

## From the Chairman

**D**uring this first year as Chairman of the Department of Biology I have learned that the chairmanship includes a number of unexpected pleasures. One of these was accompanying the Tropical Biology class to Belize over spring break (quite an experience for this laboratory scientist!). Another was discovering that I have become, by statute, President of the Biological Society of New Mexico (BSNM). The BSNM was incorporated in 1984 as a foundation to raise and administer funds that can be used to "encourage, foster and pursue excellence in education in Biology at UNM." Over the years, the BSNM has made important contributions to this department by allowing us to do things that cannot be done from the university budget.

The state budget does not contain any money to make important, small improvements to our building or to recruit and reward students. That's why your contribution to the BSNM is so important—and so much appreciated.

Things are good in the Department of Biology. We have an outstanding faculty. More students than ever are majoring in Biology (more than 1,100). The new museum is under construction. Our ninth annual Research Day took place in April, with forty posters and oral research presentations by undergraduate and graduate students. On May 13, more than 250 BS and BA degrees, and 25 PhD and MS degrees, will be awarded. Please drop by when you are in Albuquerque, and in the meantime keep in touch via our web site: [biology.unm.edu](http://biology.unm.edu). We look forward to hearing from you.

*Dr. Kathryn (Kate) Vogel*



*Marie Asbury ('01) shows a donkey dung sea cucumber*

## Tropical Biology Field Trip to Belize

by Marie Asbury

**B**elize is a spectacular tropical country tucked away between Mexico and Guatemala in Central America. I was one of fifteen fortunate students who participated in a field trip to Belize during spring break as part of an Introduction to Tropical Biology class being taught by Drs. Donald Duszynski and Tim Lowrey. As a non-traditional transfer student who has been doggedly pursuing her bachelor's degree, this was a dream come true. At heart I have always been a field biologist with a pure wonder and delight for wild places and things. I had studied the animals, plants, and ecology of the tropics, but it was different to see it first hand.

Almost immediately after arriving in Belize, the tropics became a palpable thing. The moist, humid climate that allows vegetation to thrive also quickly coated us in a layer of sweat. This trip was during Belize's dry season, a time when the insects only half eat you alive. The sun is intense, burning skin in hours, including my already naturally brown skin. While on Wee Wee Caye, we went out snorkeling every day for six days, learning about the interdependence of mangrove, turtle grass, and coral reef communi-

*(continued on the other side)*

# THE BIOLOGICAL SOCIETY OF NEW MEXICO



May 2000

## New Home Soon for the Museum

**T**he Museum of Southwestern Biology (MSB) is a research and teaching facility in the Department of Biology. It houses more than three million specimens, and is a substantial representation of the biodiversity in the Southwest. The museum, however, has outgrown its space in the basement of Castetter Hall. After several years of effort, Dr. Tim Lowrey, Director of the MSB, reports that the museum collections will move this fall to their new home adjacent to the Department of Biology. With funding from the university, the state, and the National Science Foundation (and the vision of Dr. Terry Yates and the other faculty curators), the former UNM bookstore is being renovated to become a 28,000 sq. ft. new home for all the museum's collections and research. Plans call for the addition of a third floor to the building, which will house the National Long Term Ecological Research (LTER) Network Office as well as Media Arts classrooms and production space.

The Museum of Southwestern Biology began as a small teaching collection. The Herbarium was begun in 1928 by ethnobotanist Edward F. Castetter. In 1938, vertebrate zoologist William J. Koster joined the faculty and initiated the vertebrate collections. Castetter's herbarium and Koster's vertebrate collections eventually moved to the basement of a new building, since renamed Castetter Hall. In the 1970s, a wing was added to the existing Biology building, and the collections expanded to occupy a major portion of the basement. The museum now consists of seven divisions—Arthropods, Birds, Fishes, Herpetology, Mammals, the Herbarium, and Biological Materials.

Scientific research collections have faced many challenges during the past decade. Technological advances in the fields of computer science and molecular biology, coupled with numerous conceptual advances in systematics and ecology, have revitalized research collections. At the same time these developments are placing increased pressures on curatorial staff to update and mod-

ernize the collections. Many institutions are reducing positions for systematists and staff support for collections. The rapid loss of the world's habitats has greatly expanded the amount and types of material that need to be preserved and thus has created an even greater responsibility for collections to maintain these resources.

Some may think that it is unwise for UNM and the Department of Biology to invest so heavily in systematics during the age of molecular biology. Our faculty and students, however, see fields of biology that used to be poles apart now relying upon integrated research and information. For example, the Mammal Division is currently involved in studying the ecology and epidemiology of newly discovered viruses, such as hantaviruses and arenaviruses, which are transmitted by rodents. The Department of Biology at UNM is becoming widely recognized as a leader in research that integrates molecular, comparative, evolutionary and systematic biology.

The museum also will become an active player in efforts to increase and influence science education in New Mexico. The museum hopes to establish a virtual museum of New Mexico natural history, which will include photographs and profiles of selected plants and animals native to New Mexico, photographs of selected habitat types, field notes of prominent early biologists that describe plants and animals, information on how to identify organisms, suggested natural history activities for grades 6–12, and lesson plans for teachers. It is hoped the approach will be readily adaptable to other regions of the country in promoting an interest in natural history.

Although the collections will move this fall, it will take an additional \$3.5 million to complete the offices, labs and the third floor, and we do not have these funds. It is troubling that this wonderful dream is only half completed. If you know someone who appreciates biology and is in a position to make a substantial donation to UNM, please let us know. The museum needs a name! ➤

## What Happened to the Fish Tank? Will You Help?

**H**ave you walked through the Biology Building recently? If so, you have undoubtedly noticed that something is missing from the front hallway. What's missing is the huge salt-water aquarium that has made thousands of school children smile in wonder since its creation in 1987 by Chris Altenbach and his father, Dr. Scott Altenbach, Professor.

The old tank was dismantled when the umpteenth pump leak left puddles of water and warped tiles in the hallway. After weeks without circulation, it was assumed that the fish had died, but when the water was drained, those hardy creatures were found to have been hiding in the rocks. They have been taken to a new home at the Aquarium in the Albuquerque Biological Park, but we now have a gap in the hallway.

Plans are underway to erect two new freshwater fish tanks in this location. One possibility is to use the two tanks to display warm water and cool water species of fishes from New Mexico, or perhaps Rio Grande and Pecos species. Another possibility suggested by Dr. Tom Turner, Curator of the Museum of Southwestern Biology's Division of Fishes, is to develop two tanks that provide a parallel view into natural river fish communities here in New Mexico and the tropics of South America.

It will cost about \$3,500 to erect these two tanks. Your contributions to the Biological Society of New Mexico will make it possible. The new fish tanks will have descriptive signs and donors will be acknowledged. ➤



The University of New Mexico

The Biological Society of New Mexico  
Department of Biology  
Albuquerque, NM 87131-1091

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**Millennium photo.**  
**On October 19,**  
**1999, 119 people**  
**associated with the**  
**Biology**  
**Department**  
**gathered for this**  
**group photo. You**  
**can have your own**  
**8" x 10" print, with**  
**everyone identified**  
*(see below).*



## A Note from the Father of Four UNM Biology Students

by Art Melendres

I had heard that the University of New Mexico's Biology Department was a nationally recognized department. However, it was not until my children pursued their biology majors that I realized in a very concrete way how good the department is. The outstanding courses and professors are providing fertile learning ground for Paul, UNM 1996, Fred, UNM 1999, Lana, UNM 2000, and Linda, UNM 2003, and all the other students who are fortunate enough to be part of the Biology Department. Paul, Fred and Lana majored in biology. Linda, a freshman this year, is taking biology courses with every intention of biology being her major.

Today, more than ever, I recognize the importance of the encouragement and respect given to the students whose lives teachers touch. Dr. Margaret Werner-Washburne served as Paul and Fred's faculty adviser during their undergraduate days. Linda's interest in biology was sparked in large part because of the generous mentoring by Dr. Edwina Fuge during her senior year in high school as she was preparing her science fair project. My children appreciate the significance of the biological sciences in today's world and they have experienced the joy of learning in a field where rigorous discipline is required.

When Paul graduated from New York University School of Law, he found that his scientific background was a factor in being hired by a Wall Street firm. The firm represents health care providers and there is a scarcity of young lawyers with scientific credentials. Currently, Paul is engaged in health care law, which he enjoys a great deal. Fred is completing his first year at Yale Law School and this semester is taking courses in environmental law. In undergraduate school at UNM, Fred spent six weeks doing research as a member of the UNM student team involved in UNM's Bio-Diversity Program in Australia, led by Dr. Ursula Shepherd. Fred says, "It was one of the greatest learning experiences in my life." Lana determined at a very early age that she would be a doctor. She will begin her medical school career this fall at the University of New Mexico Medical School.

While each Melendres is following a distinct career path, already they are discovering that majoring in biology at UNM is serving them well.

*Melendres served as a member of the UNM Board of Regents from 1991-96 and was Chairman from '93-96. He is the Director and Shareholder of Modrall, Sperling, Roehl, Harris & Sisk, P.A., in Albuquerque.*

was titled "The Scale of Life: Of All Creatures Great and Small."

Books published recently by UNM Biology faculty:

*Ecology: Concepts and Applications* by Manuel C. Molles, Jr. 1999. WCB/McGraw-Hill.

*The Evolution of Avian Breeding Systems* by David J. Ligon. 1999. Oxford University Press.

*The Bats of the United States* by M.J. Harvey, J. Scott Altenbach and T. Best. 1999. Arkansas Game and Fish Commission.

*A Natural History of Rape: Biological Bases of Sexual Coercion* by Randy Thornhill and Craig T. Palmer. 2000. The MIT Press.

**Coming in the next issue of the BSNM newsletter: molecular biology and genomics in the Department of Biology.**

*(Belize continued from the other side)*

ties in a thriving ecosystem. Then for three days we explored terrestrial life in the tropical jungle with its layers and layers of vegetative life. Epiphytes, bromeliads and orchids clung to tall, emergent trees, with vines and lianas draped over everything. On the final day, we visited Altun Ha, a wonderful archeological site open to the public, which has massive pyramids from the Mayan Empire. At the baboon sanctuary, we observed howler monkeys living in a riparian corridor adjacent to a human settlement. It was marvelous to see the way people and animals have learned to live together, each seeming to take the other into account. The people of Belize have a great respect for and knowledge of the environment. Many local people helped us learn about their world by serving as our guides. Both on land and under the sea, Belize was an ideal spot to learn about the tropics.

*Marie Asbury grew up in Mesilla Park, NM. Moving with her husband's jobs, she attended Western NM State and NMSU before transferring to UNM. She expects to graduate next year and hopes to work for the U.S. Forest Service or a zoological park.*

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Thank  
 you!

## Faculty News

Dr. David Faguy, Assistant Professor, joined the faculty in August 1999 from the Department of Biochemistry, Dalhousie University, Halifax. David is a microbiologist with particular interest in Archaea.

Dr. Will Pockman, Assistant Professor, arrived in January 2000 from the Department of Botany at Duke University. Will is a plant physiological ecologist focusing on roots and drought tolerance.

Dr. Gordon Johnson, Professor, will retire in May 2000. Gordon, a plant physiologist, has been a member of our faculty since 1965. Former students and friends will honor Gordon from 1-3 p.m. on May 4.

Dr. James H. Brown, Professor, was honored as the UNM Research Lecturer for 1999. His talk

Your financial donation to the BSNM is very important to maintain the quality of education offered by the Department of Biology at UNM. Thank you for sending us whatever you can.

- o Fish Tanks
- o BSNM Support of Student Activities
- o I would like a Departmental Group Photo (shown above, with donations of ≥ \$50)

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