, complexity and diversity increase, flowers bloom, birds sing, and, for the moment at least, the Earth is a well-ordered and productive garden from which we humans have not yet been ejected.

Continued existence in this garden is by no means assured. Most of the species that dwelt here once are gone, their abilities to accommodate to the existence of other kinds, to feed, to reproduce, to adapt, and to manage their economies having failed them.

We humans, as a part of this biotic matrix, can have hope for long-term residency in proportion to our ability to manage our relationship with other denizens of the garden in such a way as to ensure successful coexistence.

How to learn the secrets of living together? We all, each human, each microbe, each bird and plant, carry within our cells a record of this history of life. We each carry a personalized account of the experiences of our ancestors in dealing with life's problems. We each carry a program of instructions for successful living.

That program is our genetic code. It dictates, in substantial part, what we will do and how we will look. But these genetic lessons are based on the successes and failures of our predecessors. They tell us only what worked in the past. Each of us, and all biology, is constrained by history. Nothing in biology allows us to predict our future.

At the reproductive levels of chemistry and physics, we may make valid predictions, but at the level of the cell, the organism, the population, the community, or the ecosystem, the calculus of physical science fails us. We biologists are adrift in a middle number system. We are stalked by chaos. Our closer kinship is with sociologists, economists and historians.

Our inherited tool for coping with the present and the future is our ability to learn. Learning about life at its various scales of organization may lead us to that holistic understanding of the properties of nature that must inform our plans for continued existence in this highly selective enclave.

For that understanding, to the extent that it is attainable, humanity must look to responsible biologists.

To whom else?

Only biologists are attuned equally to the flow of energy and materials through and between cells, organisms, and ecosystems, to the flow and diversification of life through ecological and evolutionary time, and to the flow of the wind through the willows and over the wing of a falcon.

That's what we've tried to tell you.

And you graduates are the responsible biologists I'm talking about. It is you who must serve as interlocutors between the rest of the living world and humanity. Indeed, it is you who must tell humanity about itself. That's the biologist's burden, which you've just inherited. We know you can handle it!

Have a good summer!
DEPARTMENT NEWS

Sevilleta Field Research Station Opens

The new Biology Department Field Research Station opened its doors for the first time on November 23, 1991, hosting a retreat for faculty, staff and students of the Long-Term Ecological Research (LTER) Program. The station, located on the Sevilleta National Wildlife Refuge, will provide residences, laboratory and conference room facilities for scientists involved with field research projects in biology, geology, anthropology and hydrology in central New Mexico.

The station consists of four 3-bedroom houses (one equipped for the handicapped), a residence for the facility coordinator, and a laboratory-conference center. The laboratory complex contains two general labs for sample processing, a specimen-processing lab for the Museum of Southwestern Biology, a microscope lab, a computer/data-processing lab, and an office/library. Attached to the laboratory building is a 1,200 sq. ft. classroom/conference room. With the financial assistance of the National Science Foundation, the station is currently being equipped with all the necessary scientific instruments to support the wide variety of scientific projects being conducted on the Sevilleta Refuge. The instruments will be installed early in 1992, in time for the summer field season.

John DeWitt, a recent UNM Biology graduate, has been hired by the Department to be the station facility coordinator, and will be living year-round in the station. Jane Mygatt, the Department’s greenhouse horticulturalist and herbarium curatorial specialist, is developing landscaping plans using only native plant species. The landscaped station grounds will include a native plant garden with plant identification tags for the purpose of teaching students how to identify the local flora. There is also a large pond that will support a variety of aquatic flora and fauna.

We would like to encourage any interested person to visit the new station and tour the facilities. Please feel free to contact the station manager, Dr. Bob Parmenter, to set up an appointment (505/277-7619).

New Greenhouse Opens

"This greenhouse represents a substantial increase in quality and quantity of space for botanical research, and is evidence of our increasing strength in the plant sciences." -Dr. Diane Marshall

The Biology Department opened its new research greenhouse on November 8, 1991. The new greenhouse replaces the previous facility (between Castetter Hall and Marron Hall), which was built in 1951. With a total of 2,520 sq. ft., the new one is twice as large as the old one. Its space is divided into six research bays, each of which has an independent heating and cooling system, allowing several projects to be run simultaneously in different environmental conditions. And, unlike the old greenhouse, the new one has refrigerated air so that experiments can be conducted throughout the summer.

A variety of faculty and student research will be conducted in the greenhouse. Initial projects include studies of: plant mating systems by Dr. Diane Marshall and her students and postdocs; plant genetics by Dr. Ann Evans and her students; plant systematics by Dr. Tim Lowrey and his students; and gas flux in plant communities by Drs. Jim Gosz and Cliff Dahir.

The project was funded, in part, by an NSF grant (written by seven members of our Department) and, in part, by UNM. The total project cost was more than $300,000.
Historically, annual flooding by the Rio Grande probably had a number of important influences on the riparian community.

of their research sites. The experimental floods will be created in bosque habitat at the Bosque del Apache National Wildlife Refuge at San Antonio, NM, by re-routing water as it is drained off the managed wetlands at the refuge.

Some effects of flooding, such as enhancing the reproduction and regeneration by Rio Grande cottonwoods, are well documented, while others are largely unexplored. Drs. Crawford and Molles and Lisa Ellis, chief technician of the grant and one of our recently graduated M.S. students, suggest that these other effects may include reduced threat of wildfires (one of the most significant threats to the present-day bosque), enhanced food production for wildlife, increased habitat complexity, and increased wildlife diversity in the Rio Grande Bosque.
MIKE DAVIS (M.S. 1987) is a forester with the U.S. Forest Service in the Daniel Boone National Forest. He enjoys boating and camping.

DARREN DIVINE (B.S. 1990) is currently a master's level graduate student. He is working on a project to evaluate maintained artificial wildlife watering units on the White Sands Missile Range, with specific attention being paid to ungulates (bighorn sheep, pronghorn antelope, mule deer, oryx, sheep and feral horses).

THEODORE B. FLECK (M.S. 1940) is retired, but currently serves as a docent at the Arizona-Sonora Desert Museum and lectures twice a month at the V.A. Medical Center on the medical aspects of addiction and the philosophy of recovery. He loves to read, and also greatly enjoys spectator and participant sports activities.

KATHRYN GRAHAM (B.S. 1987, M.D. 1991) will be completing her Internal Medicine-Primary Care residency at Oregon Health Sciences University in Portland, OR. She is active in Health Promotion/Disease Prevention, including smoking cessation education. She enjoys mountain biking, skiing and racquetball.

JED HARRIS (M.S.) is a research associate at U.T. Southwestern Medical Center in Dallas. He writes and performs original songs, and owns and operates a recording studio. He also practices Tae Kwon Do, a form of karate.

KELLY D. HOLMES (B.S. 1988) is pursuing a DMV-Ph.D. through the Department of Anatomy and Neurobiology at Colorado State University. Her current research interests involve morphologic and physiologic changes of cells incubated with conotoxin (which blocks nerve Ca++ channels). She is a member in the American Animal Hospital Association and of the student chapter of AVMA. She trains and shows dogs, and owns three golden retrievers. She also participates in the F.A. Club and the T.G.T.T.I.O.O. (Thank God This Test Is Over Organization).

CHERYL IMES (B.S. [Biology/Psychology] 1978) received an M.A. in Experimental Psychology from Bradley University in 1982, and completed her Ph.D. in Rehabilitation Psychology in December, 1990. She is a Rehabilitation Assistant for the Psychology Department at the Methodist Hospital of Indiana in Indianapolis. She enjoys both her nieces and her dog.

JAMES C. JARAMILLO (B.S. 1961) received an M.A. in Urban Studies from the Occidental College in Los Angeles in 1971. He is the Director of Corporate Administration at Advanced Sciences, Inc., an environmental scientific firm, headquartered in Albuquerque, which has 11 offices throughout the U.S. He was a National Urban Fellow at Yale University in 1970 and is a member of the Governing Board of Technical-Vocational Institute in Albuquerque.

REBECCA DANIELS KUSH (B.S. 1975) has a Ph.D. in Physiology/Pharmacology from the University of California at San Diego. She is currently the Associate Director of Project Managers at Pharmaco, a clinical research organization, where she oversees those who are responsible for all the activities associated with NDA submissions of drugs, biotech products or devices and with post-marketing surveillance of these products.

GRANT D. LAWLESS (B.S. [Biology] 1973, B.S. [Pharmacology] 1977) received his M.D. in 1984, and is currently the Medical Director for Medical Affairs for Blue Cross of West Pennsylvania. Additionally, he is Board Certified in Internal Medicine and is an Attending Physician in the Department of Medicine at the St. Francis Medical Center in Pittsburgh.

JOHN E. LEDER (B.S. 1965) has an M.S. from the University of Washington and, after retiring from the U.S. Navy Reserve, works as the Project Manager and Senior Planner in an Earth science consulting firm in Seattle. He is currently studying to become a certified groundwater scientist. He also enjoys being a soccer coach and referee.

MELISSA D. MCCRAY (B.S. 1984) took a leave of absence from her job at SED Medical Labs in Albuquerque to join the New Mexico Air National Guard, where she received technical training in Electronic Warfare at Keesler A.F.B. in Mississippi. She returned to Albuquerque in December, 1990, and is obtaining her OJT toward certification as a microbiology technician, while also serving at the NM Guard on weekends.

KAREN MENCZER (B.S. 1979) has an M.S. in Ecology from Indiana University. She is a Natural Resources Manager at the Adelphi Laboratory Center, a U.S. governmental agency. She enjoys swimming, tennis, bike riding and birdwatching.

GEORGE H. MERTZ (B.S. 1949), a retired physicist, is the Chairman of the Board of Trustees for Blood Systems, Inc., a nationwide, non-profit blood banking corporation.
JILL MILLER (B.S. 1974) completed her M.D. at the UNM Medical School in 1979. She is currently a physician at the UNM Student Health Center. She has two children, ages 4 and 2.

LEONA (RUSTY) MILLER (B.S. 1970) is currently a biology teacher at Highland High School in Albuquerque, and sponsors students for environmental education. She also is a sponsor of Highland's varsity and junior-varsity cheerleaders. She enjoys raising, training and showing Arabian horses.

CHRIS S. NEARY (B.S. 1986) is a District Wildlife Officer for the New Mexico Department of Game and Fish. He was stationed in Peñasco, NM, in July, 1990. His wife, Barbara, is doing archaeology for the U.S. Forest Service and also working at a Taos museum.

KATHY O'CONNOR (B.S. 1978) received a Nuclear Medicine Technology degree in 1980, and is currently a third-year medical student. She enjoys biking, canoeing, gourmet cooking, and travel in third-world countries.

ANDY PAQUET, JR. (B.S. 1967, M.S. 1970) received a Ph.D. from the University of Arizona in 1974. He is an Associate Professor and Chairman of the Biology Department at Texas Christian University in Ft. Worth. His research interests are in microbiology and immunology. He and his wife have completed building a Southwest-style home in the country, where they are enjoying raising pygmy goats, standard poodles and box turtles (which he acknowledges is "pretty weird for a microbiologist"). He also notes that his daughter, Amanda, graduated from UNM this past May.

BRUCE A. SHAFFER (B.S. 1980, M.D. 1985) is practicing internal medicine, pulmonary medicine and critical care in Santa Fe. He enjoys biking, hiking, skiing, sailing, bonsai, photography, automotive mechanics, and gardening, among other things.

LYMAN B. SPAULDING (M.S. 1972, Ph.D. 1974, M.D.) is a physician in the Department of Obstetrics-Gynecology at the Permanent Medical Group in Denver. He relates that he and his family have "escaped California and are quite happy back in the Rocky Mountains."

ELIZABETH A. VENCILL STOWE (B.A. 1971) is a Laboratory Supervisor at SmithKline Beecham Clinical Laboratories in California. She is a past regent of the Daughters of the American Revolution, Major Hugh Moss Chapter, and is the past President of the Ladies Auxiliary, California Society Sons of the American Revolution. She enjoys her stepson, gardening and genealogy, and is learning to play the piano.

APRIL SAUER (B.S. 1990) is currently enrolled at the Babcock Graduate School of Management at Wake Forest University, where she is earning her M.B.A.

RONALD J. TRUJILLO (B.S. 1975, M.D. 1983) is a physician in solo practice. He has a wife and three children, and enjoys jogging, reading, exercise and golf.

DON E. WILSON (M.S. 1967, Ph.D. 1970) has been appointed the Director of the Smithsonian Institute’s Biodiversity Program, where he oversees a variety of ongoing projects aimed at inventorying the world’s flora and fauna, with a focus on Latin America. His office is in the National Museum of Natural History in Washington, D.C., where he has worked for the past 19 years.

GLENN WILSON (B.S. 1971) obtained his Ph.D. in Anatomy from the University of Illinois in 1976. He is currently a Professor in the Department of Structural and Cellular Biology at the University of South Alabama College of Medicine.
The Biological Society of New Mexico is a tax-exempt organization under the New Mexico Non-profit 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, etc., 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 six other accounts that may have special interest to you.

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

For the last six years we have been building an endowment from private donations and other sources to create the first Endowed Chair in Biology. 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. As of June 30, 1991, the L.D. Potter fund had $134,000. Contributions are most welcome as we hope to one day have our first $1 million chair in Biology.

**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 $3,500. 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 field research conducted by faculty and graduate students in Biology at UNM.

**Presidential Young Investigator Matching Funds**

For the next four years, we will be working against time to help our three PYIs (Drs. D. Marshall, B. Milne and M. Werner-Washburne) generate the private funds they need to qualify for matching funds from NSF. Remember that donations can be in kind (i.e., building materials, vehicles, laboratory equipment, etc.). Won't someone try to sponsor a PYI? Each dollar you give generates a dollar from NSF.

**Faculty Excellence Fund**

We started this fund to support faculty travel to professional meetings where they present the results of their work. We have only $600 in this fund—obviously a long way from a meaningful endowment.

**Commencement Fund**

This past June, our Biology Commencement Exercise cost us $1,200, while UNM gave us only $400. The balance came from the pockets of our faculty and graduate students. We'd like to start an annual fund to at least break even.

**Membership**

Any person contributing $20 or more annually becomes a member of the Society and will receive the annual BSNM newsletter.

**All memberships and 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:

**UNRESTRICTED GIFT ACCOUNT**  
**POTTER ENDOWED CHAIR**  
**BEALMEAR SCHOLARSHIP FUND**  
**MUSEUM OF SOUTHWESTERN BIOLOGY**  
**PYI ACCOUNT**  
**FACULTY EXCELLENCE FUND**  
**COMMENCEMENT FUND**  
**Other**

Total Amount Enclosed $_________

Name ___________________________  UNM Degree(s) _______  Year(s) _______

Other Degrees ___________________________  Complete Current Mailing Address __________

Phone No. _________________________  Current Occupation ____________________________

Activities and interests: ___________________________________________________________

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**THANKS FOR YOUR CONTINUED SUPPORT AND INTEREST!**

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