

Museum of Southwestern Biology  
May 17, 2004

**Welcome to *MSB Highlights!***

The Museum of Southwestern Biology is nearing completion of its new facility in the former UNM bookstore on the University of New Mexico campus. With construction slated to end in July, the completely refurbished building will house the collections and research laboratories of the museum's seven divisions, as well as the offices of the U.S. Long Term Ecological Network (LTER), the Sevilleta LTER program, the Media Arts Department, and the Art Technology Research Group.

In anticipation of the heightened public profile that will come with the move into the new building, the MSB is launching an initiative to keep its friends in the community better informed of the important work being carried out by its various divisions.

*MSB Highlights*, a quarterly email posting of divisional and program developments, is being sent to you as an integral part of that effort.

Here are some highlights from the various divisions:

**Division of Amphibians and Reptiles**

- Since the beginning of 2004, staff members have been working hard to assign precise geographic coordinates to specimens in the collection. To date, we have been able to place in space over 3,100 descriptions of localities, which translates to knowing the geographic coordinates for over 13,000 specimens. In the coming months the Division hopes to unveil an online mapping application that will make use of this information.
- The Division has also been cross-checking for accuracy the information contained within the written field notes and catalog, the electronic database, and the specimens themselves. To date, we have finished checking all of our specimens of salamanders and toads.
- At the present time, due to the ongoing construction efforts, the Division is concentrating on skeletal material curation.

**Division of Arthropods**

- The collection has never been cataloged, so the current databasing effort has resulted in first-time information on how many and what kind of specimens make up the Division's collections. So far, over 10,000 specimens have been labeled and about 6,000 have been entered in the database.
- Species lists have been prepared for over half of the insect orders. These lists will eventually be made available to the other 3 EPSCoR university entomology collections. These lists represent the underlying taxonomic base for data entry (valid name, correct spelling, etc.).

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**Division of Birds**

- The Bird Division is please to announce the recent hiring of Andrew Johnson as its Collections Manager. Andy received his MS from the University of Alaska Fairbanks, where he had field experience across the breadth of that state. He did his thesis research on migration stopover in Belize.
- At Andy's suggestion, the Division has drastically revised its cataloging methodology. Instead of first entering specimens in a paper catalogue, and then entering them into the computerized database, the division now enters the specimen directly into the database, capturing all data on the label.
- As a result of his familiarity with the bird collection at his alma mater, Ohio Wesleyan University, Andy has arranged a specimen trade with this institution. The MSB will receive a historical collection of approximately 160 birds from New Mexico collected by Charles Marsh in the early 1880s, while Ohio Wesleyan University will receive modern specimens of the same taxa from the MSB.

**Division of Fishes**

- The MSB Division of Fishes currently maintains 51,818 catalogued lots of fishes or 2,531,588 specimens. A total of 2,220 lots (19,978 specimens) have been added to the catalogued collection during the fiscal year, FY2002/03. The Division has received \$1,279,967 in direct funding for ichthyological studies, aquatic research, and collection management of specimens and data. All original field notes (about 50,000 pages), past and present, have been scanned and saved in three different file formats. Field notes files are hyperlinked to the locality database (21,500 records) so that the collectors' original notes can be viewed by researchers. Scanned copies of field notes are also backed up on CDs and archived as second copies. Three student employees have been responsible for designing protocol, implementing, and completing this project
- The Division of Fishes is actively involved in research and monitoring of aquatic ecosystems throughout New Mexico. We currently have active projects in the Rio Grande Basin, the Pecos River, the San Juan River, and the Gila River. Funding for our projects comes from a diverse group of New Mexico State and Federal Agencies including the New Mexico Department of Game and Fish, The US Bureau of Reclamation, and the National Science Foundation.

**Division of Genomic Resources**

- During the last six months the Division of Genomic Resources has been busy processing information requests and tissue loans (about six per month). Weekly we continue to archive samples from the Museum's hantavirus project and other miscellaneous projects. During the past month we have successfully added over 1,000 Panamanian samples to the database and are expecting as many samples to arrive from Chile. We are currently at carrying capacity for our freezers, and are looking forward to moving into our new space!

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**UNM Herbarium**

- The UNM Herbarium recently completed databasing the specimen collection of approximately 105,000 vascular plants, mosses, and lichens. The second phase of data processing will begin in the Summer of 2004 and will focus on georeferencing the specimen label data.
- The databasing effort is funded through the Institute of Natural Resource Analysis and Management (INRAM) via a grant from the National Science Foundation. The INRAM website has a query page which will eventually allow researchers and the public to search for specimens held at University collections throughout New Mexico. Currently, there are 150,000 records from five divisions of the Museum of Southwestern Biology (MSB), including the Herbarium. One can generate several different table views of the data and county-level maps from the INRAM query page (<http://biodiversity.inram.org/>).
- The Curator, Dr. Tim Lowrey, will deliver the outgoing Presidential address at the International Organization of Plant Biosystematists Congress in Valencia, Spain in mid-May.
- Ongoing construction in the Herbarium is nearing completion. There will be more space for visiting botanists to use the collection and new cabinetry in many areas for much needed storage. By mid July, there will be a new Cytology Laboratory that will facilitate taxonomic studies for MSB researchers.

**Division of Mammals**

- Integration of USGS Biological Survey Collections and MSB mammal specimens is now fully underway. Towards this end, the Division recently completed upgrading the storage conditions and data quality of its collection of mammals in the Order Insectivora. The collection consists of almost 4,000 fluid-preserved and “dry” specimens of shrews and moles with the largest holdings from the United States (New Mexico, Colorado, and South Carolina), Japan, and Hungary.
- Previously housed in separate cases, the Insectivores of the USGS Biological Survey Collection have been physically combined with those from the Division of Mammals and rearranged following the most recent taxonomic authority. The specimens were installed into new cases and drawers, and expansion room was created to allow for future growth. Further integration efforts should assure more efficient management and study of these unified collections.

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**Natural Heritage New Mexico**

- Ecologists at Natural Heritage New Mexico have recently completed vegetation surveys and maps for Carlsbad Caverns National Park and Fort Union National Monument and an ecological assessment for Valles Caldera National Preserve.
- NHNM botanist Phil Tonne gave a talk at the Fourth Southwestern Rare and Endangered Plant Conference on his work on the pollination ecology of an endangered plant species [*pomopsis sancti-spiritus* (Polemoniaceae)].
- Zoologists have recently completed a remote sensing survey of black-tailed prairie dogs over their 44 million-acre historical range in NM and they are also collaborating with the Pueblo of Isleta on a habitat enhancement project for endangered southwestern willow flycatchers.
- The information management group is developing a kids' web page, where K-8 students can query the NHNM database on New Mexico species of conservation concern.

For general information on the MSB or to subscribe/unsubscribe from this list, contact: Katherine Liden, Program Coordinator (katherine.liden@msb.unm.edu). You may also visit our website at <http://www.msb.unm.edu/>.