

# Museum Quarterly

LSU Museum of Natural Science

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## Museum of Natural Science Curators and Directors

**Frederick H. Sheldon**  
*Director and  
Curator of Genetic  
Resources*

**Christopher C. Austin**  
*Curator of  
Herpetology*

**Robb T.  
Brumfield**  
*Curator of  
Genetic Resources*

**J. Michael  
Fitzsimons**  
*Curator of Fishes*

**Mark S. Hafner**  
*George H. Lowery,  
Jr., Professor and  
Curator of  
Mammals*

**James V. Remsen**  
*John Stauffer McIlhenny  
Professor and  
Curator of Birds*

**Rebecca Saunders**  
*Curator of  
Archaeology*

**Judith A.  
Schiebout**  
*Curator of  
Vertebrate  
Paleontology*

**Sophie Bart Warny**  
*Director of  
Education*



## Letter from the Director...

Here's an interesting email exchange between **Dr. Van Remsen**, curator of birds, and Stacy Golleher, a lobbyist for LSU. The emphases are mine.

Golleher: "My name is Stacy Golleher and I work for the LSU System, Division of Federal Affairs in Washington, DC. I was contacting you to obtain some information about the Collection of Birds at the LSU Museum of Natural Science. It has recently been brought to our attention that there are several individuals involved with the Smithsonian's National Museum of Natural History, including the current head of the Bird's Division, **Dr. Gary Graves**. Dr. Graves received his master's degree from LSU and possibly his doctorate. Also, **Dr. Terry Chesser** is the Research Zoologist at the Smithsonian. He received his PhD in Zoology from LSU in 95. I was writing to find out if you have ever spoken with this Division of the Natural History Museum about LSU's collection? Have you ever had any correspondence or worked on joint ventures? *We would like to establish a connection with them for you.* Please contact either myself or Paul Gravel, the executive director of our office to discuss this matter further. Thank you for your time."

Remsen: Stacy — Gary and Terry were both former students of mine, as is also **Dr. Pete Marra** at the Smithsonian Migratory Bird Research Center, and we all keep in contact regularly. **Dr. Mike Braun** is also an LSU Ph.D. (Med Center, but his committee included several of us here at the Museum). One of the Smithsonian's mammalogists, **Dr. Al Gardner**, also got his PhD at LSU. (*Maybe we should start thinking of the Smithsonian as LSU East?*) One of Mike's doctoral students, **Dr. Robb Brumfield**, now holds our tenure-track Genetic Resources position. Robb and Mike just finished some joint fieldwork in Panama this year. Steve Cardiff and Donna Dittmann of the LSUMNS had previously collaborated with the Smithsonian Tropical Research Inst. in Panama on field research in that country and are likely to do more of that in next few years. Mike Braun is also a collaborator with **Dr. Fred Sheldon** (Director of MNS) on a major research project funded by the NSF. Also, two Smithsonian research associates, Mort and Phyllis Isler (who are also Honorary Associates of the LSUMNS) are visiting here right now to work on a joint project with Dr. Brumfield. This summer, we did a joint LSUMNS-Smithsonian field research project involving two of my doctoral students [**Brian O'Shea** and **Santiago Claramunt**] in Guyana.

Golleher: Wow, what an incredible representation we have! (*I agree that LSU East is a proper name for the Smithsonian.*) Thank you for all the additional contacts - we will be sure to keep them in mind when dealing with the Smithsonian. Please let us know if we can ever be of assistance to you as we are here to help!



## Congratulations!

**Dr. Jessica Eberhard**, research associate with the Museum, is now a mom. Congratulations from all of us to Jessica and her husband, Dr. Kyle Harms, as they welcome Dylan Reese Harms. Dylan was born on January 13, 2005, at 2:25 p.m. at Baton Rouge Woman's Hospital. He weighs 8 lbs. 3 oz. and is 21 1/4 inches long.

# HERPETOLOGY

## New National Science Foundation half-million dollar award



*Emoia caeruleocauda* is a common terrestrial skink with a brilliant blue tail. This species is found in New Guinea as well as the Solomon Islands. The color pattern of this lizard, a dark background with golden stripes and a blue tail, has evolved independently in several different skink species.



A Papuan Taipan (*Oxyuranus scutellatus*), the most venomous terrestrial snake in New Guinea. The closely related Inland Taipan (*Oxyuranus microlepidotus*) from central Australia is considered to have the most toxic snake venom in the world. A large snake (up to 3.36 m), the Papuan Taipan actively forages for its prey (primarily rodents and bandicoots) during the day and evenings.

What forces cause biodiversity to increase or decrease over time? Why do some regions of the planet have more species than others? These are some of the most important questions in natural history. A half-million dollar National Science Foundation grant has been awarded to **Christopher Austin**, Assistant Curator of Reptiles and Amphibians, to study the underlying processes responsible for both the production and maintenance of biodiversity. His research will sample DNA from multiple vertebrate species with diverse ecological needs from the island of New Guinea, one of the most diverse regions of the planet. Modern molecular genetic techniques will be used to examine several different genes to test hypotheses about how past changes in climate and geological processes shape biological diversity. The new automated DNA sequencer in the Museum genetics laboratory [funded by another NSF grant] will be important for the large amount of data produced by this project.

New Guinea, the world's largest and highest tropical island, has an elaborate assemblage of ecosystems ranging from lowland rainforest, tropical grassland savannah, Eucalypt forest, moss forest, alpine grasslands, to alpine glaciers. Most of the biota is endemic and includes 5-7% of global biodiversity and more than 70% of the biodiversity in the Pacific region (See Illustrations 1-3). Preliminary DNA data for reptiles and amphibians collected by Austin and colleagues suggest that paleoclimatological and geo-tectonic events were critical processes that generated, and currently sustain, considerably more biodiversity than is currently recognized. If this is correct New Guinea may be one of the most diverse hotspots on this planet.



A legless lizard (*Lialis burtonis*) from southern New Guinea. This species is active at day and night but is especially during the early morning and early afternoon. It feeds mainly on small lizards. These snake-like lizards are closely related to geckos. Like many geckos *Lialis* do not have eye lids and wipe the clear scale that covers the eye with their tongue. Snakes, also without eye lids and with a clear scale covering the eye, can't do this.

The broad significance of this project is that it integrates research and education at both the national and international levels, acts synergistically to advance scientific knowledge, creates partnerships with seven national and international museums and universities, promotes conservation and enhances scientific and educational opportunities for a broad spectrum of people. The research uses the results of two recent comprehensive conservation priority-setting workshops and innovative digital mapping and modeling of methods to provide a much stronger scientific foundation for conservation planning than is currently available. The project will help to ensure that conservation efforts preserve both genetic and species diversity. Education will provide local scientific infrastructures and help foster better international relations in the Pacific Rim.

## Research Trip To Vanuatu

Doctoral candidate **Alison Jennings** recently completed her third research trip to Vanuatu, a small island nation in the Southwest Pacific. During the nine-week field expedition from June-August 2004, Alison collected data essential to the completion of her doctoral research.

Alison took three field assistants with her: Elaine Klein, a recent graduate from Simon's Rock College in Great Barrington, MA; and Kara Blaha and Kathy Grazyck, both seniors at Daemen College in Buffalo, NY. In addition to field assistance, Kara Blaha also collected data for her honors thesis while in Vanuatu.

The goal of Alison's dissertation research is to understand the evolution of genetic and species-level diversity in tropical oceanic island systems. She is very interested in how lizards colonize archipelagos, disperse among isolated volcanic islands, and specialize and diversify once they have become established.

For her Ph.D. research, she is working in the Republic of Vanuatu, which is a group of 83 islands in the Southwest Pacific Ocean, near the Solomon Islands, New Caledonia and Fiji. Alison chose Vanuatu because of its relatively recent emergence as a volcanic island chain. Due to its volcanic origin and lack of a historical connection to any continent, all the plants and animals occurring in Vanuatu arrived there by way of over-water dispersal or through speciation on the island itself.



From top to bottom: a view of Anelguhat, on Aneityum Island; a view of an eruption in Mt. Yasur, on Tanna Island.

Alison is interested in learning how lizards have moved from island to island within Vanuatu, where their ancestors came from, and how populations on different islands vary in genetic structure. Working on a young island will allow Alison to examine the “footprint” of evolution and thus further the understanding of the factors crucial to the process of speciation in lizards.

Alison is comparing patterns in two lizard species: one skink and one gecko. These species were chosen because they differ from each other in ecology and life history, and are distantly related. Any shared patterns of among-island diversification between these two species would suggest that geology or some other barrier to dispersal was important in shaping their evolutionary history. Differences in patterns of diversification between them would point to the role of factors such as life history, habitat use, or mode of reproduction.

Alison is working on about 20 of the 83 islands in Vanuatu. During each research trip, she spends one to three weeks collecting and observing lizards at each site. This past field season, she collected data from populations on 7 islands: Efate, Aneityum, Tanna, Futuna, Erromango, Ambae, and Pentecost. From each locality, she collects voucher specimens and tissue samples for use in her molecular research. The collection of voucher samples is important, because the reptile fauna of Vanuatu is poorly described and she has already identified at least one, and likely two, new species.

In addition to catching the two target species for her study, Alison is also conducting biodiversity surveys for the Environment Unit of Vanuatu. The information that Alison provides to the Environment Unit helps in their effort to inventory and protect biodiversity of this developing country.

Alison has a fourth trip to Vanuatu planned for this summer. In the future she will continue studying patterns of differentiation and speciation in island reptile and amphibian species in the Pacific and eventually expand her research to the island systems of Southeast Asia.



From top to bottom: Alison collecting specimen for the MNS; a specimen of *Nactus pelagicus*; a specimen of *Emoia sanfordi*.

## Other Herpetology News

- **Alison Jennings'** Ph.D. research on the phylogeography of reptiles from the Vanuatu archipelago was showcased in a full-page article in the Fall 2004 edition of *LSU Research*. This quarterly publication has broad circulation (including members of the US Congress and Senate) and highlights important research efforts at LSU.
- **Chris Austin** was awarded a fellowship from the Max Planck Institute and spent the month of November in Stuttgart Germany working on collaborative morphological research on adhesion mechanisms in reptiles.
- Fieldwork by **Chris** in New Guinea (August-September) and **Alison** in Vanuatu (June-August) added over 1,000 new specimens to the LSU MNS Herpetology collection. Our Reptile and Amphibian collection is of critical importance for systematics, biodiversity, and conservation; in 2004 the Herpetology Department handled 372 data requests or specimen loans to U.S. and foreign scientists.

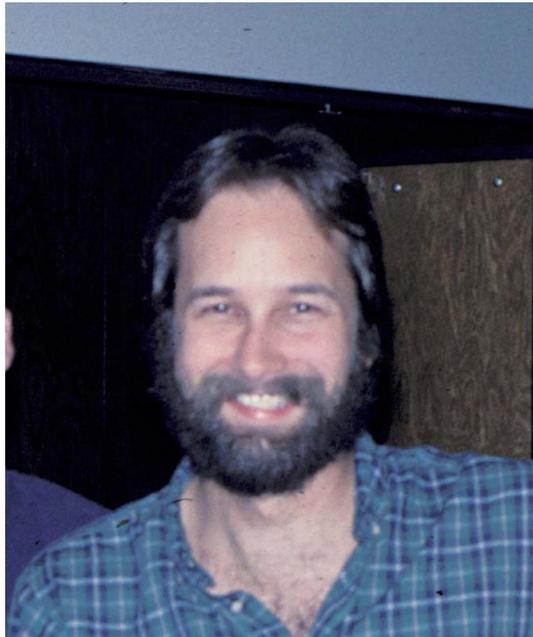
# Former MNS Grad Student Terry Chesser Named to Curatorial Position at the Smithsonian

The USGS Patuxent Wildlife Research Center announced their selection of former LSU doctoral student **Terry Chesser** for the position of Research Zoologist. He will serve as curator of North American birds in the Division of Birds at the Smithsonian.

Terry has done fieldwork on birds in North America, South America, South East Asia, and Australia. His research career has focused on the biogeography and systematics of birds and primarily involves the use of modern molecular and systematics techniques for reconstruction of phylogeny, character evolution, and biogeographic history.

A native of Georgia, Terry completed his B.A. at Georgia State University, and received his Ph.D. in Zoology at Louisiana State University in 1995. His doctoral research was a biogeographical, ecological, and evolutionary study of the seasonal distribution of South American austral migrant birds.

While at LSU MNS, Terry won LSU's 1995 Outstanding Dissertation Award. In a letter of recommendation for Terry, his advisor **Van Remsen** said, "His dissertation was a model of scholarship and analysis. Terry accumulated and computerized a database of roughly 50,000 specimen records, each consisting of a date, locality, and elevation for an individual bird specimen. To do this, he visited 18 museums on three continents. Manipulating



Dr. Terry Chesser when he was a graduate student at the LSU MNS.

this data set to generate the maps in his dissertation was an enormous endeavor. The product is a major achievement, for which there is no equivalent in ornithology. He also tracked down every reference ever published on bird migration in South America; Terry is an exceptional scholar, with an intense interest in digesting both old and new publications (so often lacking in today's students). His dissertation bibliography of roughly 425 references, spanning more than a century and six languages, is major achievement itself that will become an indispensable resource for ornithology."

While at LSU, Terry received 10 grants and fellowships totaling \$6500 and was never declined for any award. He financed all of his own research, including extensive travel to museums on 3 continents. His record was exemplary. Terry also participated in the 1990 MNS expe-

dition to Bolivia, during which he prepared several hundred bird specimens for the Museum.

His research during two postdoctoral fellowships, first at the American Museum of Natural History, and second at the University of Arizona, was devoted to the study of the molecular systematics, biogeography, and biodiversity of birds of the Neotropical region.

Since November 2000, Terry has been Curator and Research Leader at the Australian National Wildlife Collection, Commonwealth Scientific and Industrial Research Organization (CSIRO), Canberra, Australia. His research in Australia has dealt primarily with the phylogenetics and evolution of bird groups endemic, or largely endemic, to Australia. In addition, he also initiated major studies with biodiversity and conservation management implications, including research on the phylogeography and movement patterns of Australian water birds and on gene flow in birds of fragmented woodlands of south-eastern Australia.

Terry will continue to work at CSIRO for the next few months to complete ongoing research projects. He expects to start his curatorial position at the Smithsonian in Spring 2005.

# SPRING EXPEDITION TO THE HIGH ANDES OF PERU

In the Summer 2004 Research Associate **Daniel Lane**, Graduate Student **Zac Cheviron**, and Curator of Genetic Resources **Robb Brumfield** mounted an expedition to Peru with several goals: 1) to collect specimens for Dr. Brumfield's project on the evolutionary relationships of all 326 species in the family Furnariidae (ovenbirds and woodcreepers), 2) to target samples for Zac's dissertation project examining how birds adapt to life at high elevations in the Andes, and 3) to find new distributional records for Dan's work on the soon-to-be-published *Birds of Peru* book.

For Zac's study of adaptation to life in the High Andes, he needed specimens of four bird species: the Many-colored Rush-Tyrant (*Tachuris rubrigastra*), the Wren-like Rushbird (*Phleocryptes melanops*), the House Wren (*Troglodytes aedon*), and the Rufous-crowned Sparrow (*Zonotrichia capensis*). What makes these species unique is that they are all capable of living from sea-level to nearly 14,000 feet in the high Andes (about the same height as Mt. Rainier in Washington State). Zac wants to understand the genetic mechanisms that allow these birds to survive in the extreme high-elevation habitats. The team spent the first couple weeks of the trip collecting birds in the cushy lowland habitats outside of Lima, Peru. Their base camp was a hotel called The Place, whose staff was amazingly tolerant of the their room's conversion to a bird-skinning lab. After a couple weeks of hard work, Zac had everything he needed from the lowlands and it was time to head for the mountains. Mis-



Dan and Zac's bedroom is converted into a bird-skinning facility, much to the amusement of the friendly hotel staff.

judging both the time it would take and the amount of fuel needed to reach the high Andes, the trip turned into a nail-biter as, after having driven all day, they zig-zagged back and forth along a single-laned gravel road through the pitch black Andean night with the fuel gauge on empty, the temperatures at freezing, and the air noticeably devoid of oxygen. Altitude-sick and exhausted, the team reached a small shop that sold gasoline out of a 55-gallon drum. Assuming the gas was probably diluted with water (later proven to be true), they bought only about \$5 worth, enough to get them to the small mining town of La Oroya (3750 meters or ~ 12,000 feet in elevation).



Mechanic in La Oroya converting the air and fuel mixture of the Hi-Lux for high elevations.



Back at low elevation, the team (Dan, Robb and Zac) celebrates a successful trip.

By morning, the party had lost its first member to soroche, the local term for the elevation sickness that welcomes most travelers from the lowlands. A Peruvian student realized she was too sick to continue and took a bus back to Lima. After having their Toyota Hi-Lux's carburetor modified to deal with the high elevations, the team headed to even higher elevations at Junin Lake (4125 meters or ~13,200 feet). Robb and Dan soon realized that it was Zac's destiny to do this dissertation project — he appears to be pre-adapted to high elevations as he was completely immune to soroche. As Zac bounded (in between bouts of traipsing and sashaying) through the high-elevation habitats collecting his target species, Dan collected birds in between bouts of nausea and Robb laid in the passenger seat of the Hi-Lux feeling like Mike Tyson was driving a railroad spike through his skull over and over and over. With the help of persistence, coca tea, and ibuprofen, the team managed in a few days to collect a nice series of Zac's target species.

Because Zac had to return to the U.S. to fulfill his teaching duties, it was time for Robb and Dan to turn their attention to ovenbirds. In Peru, 17 ovenbird species occur from which no tissues exist in the world's genetic resource



A 3-foot long earthworm crossing the trail at Lampa.

collections. Unfortunately, most of these species reside at high elevations, so it was back to the high Andes. Miraculously, on their return to high altitude, the sickness that had previously plagued their every moment did not rear its ugly head — — their bodies had acclimated to the high-elevation!!!! With new found health, Dan and Robb were able to move swiftly about and the collecting went well. By the end of the trip they had knocked off six of the target ovenbirds from the list. They may have added one to the list as well. At Lampa, a locality in the central Andes where LSU graduate student **Thomas Valqui** had discovered the Black-spectacled Brush-Finch (*Atlapetes melanopsis*) a few years earlier, Sophie collected a thornbird (*Phacellodomus*) that may be something new to science (stay tuned).

Other highlights of the trip included the first specimens of a distinctive new taxon of wren, observing a 3-foot-long earthworm on the trail at Lampa, and missing the hot Louisiana summer! The team returned home early September, but with extra money and active permits still available, it was decided that Dan would fly back to Peru to try to get more fieldwork done. He returned with only a week's rest between travels, and conducted more local fieldwork around Lima with Thomas Valqui and various students from Lima.

In October, one last long stint was planned to try for more “outstanding furnariids.” Dan teamed up with Miriam, a student from the Lima museum and Fernando, a friend from the city of Chiclayo, and set out on a long excursion that took them from the northern city (3rd largest in the country) of Trujillo into the Andes to the little town of Sinsicap, then to the dry Marañon valley, and finally to the high cloud forests on the east slope of the Andes near the town of Leimebamba. Sinsicap is another site first explored by Thomas Valqui, and here the team of ornithologists found a population of a very poorly-known owl, Koepcke's Screech-Owl. Dan managed to acquire some of the first voice recordings of the species, even though there is an audible trumpet version of “Happy Birthday to You” in the background. The town's trumpeter must have been preparing for a future celebration. From the sound of it, he had a long way to go.



A Yellow-faced Parrotlet, only found in the Marañon valley of Peru.

After a fairly long drive from Trujillo to Cajamarca (the site where the Inca emperor was captured by Spanish conquistadors), and a night's sleep in a fine hotel, the little band of field researchers continued on their way over the central Andean range into the valley of the Marañon River, the westernmost of the main headwaters of the Amazon. Here, where the rainshadow effect of the eastern Andes creates an isolated dry valley, they made short work of finding and collecting the local endemic Chestnut-backed Thornbird (*Phacellodomus dorsalis*). Spending only one night at the pitifully low elevation of 2500 ft (about 800 meters), where the temperatures were an uncomfortable 80 degrees at night (remember, they'd been camping in the High Andes up until then!), they continued back up into the high elevations on the eastern range of the Peruvian Andes. The wet cloud forest of the east-facing slopes was a welcome relief from the dry desert and thorn scrub in which the team had been working until then. However, their goal of collecting a little brown bird called Russet-mantled Softtail (*Thripophaga berlepschi*) (and yes, that really is its English name) was not achieved. The bird, although present, proved to be a foxy little devil, and they had to leave without it after two whole days of trying.

The next stop, to the south by the town of Cajabamba, was again in the dry Marañon valley, this time to search for yet another local furnariid, the Great Spinetail (*Siptornopsis hypochondriacus*) (don't ask us where that scientific name came from... apparently, the bird must have claimed to have symptoms of something). This one was not so hard, and the crew returned to Trujillo triumphant. With only minutes to spare to get Fernando on the next bus to Chiclayo so he could be back at work on time the next day, Dan and Miriam rolled into Lima the following night after having covered 2500 kilometers in 10 days. Tired? You betcha!

-submitted by Robb. Brumfield

# Zooarchaeological Comparative Collection



LSU MNS

Scientific: *Aythya valisineria*

Common: Canvas Duck

Element: Femur

In April, 2003, **Rebecca Saunders, J.V. Remsen, and Mark Hafner** submitted a Louisiana Board of Regents Collections Improvement Grant. The proposal was to fund an upgrade of the Vertebrate Zooarchaeological Comparative Collection in the Archaeology Division of the Museum. This collection is integral to the research and teaching missions of the Museum and a valuable resource used by outside researchers and cultural resources management firms throughout southeastern Louisiana.

Zooarchaeology is the study of animal remains from archaeological sites. At its most basic, the study involves identifying the animals that were exploited by humans for food and other uses in the past. Zooarchaeologists routinely consult comparative skeletal collections to identify the preserved animal bone recovered from prehistoric and historic archaeological sites. This laborious process provides unparalleled insight into the daily lives of past peoples—from Native Americans who arrived in the Southeast some 12,000 years ago, through the early interactions of Native Americans, Europeans, and Africans in the 1500 and 1600s, through the Civil War and up to recent times.

Discovering what was eaten in the past, however, is only the beginning of the information derived from faunal analysis. Zooarchaeology has always been an interdisciplinary field, bringing together the natural and social sciences, history, and humanities for concepts, methods, and explanations. Traditional zooarchaeological studies focused on zoogeographical relationships, environmental evolution, and the impact of humans on the landscape. Nutritional studies, studies of resource use and catchment areas, and economic decision-making are among the more current uses of zooarchaeological research. As an example, Becky Saunders' research focuses on Middle and Archaic period (ca. 7000-3000 B.P.) coastal adaptations. In the Middle Archaic period, ca. 6000 years ago, estuaries were forming at more or less modern locations and humans began to exploit them. The fauna recovered from a number of coastal sites spanning the period from 6000-3000 years ago are being examined to address: the different species exploited and, by extension, the habitats used; the kinds of scheduling necessitated to take advantage of seasonal abundance of resources; division of labor; the size and organization of work groups, for instance, in net fishing; ownership of community resources (e.g., large nets, canoes, etc.); macrobanding and feasting at certain sites with distinctive shell mounds in ring or semi-circular shapes; and the possibility that social status, observed as different quantities or qualities of food remains, is visible in those rings. In addition, it is possible to study food preferences through time, as cultural and social changes produce changes in food preferences or overexploitation forces reliance on less productive resources.

While the collection prior to enhancement was useful for research, there were some serious gaps in species representation. In addition, for teaching and research, additional species, as well as multiple specimens of the different sexes and ages of a single species, were needed. We proposed to identify and fill the gaps in the collection so most or all of the commonly recovered species were represented. We also proposed to create a synoptic collection, which directly compares single elements from morphologically similar species to aid in identification. Finally, we proposed to establish a synoptic collection website by posting a portion of the digital images created on the Museum website. The complete digital synoptic collection will be copied to CD for distribution.

We have acquired 1480 new specimens representing 162 new species. In our upgrade, we targeted otoliths (fish earstones) because they are especially common on archaeological sites, resistant to erosion, and are almost always diagnostic to species. The majority of the new specimens/species (1165/45) is represented by otoliths only. The remainder is comprised of complete or nearly complete skeletons from three classes: 46 new species of birds (total 94), 4 new reptiles (total 52), 4 fish (exclusive of the aforementioned otoliths; total 35), and 63 new mammals (total 134).

Synoptic collections have been developed for amphibians (2 species, 5 elements); birds (25 species, 6 elements), mammals (21 species, 6 elements); fish (39 species, 6 elements [exclusive of otoliths]); otoliths (143 species); cartilaginous fish (2 species, 4 elements); and reptiles (7 species, 6 elements).

Most elements in the physical synoptic collection have been photographed and the photograph mounted in the digital synoptic collection. At present, there are 863 digital photographs which can be burned to three CDs for distribution.

Thanks are extended to the Regents for making it possible to upgrade our zooarchaeological collection, and to all contributors including: **Ray Wilhite**, Dr. Daniel Hillman; **Robby Mann**, **Lorene Smith**, **Steve Cardiff** and Dr. Andy Fischer.

# New Antarctic Exhibit: in Design phase

A new "Around the World" exhibit is scheduled to open at the MNS in June 2005. It will be the first major exhibit added to the MNS since its opening to the public in 1955. The new Antarctic exhibit is coming to complement our existing 3 dioramas depicting scenes from around the world. Current "Around the World" dioramas consist of "The Rockies Above Timberline," "The Great Southwestern Desert" and "At the Edge of the Rainforest."

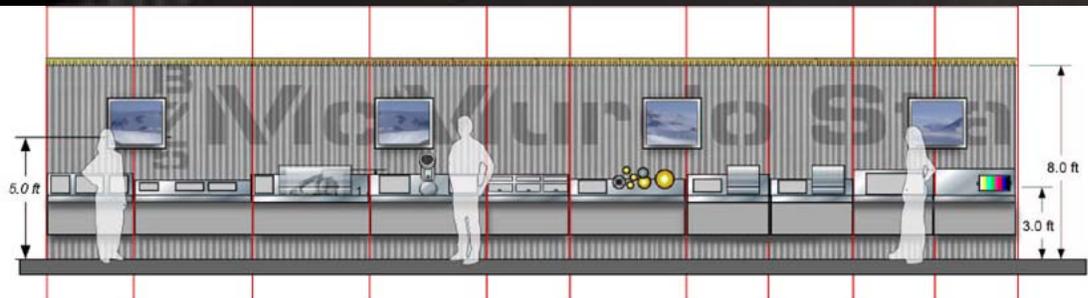
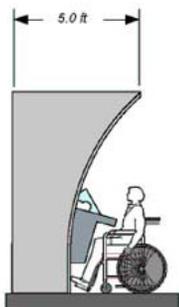
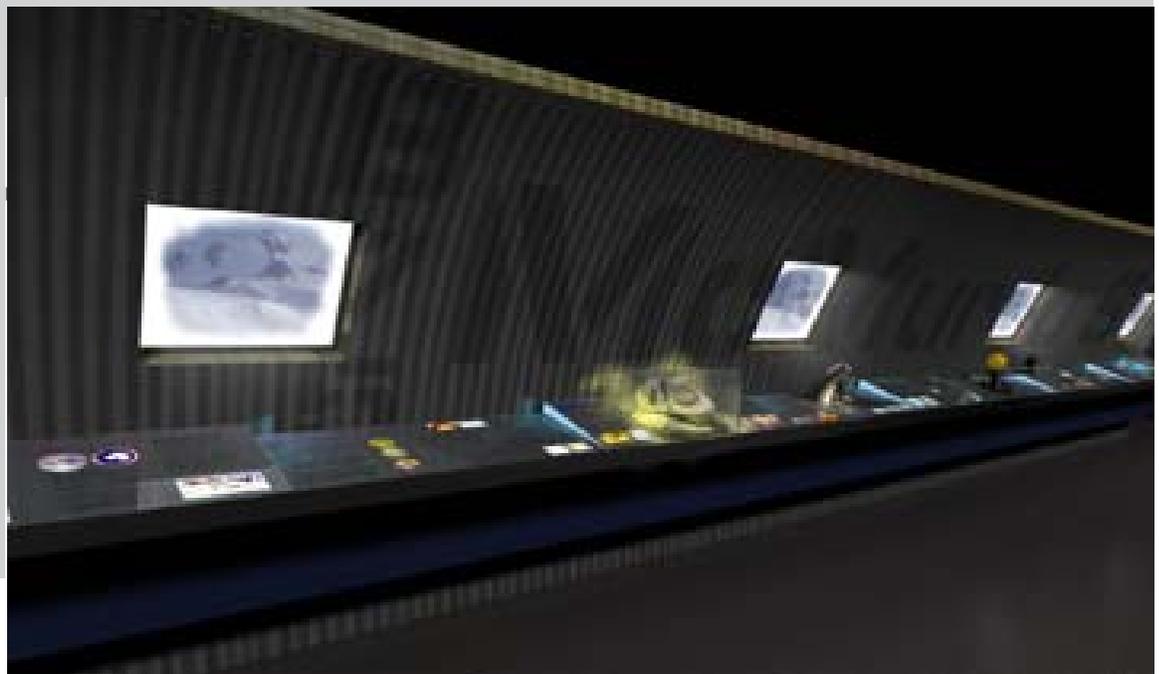
The exhibit is funded thanks to grants awarded to **Sophie Warny** and **Fred Sheldon** by the Louisiana Board of Regents and the W. B. & Irene Pennington Foundation. Most research depicted in this exhibit was funded by NSF. The new exhibit will teach concepts of climate change and geoscience to the public, while il-

lustrating some of the research conducted at the Museum in the field of Antarctic micropaleontology (Dr. Warny and **Lorene Smith**) and general vertebrate paleontology (**Judith Schiebout**). Exhibit panels will also illustrate research conducted by colleagues from the department of Geology and Geophysics (Dr. John Wrenn, Dr. Philip Bart, Dr. Huiming Bao, Dr. Barbara Dutrow, Dr. Sen Gupta and Dr. Gary Byerly).

With this exhibit, the Education Office is pursuing its goal to provide new education programs based on ongoing MNS and LSU research. This new exhibit is the first of many to come. The MNS is currently pursuing funding to create the next new exhibit, in collaboration with **Steve Fullen** and **Becky Saunders**, on archaeological research in Louisiana.

Left: Overall rendering of new exhibit.

Below: Details of plan, side and front elevations.



Louisiana State University



# Ocean Commotion 2004

On November 4, 2004, the LSU Pete Maravich Assembly Center was transformed into an educational haven filled with exhibitors ready to tell kids all about Louisiana's coast. The event was hosted by Louisiana Sea Grant College Program. Exhibits were provided by LSU researchers and public and private organizations. The primary purpose of the exhibits was to give students the chance to learn about and touch products of the sea and coast – the aquatic animals, plants and minerals – upon which Louisiana's citizens are so dependent.

The MNS Education office hosted a booth showcasing a few of the many aquatic fossils of Louisiana. The booth had several Louisiana marine and freshwater fossils, including a whale, shark teeth, bivalves and fish otoliths. Students gathered around the table to hear Museum Education Director **Sophie Warny** and Curatorial Assistant **Rebecca Tedford** identify the fossils and discuss with them marine fossil locations and their environmental significance. MNS Student Worker **Theresa Douglas** and MNS Public Relations Intern **Holly Hernandez** also assisted at the booth.

Once again, Ocean Commotion was a great opportunity for the Museum to display its collection of fossils to children from the greater Baton Rouge community. Ocean Commotion seeks to provide students with an educational field trip destination and LSU researchers with a forum to display their research. MNS has participated in this event since the very first Ocean Commotion held in 1998.



Each year Ocean Commotion brings about 3,400 area students and teachers to LSU. This year's event was a great success and MNS was proud to take part in such a wonderful educational opportunity for children.

# Highlights on Past Special Saturdays



## “Horseshoe Crabs: Living Fossils on our Shores”

Are horseshoe crabs really crabs? How old are they? Where can they be found?



Children and parents gathered at the Museum of Natural Science for October’s Special Saturday to find out the

answers to these questions and much more.

**Dr. Michael Hellberg** from the Department of Biological Science introduced everyone to the wonders of the horseshoe crab with stories, slides and live specimens.

After learning about the horseshoe crab, each child created their very own model and used their artistic talent to color and name their unique horseshoe crab.



One lucky attendee to this Special Saturday was awarded a door prize. Marianne Konikoff, age 8, won a hermit crab. She said, “I love it! I already have three hermit crabs so they get a new friend!” When asked about her favorite part of October’s Special Saturday, she said, “My favorite part was, well, I liked it all!”



## “The Secret Live of Honeybees”

This Special Saturday was all the buzz at the Museum of Natural Science. **Dr. Jeff Harris**, an entomologist at the USDA Bee



Lab, presented a slide show to an audience of about fifty, a record crowd! The honeybee case he brought with him for the children to see was a hit.

Children and their parents relaxed while the slides taught them about different types of bees in a colony, the job of each bee and different types of bee communication. Dr. Harris also talked about bee stings and told the parents about precautions they can take when their children are playing outside.

Ann Bernard, a parent, said, “This was a really good one (Special Saturday) because we see bees in the yard all the time. I wanted to bring them because I thought if they learned about bees they wouldn’t be so afraid of them.”

After the slide show presentation, the children colored a map indicating the areas where different types of honey are produced. Next, everyone was given the opportunity to taste a variety of honey and choose which one was their favorite.



“Tasting the honey was my favorite part of Special Saturday because it was so good!,” Hannah, age 9.

Would you like to attend one of the MNS future Special Saturdays?

For more information, call (225) 578-3080 or email Rebecca Tedford at [rtedfo1@lsu.edu](mailto:rtedfo1@lsu.edu).

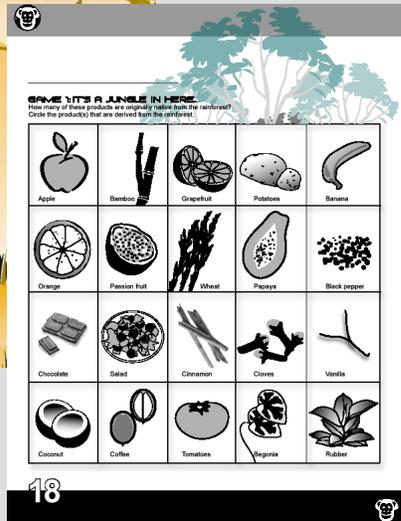
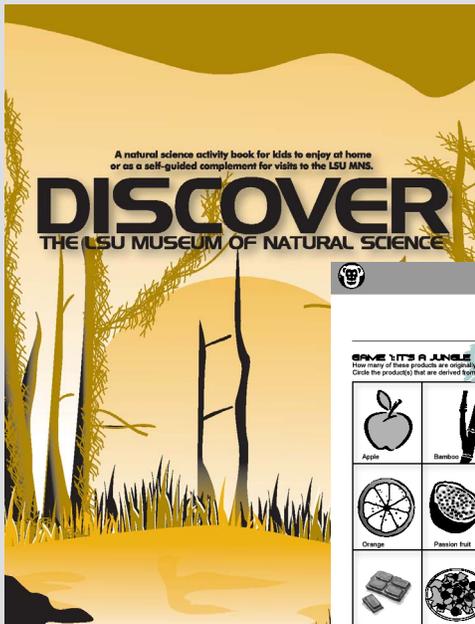
See our website [www.museum.lsu.edu/education](http://www.museum.lsu.edu/education) for more details!

“A Walk in the Jurassic”.....Feb. 26  
 “An Arbor Day Celebration!”.....Apr. 23

“Secrets of the Sand”.....Mar.19  
 “Minerals All Around!”.....May 21

# New Books at the MNS

## *DISCOVER: The LSU Museum of Natural Science*



A new educational book designed to help our young visitors and their parents or teachers make the most of their visits has been published recently by Creative Company publishers in Indiana. The book was conceived by **Sophie Warny** and illustrated by Amber Cancienne to complement self-guided visits to the MNS.

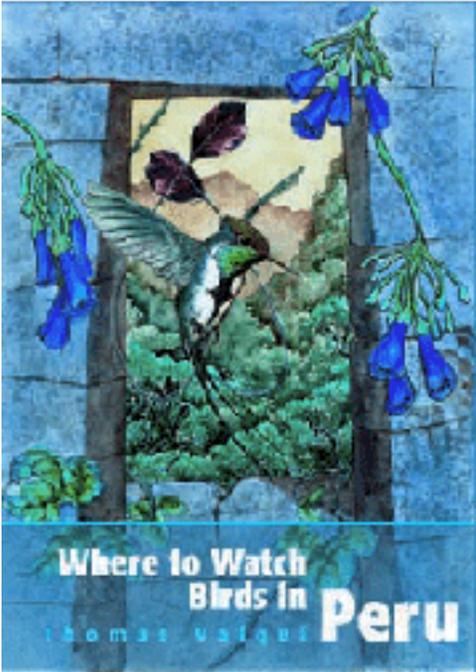
Each chapter is linked to MNS displays and provides in-depth descriptions. The book will allow visitors to learn through a variety of activities. Games, quizzes, crosswords and math problems are all linked to the exhibits to make learning fun and help kids practice subjects important to elementary school science classes. Science teachers can obtain a free copy of the book on request. For more information or to purchase the book (\$6), please contact the education office at [mused@lsu.edu](mailto:mused@lsu.edu).

## *Early Pottery: Technology, Function, Style, and Interaction in the Lower Southeast*

**Rebecca Saunders**, Curator of Archaeology, and **Christopher T. Hays**, the Regional Archaeologist at the Museum from 1994-2000, have a new edited volume out: *Early Pottery: Technology, Function, Style, and Interaction in the Lower Southeast*, published by University of Alabama Press. In this book, Saunders, Hays, and 13 other authors explore the characteristics of the earliest pottery in the United States, which appeared around 4500 years ago in the Savannah River valley and lower Atlantic coast, and up to 1000 years later in the Lower Mississippi River Valley. Three articles are devoted to the issue of whether pottery was produced at the famous Poverty Point site in West Carroll Parish, which was constructed between 3600 and 3300 B.P., just as pottery began to appear in the area. The authors discuss aspects of pottery production, including the manipulation of clay pastes to achieve the desired working and firing properties, and also the way that pottery functioned in early societies — whether early pottery was a revolution in utilitarian container technology that allowed more efficient food production or whether it was mainly a high status item used for display during rituals. While there is no consensus (it was probably a bit of both), the studies in the volume provide a wealth of information from which to form your own opinion.



Kelli Ostrom, former MNS curatorial assistant and Steve Fullen, archaeology collection manager, re-fitting pieces of pottery from an experimental exercise in which fiber tempered pots were analyzed to determine construction methods.



# One more book...

## *Where to Watch Birds in Peru*

MNS Graduate Student **Thomas Valqui** is the author of this recently published book. It includes:

- how to bird at 152 sites
- nearly 1300 species mentioned in the text
- 7 regional maps and 60 site maps
- 3 thematic color maps
- a complete up-to-date Peru checklist
- descriptions of the 15 biogeographic bird-regions
- descriptions of the 42 most important bird habitats
- 50 color photographs of biogeographic regions and habitats.

## In the News

### Staff Research Associate Receives Award

**Bret Whitney** received the American Birding Association's 2004 Ludlow Griscom Award for outstanding contributions in regional ornithology. Bret has been associated with the Museum officially as a staff research associate for about 10 years. He has strong input into the MNS field research program in the Neotropics. He has influenced research projects of many recent MNS students. Bret has written about 30 papers with LSUMNS bylines, often in collaboration with current or former LSUMNS personnel. He has discovered and described seven new species of birds while associated with LSU, including a new genus of bird, *Acrobatornis*. Bret engineered the deposition of one of the four specimens of *Acrobatornis fonscai* at the LSUMNS. This is the only specimen of that new species and genus available for study outside Brazil!

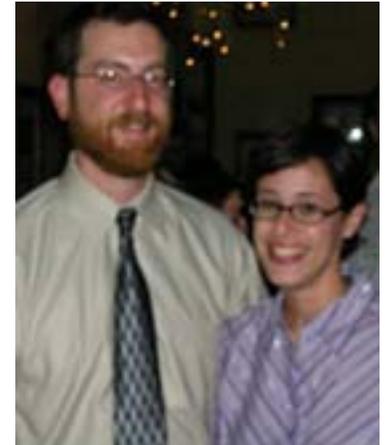


Photocourtesy of Gill Carter



# MNS Holiday Social

On Saturday, December 4, MNS faculty, staff, students and friends of the Museum gathered to celebrate the holidays with a festive social gathering. This annual celebration is a great way for everyone to meet family and friends of those associated with the Museum.



Award winner, Jessica Light, and her friend Jamie Saucier



Van Remsen and his wife Catherine Cummins

In accordance with this annual Museum tradition, an outstanding graduate student was honored. Congratulations to this year's awardee Jessica Light! When asked how she would spend the award money, she replied, "I intend to use it to purchase lab supplies so I can finish collecting data for my dissertation work."



Matt Carling, Zac Cheviron and Robb Brumfield

We would like to thank all of the guests who generously donated books. The books were given to the LSU Women's Center for their children's programs. The center was very appreciative of our donation. They look forward to incorporating the new books into one of their many programs that help students, faculty and staff on campus who are raising small children.



Jesse Prejean, Nannete Crochet and Rebecca Cooley



Doug Pratt entertaining guests

We would also like to thank the Baton Rouge branch of Community Coffee for donating the coffee and condiments. We appreciate their yearly support of the Holiday Social.



Bob Tague and Mark Hafner







**LOUISIANA STATE UNIVERSITY**

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If you would like to include items in the next issue of *Museum Quarterly* please send information, articles and photographs to the Museum Education Office c/o Holly Hernandez, public relations intern. Articles about research, study or any other items of interest are encouraged. Information may be submitted as completed articles with jpeg pictures in attachments, or in list form to be put into articles. Simply email your material to [hherna4@lsu.edu](mailto:hherna4@lsu.edu), or to [mused@lsu.edu](mailto:mused@lsu.edu), or mail to:

The LSU Museum of Natural Science  
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