Museum Quarterly

LSU Museum of Natural Science

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Museum of Natural Science Curators and Directors

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Judith A. Schiebout
Curator of Vertebrate Paleontology

Sophie Bart Warny
Director of Education

Letter from the Director...

Folks who work in academia lead rich and unusually self indulgent lives. We have the freedom do most anything our imaginations conjure and our energy allows. For museum faculty and students that means we usually choose to travel to wild places and investigate esoteric questions about the natural world. Despite this wonderful freedom, we are occasionally required to report to authorities on what we do. A case in point is the recent North American Ornithologists Conference in Veracruz, Mexico, 3-8 October. The Museum's ornithologists were forced to travel to this resort on the west coast of the Caribbean and explain to 2,000 other bird scientists what we've been up to this past year. I must say it was an onerous task. Those from the Museum who suffered through it were curators **Robb Brumfield**, **Van Remsen**, and I; graduate students **Gustavo Bravo**, **Curt Burney**, **Matt Carling**, **Zac Cheviron**, **Santiago Claramunt**, **Richard Gibbons**, **Cheryl Haines**, **Haw Chuan Lim**, and **Ben Marks**; and undergraduates **Katie Faust** and **Phred Benham**. Other LSU ornithologists who attended the meeting included **David Brown** from Biological Sciences, and **Laura Palasz**, **Toni Taylor**, and **David Fox** from Renewable Natural Resources. All the pain was worth it, however, because **Zac Cheviron**, **Matt Carling**, and **Ben Marks** achieved glory for LSU by winning recognition from the conference for their outstanding research presentations.

Fred Sheldon

Human remains found at Sims site

by Dr. Rob Mann, S.E. Regional Archaeologist

The **LSU Museum of Natural Science** Regional Archaeology Program discovered human remains at the Sims site in January 2006. The remains consisted of bone fragments from several individuals.

The human remains we recovered were placed in the mound, probably as disarticulated bundles of bone, by Native Americans during the construction of the mound, which may have taken place over the course of many years.

The human remains are assumed to be affiliated with the Native American Chitimacha Tribe because of the area where the remains where found. They were found clinging to a root ball of a tree that was knocked down by Hurricane Katrina.

The Sims site is a multi-component mound complex with associated midden deposits located along both banks of Bayou Saut d'ours. This mound was constructed particulary for burial purposes.

In order to protect these ancestral remains from further destruction and loss through erosion and/or pot hunting, an Unmarked Human Burials Permit was secured from the Louisiana Division of Archaeology. The documentation, excavation and stabilization of the disturbed portions of the mound at the Sims site were undertaken by Dr. Chip McGimsey, a Southwest Regional archaeologist, and me in consultation with the Chitimacha Tribe.

Tree fall on Mound A at Sims site

The historic period cemetery atop and adjacent to Mound A

The team also recovered more than 100 pottery shards including a partially reconstructed Winterville Incised vessel. Other distinctive pottery types include Anna Incised, Cole Creek Incised, Mazique Incised, L'eau Noir Incised, and French Fork Incised.

Several volunteers assisted at the site. The student volunteers enjoyed the experience and hopefully will continue to pursue their interest in archaeology.

Once documentation and analyses of the artifacts and human remains recovered from the mound fill was complete, these materials were returned to the Chitimacha Tribe for reburial at the site.

Partially reconstructed
Winterville Incised vessel

Special Saturday Schedule 2006-2007

"Leaf it to You: Tree Identification"
Date: November 18
Ages: 5 – 12
Did you know that trees are the number one agricultural crop in Louisiana? We will discuss how to identify trees by using their leaves and bark.

"Gulf Coast Sea Life"
Date: January 27
Ages: 5 – 12
The Louisiana gulf coast is teeming with life including shrimp, a huge variety of fish, oysters, and many other aquatic organisms. Come learn about all these magnificent creatures and their importance to coastal ecology and Louisiana.

"Who Dunnit It? Understanding forensic science"
Date: February 24
Ages: 5 – 12
For all you future detectives out there, this is your chance to learn how forensics science can help solve a crime. See how hair, fibers, fingerprints, and DNA are all evidence that can help pin down a suspect. In this activity we will put our information gathering skills to work and analyze the evidence to solve a make-believe case in the museum.

"Crawfish: Louisiana's mudbug"
Date: March 24
Ages: 5 – 12
"Crayfish", "crawdads", "mud bugs".... Louisianans are very familiar with this edible crustacean, but what do we know about how they move, feed, and behave. Examine crawfish up close! This time, the crawfish will be for studying and observing... no eating please!

"Eco-solutions"
Date: April 21
Ages: 5 – 12
We are using our resources faster than we replace them. To be less dependent on natural resources, we are going to learn different ways to recycle and reuse many of our resources from home.

"Animal tracking"
Date: May 12
Ages: 5 – 12
Deer, alligator, and raccoons, oh my! Learn how to interpret the evidence these animals left behind. Tracks

Miocene terrestrial vertebrate sites of Louisiana

by Dr. Judith Schiebout

Terrestrial vertebrate sites in the Fleming Formation, first discovered in 1993 on Fort Polk in western Louisiana, had been the only source of Miocene terrestrial vertebrates in the state until discoveries in southeastern Louisiana in the Pascagoula Formation in June of 2005.

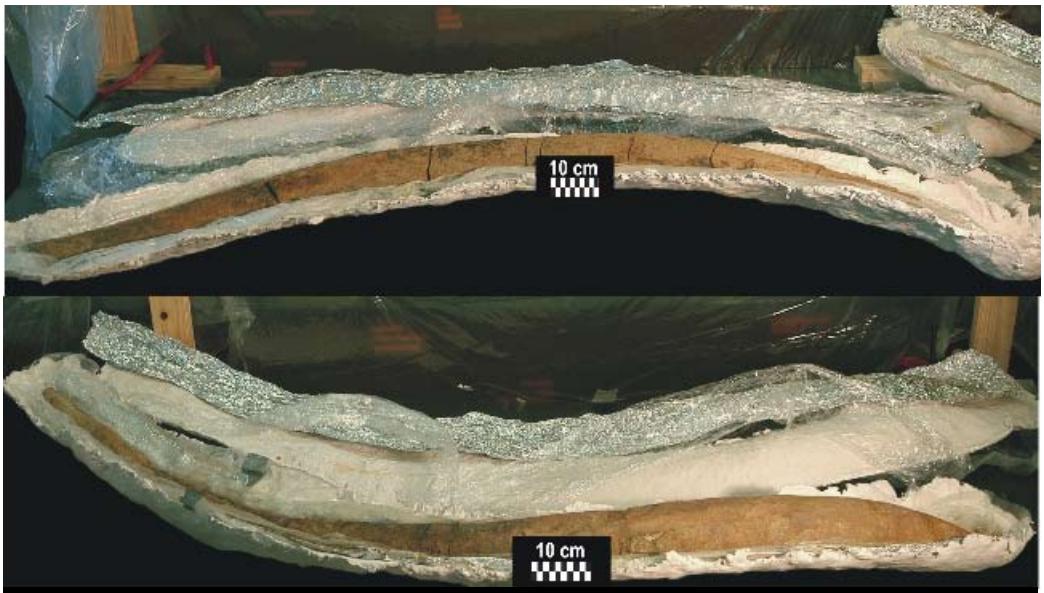
6359 cataloged specimens, mainly mammals, have been recovered from western Louisiana, including the rhinoceros *Aphelops*, a gomphothere, two species of merychippine horse, the protoceratid *Prosynthetoceras* francisi, a large camel, a small peccary, *Miomustela*, a hedgehog, bats, shrews, two small beavers, rodents *Copemys* & *Texomys*, heteromyids, and squirrels, as well as lower vertebrates including turtles, snakes, frogs, toads, salamanders, and fishes. Heavy vegetative cover and isolation from other sites in Texas and Florida impede placing these fossiliferous sites in context, both locally and globally.

Paleomagnetic work on cores at sites in western Louisiana, places the most prolific as probably between 14 Ma and 13.5 Ma, which is consistent with the Late Barstovian (Langhian Stage) Land Mammal Age of their faunas. Concentrations of calcareous pedogenic nodules produce most of the fossils. The nodule concentrations have been attributed to drops in base level causing erosion on interfluves. Timing is congruent with global cooling and lowering of sea level associated with Antarctic ice development. One of the stratigraphically lowest western sites is marine, bears both marine and terrestrial large and small vertebrates, and is currently considered to record a storm event.

The faunas from the Pascagoula Formation in the Tunica Hills region are the first significant vertebrate finds for that formation. The original site has yielded large and medium sized mammals, including a mastodon (tusks and a palate with teeth), the rhinoceros *Teleoceras*, a dwarf rhinoceros, two taxa of horses, a small llama-like artiodactyl, a pronghorn-like antilocaprid, and fishes, turtles, and alligators.

We are attempting an innovative use of resistivity surveying to try to locate totally buried large bones at this site. Environmental indicators at the site are consistent with estuarine deposition. Plans for additional coring and surface search are underway both at the marine site in the Fleming Formation in western Louisiana and at the estuarine site in the Pascagoula Formation.

The Pascagoula vertebrates suggest a Hemphillian Age (Messinian Stage), latest Miocene, making them roughly eight million years younger than the western Louisiana faunas, a time for which the paleogeographic record of Miocene vertebrate faunas in the central Gulf Coast region of North America had been lacking.



Mastodon tusks in supportive casts undergoing slow drying process to minimize cracking

Significant vertebrate fossil site in Louisiana

A presentation at the Gulf Coast Association of Geological Societies Annual Meeting

The first significant vertebrate fossil site in the Pascagoula Formation was discovered at a location in the Tunica Hills in southeastern Louisiana during June, 2005.

A mastodon palate with teeth was initially reported by Kerry Dicharry, an amateur naturalist. Subsequent field surveys revealed abundant large and medium sized mammal remains, including two mastodon tusks associated with the palate (one nearly seven-feet-long) and an associated humerus, femur, pelvis, ribs and part of the tail of Teleoceras, a large, short legged rhinoceros.

Other animals tentatively identified include a dwarf rhinoceros, two taxa of horses, a small llama-like artiodactyl, a pronghorn-like antilocaprid, and fishes, turtles, and alligators. In a novel application, we are attempting to use resistivity surveying to locate buried large bones.

Preliminary examination of the blue-green, clayey silt lithology and trace fossils (e.g., burrows and trails) of the Pascagoula Formation at the Tunica Hills Site suggest that the depositional paleoenvironment was an estuary. Palynomorphs and phytoliths may shed light on the flora, paleoenvironment, diet of the animals, and age.

The Pascagoula Formation in Louisiana has been dated on stratigraphic position because no fossils have been reported from it. The dwarf rhino suggests an age no younger than Miocene, as these animals became extinct in North America at the end of the Miocene.

The vertebrate fauna so far is consistent with a late Miocene age, probably younger than Miocene vertebrate sites in the Castor Creek Member of the Fleming Formation on Fort Polk in western Louisiana.

Pelvis of the rhinoceros
cupped in part of its field jacket

A. Crown view of molar tentatively assigned to the horse *Neohipparion* eurystyle.
B. Posterior view of A

United Nations
Educational, Scientific
and Cultural Organization

Hurricane Katrina and the role of Holocene enviromental catastrophes in human history

by Sophie Warny

Last year, I was contacted at the **Museum** by Dr. Suzanne Leroy, Belgian palynologist and professor at the Brunel University, West London, UK. Suzanne is the coordinator of one of the UNESCO IGCP projects (Project 490). As part of this project, she needed to organize the 2006 annual meeting on the role of Holocene environmental catastrophes in human history. After the worldwide attention that Hurricane Katrina gave to our part of the world, it became obvious that hosting the meeting in an area hit with such a major human and geological tragedy was well fitted. Suzanne introduced me to palynology in 1990 and I was happy to help her bring her group to Louisiana. After many emails and conversations, we've got the green light to host the IGCP meeting in collaboration with the 2006 GCAGS conference held in Lafayette. This could not have happened without Mary Broussard and Mike Cornyn, both with Stone Energy, and the rest of their team. So I want to take the opportunity to thank both of them for their tremendous help and fantastic organizational skills.

For those unfamiliar with this program, the IGCP is the International Geological Correlation Programme. It is a joint endeavour of UNESCO (United Nations Educational, Scientific and Cultural Organisation) and IUGS (International Union of Geological Sciences). It was launched in 1972 to facilitate cooperation among geoscientists across frontiers and boundaries. Its objective is to bring scientists from all over the world together and enhance interaction through joint research work, meetings, and workshops.

Project 490 focuses on the inter-disciplinary investigation of Holocene geological catastrophes, which are of importance for civilizations and ecosystems. This project is concerned with environmental events since the beginning of the Holocene (the last 11,500 calendar years) excluding therefore the influence of the glacial-interglacial cycles. The project examines how quickly ecosystems and civilizations are able to recover from catastrophic events. With the growing recognition that major natural events can have abrupt global impacts, this project is a timely opportunity to assess the sensitivity of modern society to extreme natural threats (www.mun.ca/canqua/igcp490/).

As part of the conference, we needed to organize a field trip that would allow the visiting scientists to better understand what happened on August 29, 2005 when Hurricane Katrina made landfall, and why levee breaches occurred from a geological point of view. Dr. Steve Nelson (Tulane University, Dept. of Geological Sciences), who has just published an article on this subject in GSA Today (Nelson and Leclair, September 2006), agreed to lead the field trip.

Dr. Nelson brought us to visit several "Katrina outcrops" and shared geological cross sections of areas along the levees, helping us understand what were the main causes of levee failure. If some of the levees in New Orleans were indeed overtopped because they were not high enough to offer protection for a category-3 hurricane, geological evidence tends to prove that some failures were linked to the poor integration of known sedimentological data into the levee design. Evidence we observed showed that some of the levees were not armored, therefore lacking the protection against erosion from overflowing water. It was reassuring to see that ongoing wall repairs were done using "T" shaped walls, therefore offering better protection in the future. Near the lakefront, "Katrina peat samples" indicated that some of the floodwalls were probably anchored in or close to peat deposit, a very unstable sediment that was originally deposited from swampy forest existing in the area in a not-so distant past. But one of the most disturbing sites was the southern breach of the London Ave. Canal. There, approximately 26,380 m^2 of sediments were deposited in the days that followed Hurricane Katrina, which means a deposition rate ranging from 0.3 m to 1.8 m in two days (Nelson and Leclair, 2006). Despite this unusually high sedimentation rate and the quantity of sand deposited, no sand was observed in the breached levees. On this basis, and on the basis of the deposit composition (fine-grained sand, shells, shell fragments), Nelson and Leclair postulated that these sands originated from the Pine Island Trend beach deposits. This is a very disturbing fact because these sands, that were deposited about 4,000 years ago as sea-level rose (Coleman et al., 1998), can be found in the subsurface beneath all of the drainage canals. This raises significant concerns about the stability of the New Orleans drainage canal levee system (Nelson and Leclair, 2006).

Picture legends: 1) Our family's house near the London avenue canal in the days following Hurricane Katrina, 2-4) Dr. Nelson guiding the trip, 5) Francesca Budillon (Italy) holding a cross section showing the sand deposits, 6-7) sandy "Katrina outcrop" at London avenue canal with Suzanne and I as scale, 8) ongoing levee reconstruction.

Museum Expedition to Northern Perú
by Dr. John P. O'Neill

With his fifth grant from the National Geographic Society's Committee for Research and Exploration, and a gift from a good friend of the **Museum**, Staff Research Associate **John P. O'Neill** planned and led an expedition to a remote area of northern Peru. The aim of the expedition was to explore the southern section of the Cordillera del Cóndor on the border of Ecuador in the department of Cajamarca. The region was among many that has never been biologically inventoried or studied. Thanks to a scouting trip by an adventuresome friend, Todd Mark, the group knew something about the area and how best to get to their goal of studying birds over an elevational gradient that spanned more than 6,000 ft.

Aside from **Dr. O'Neill** and his wife Dr. Leticia A. Alamía, the group included Ph.D. student **Santiago Claramunt**, **Museum** Associates **Greg and Donna Schmitt** and their son Jonathon from New Mexico, volunteer Jove Graham (son of former **LSUMNS** student **Gary Graham**), Photographer/Film-maker Sandesh Kadur from the University of Texas at Brownsville, and Peruvian students Fernando Takano and Sonia Salazar from the Museo de Historia Natural in Lima. Long-time helpers Manuel and Marta Sanchez performed their usual jobs of being guide, cook, specimen preparer, and many other tasks. Additionally we had 6 other full-time workers and employed a number of local people on and "as-needed" basis.

Hito Jesus landmark in the Peru-Ecuador border

John and part of the group arrived in Lima on June 7th, with Sanchez and friends arriving the next day. After a week getting equipment in order, buying food for about 20 people for two months, and packing everything, the group left Lima June 24th and went by bus north to the coastal town of Chiclayo and then west over the Andes to the town of Jaen. Jaen is located at the northern edge of the great desert of the Río Marañón just at the point where more humid vegetation begins to take over. It is a fascinating area biologically, but we had no time to do anything because we wanted to get to the Cordillera del Cóndor as quickly as possible. Because of personal commitments and other factors, the expedition had to be limited to about two months, and believe it or not, this is truly a short trip when one is studying birds over an elevational range!

Equipment being transported up the mountain

Three days later we left Jaen in a large truck packed with all the supplies as well as the people, and traveled north on a paved road to the town of San Ignacio, then northeast on a gravel road to the Río Chinchipe, which we crossed on a small barge, and on north via a dirt road with only a few muddy areas, arriving at the small village of Siete de Agosto (Seventh of August, the date of the town's founding some 8-9 years ago). We were now in an area that had been pristine lowland forest less than a decade ago, but was now mainly cutover and planted with coffee (fortunately Peru has mostly coffee that needs shade, so the area still has a fairly good tree cover). From here we would then go in Toyota trucks with large tires, slogging our way over a road that had mud deep enough to allow the trucks to "bottom out: on a regular basis. Some six hours of travel over this amazing road brought us to the end of the line as far as vehicles are concerned. We were in another small village called Misa Cantora, just a stone's throw from the Río San Francisco, the border between Ecuador and Peru. Here we began the long process of

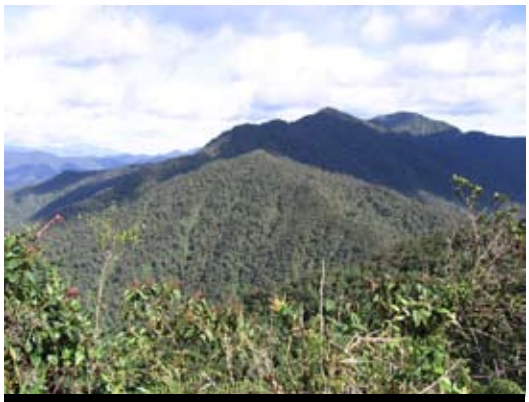
arranging for mules to take the equipment to the end of a trail, some eight hours further east. It was coffee harvest time and people needed heir mules to transport their crops, so it took us almost a week to get all of the equipment and people to the end of the mule trail. At this point we realized that we needed to begin studying the birdlife and not waste any more time getting further into the mountains, so we established our base camp just beyond the end of the mule trail. Being at 1,800 meters was somewhat higher than we had hoped, but we had access to forest as well as an old field with scattered large trees and a small stream with good water ran along one side. Soon the workers were busy putting up tarps, preparing tent sites for sleeping, setting up work tents, and making a decent kitchen for Marta's good cooking. By the end of the day we had the basics ready and it was good that everything was covered as the rain began to fall. Little did we know that we were witnessing the beginning of the rainiest **LSUMNS** expedition in **John's** 45 years of working in Peru! The next day the first nets were in place and people began to explore trails looking for interesting birds. Thanks to our small (29 lb) 1000 watt generators we soon had lights and could work easily on the darkest days, or into the night with no problems. These generators have revolutionized our work as batteries can be charged, computers can be in used, and we have that precious light! The next task was to get the workers busy extending the existing trail on past its end with the goal of reaching an area of 3,000 meters (about 10,000 ft.). This high-elevation area was quite isolated from the main Andes and promised to hold interesting birds. We already knew that our friend Todd Mark, who had scouted the area for us, found the Jocotoco Antpitta (Grallaria ridgelyi) and the White-breasted parakeet (Pyrrhura albipectus), both species known only from Ecuador, but it was important to get specimens to document their occurrence in Peru. The Antpitta was only discovered in 1997 and formally described in 1999. The workers soon established a second camp at 2350 meters and began putting up nets. Specimens were brought down to the base camp for preparation. After a few days Santiago and Fernando packed up what they would need and hiked up to the second camp. From here they would be able to get to a number of habitats not at the base camp and when it briefly stopped raining they would get unprecedented views of a vast wilderness stretching northward and eastward as far as the eye could see. Most of the time, however, it either drizzled or poured and only safely in their tents at night were people warm and dry! Workers who brought specimens down to the base camp brought notes from those at the upper camp telling us what supplies they needed for a few more days. We had small radios that were supposed to have a 14 mile range, but we were still surprised when they worked well in the mountains where signals often seem to be blocked by the ridges above. We talked three times a day and so had a good idea of what birds they were finding. On the first evening the group heard the unmistakable low hooting of a Jocotoco Antpitta. The habitat was very similar to that it inhabits in Ecuador – a steep slope with Chusquea bamboo and a small stream nearby, and very wet!. After only a few days Santiago was able to see and then collect an antpiitta – the first specimen from Perú and a new species for the **LSUMNS** collection! He also found other interesting birds such as two species of tapaculos (family Rhynocryptidae), a variety of hummingbirds and tanagers, and many other birds, most of which did not occur at the 1800 meter base camp. He soon also collected a specimen of the Flammulated Treehaunter, *Thripadectes flammulatus*, a member of the family Furnariidae, and one of the few members of that family for which no tissue existed. This is especially important because of Dr. Remsen's and Dr. Brumfield's NSF-funded project to study the phylogeny of this huge Neotropical family

Grass-green Tanager (*Chlornis riefferii*) caught in a mistnet

Forest at the base camp

of birds.

Work on the trail up to 3,000 meters continued and nets were moved to sample the different avifaunas. Although the clouds at 2500 meters and below occasionally parted for a few hours, the workers at the higher elevations were constantly subjected to wind and rain, making their task miserable – but they persevered. As they moved up birds like the Buff-winged Star-frontlet, (*Coeligena lutetiae*) and the Glowing Puffleg,(*Eriocnemis vestitus*), hummingbirds of very high elevations showed up and indicated more exciting things to come. The distance to the uppermost areas was about 20 km and as the workers went higher the vegetation was lower and thicker – the distance that trail could be cut in one day greatly decreased. Finally, only a couple of weeks before we were to leave, they reached 2950 meters and entered a land of club mosses, ground bromeliads, and grasses – timberline at last. Both Sandesh Kadur and Santiago Claramunt had the good luck of being at the highest point of the trail when the clouds parted for a few minutes, so we were able to get pictures of some of this amazing habitat. Birds like the Plumbeous Inca-Finch, (*Phrygilus unicolor*), and Páramo Seedeater, (*Catamenia inornata*), were netted – they are species that only occur in the above-timberline vegetation. After a few more days of having nets up high we ran out of time. We needed three or four weeks to sample this habitat, as well as the elfin forest just down slope, but we had to pack up our camps and leave before we could do that.



View from the ridge of the Cordillera del Condor to the south

Santiago Claramunt and Abraham Urbay above timberline

While the saga of new birds was ongoing at the higher camps, the Schmitt's and Sandesh Kadur arrived at the base camp on June 29, adding great talent to the skinning and hunting efforts. Jonathon, only 17 years old, has already been on several expeditions and is now a skilled hunter and an excellent preparer of specimens. He concentrated his efforts on collecting the dozen or more sympatric species of Tangara tanagers that were at the 1800 meter camp, as well as other interesting species (including the only specimen of the Equatorial Graytail, (*Xenerpestes singularis*), collected on the expedition. This small member of the furnariid family is very poorly known. Shortly after the Schmitts arrived, Santiago went out one morning and came upon a flock of White-breasted Parakeets and managed to collect two specimens – a new species for Perú and also for the **LSUMNS** collection!

Finally we had to make a schedule to take down the camps, stop preparing birds, and prepare to leave. Our allotted time had run out. With the almost continuous rain of the previous 50 days or so the trails were now nearly three feet deep in thick, gooey mud. Thanks to our new local friends we were able to get enough mules to get all of our stuff off the mountain and down to where trucks could be used in only two days. Some work had been done on the road and we were able to slip and slide down to where it was dryer. We actually made it out from camp to Jaen in three days – a miracle! Soon we were in Jaen where it was warm and dry, sleeping in beds, eating in a restaurant, and all was peaceful. But, in reality, we knew that we had not finished our work in the Cordillera del Condor, and likely would not be able to go back. That's the way it is in Perú – there is always more to do and there will always be new discoveries. We do not seem to have found any new species, but we did get two species new for Peru and new for the **LSUMNS** collection and we have many interesting records of birds from an area that was once a total biological unknown.

I might also add that a major book on the birds of Peru written by Tom Schulenberg, Doug Stotz, Dan Lane, and I, and illustrated by 13 of the world's best artists is now in press (Princeton University Press). The first volume, "The Field Guide" will cover more than 1800 species in 300 color plates and a detailed, but concise text opposite the artwork. A small color distribution map will also accompany each species, and descriptions of vocalizations will be presented for each. We have hopes that it will actually be available by the

LA Board of Regents awards grant for Native American exhibit

The LSU Museum of Natural Science received a grant from the Louisiana Board of Regents of $129,460 in June 2006. The grant was awarded to **Dr. Sophie Warny, Dr. Rebecca Saunders,** and **Steven Fullen** to build a new exhibit entitled "Ancient Mounds and Artifacts: durable reflections of transitory societies."

The two main goals of this exhibit are to enhance our educational programs and showcase the museum's archaeological collections, keeping with our goal to bridge the gap between our research and public education, said director of education **Dr. Sophie Warny**.

The program will be based on artifacts that are part of Dr. Saunder's archaeological collections.

Features include permanent "in-house" exhibit and a free-to-loan traveling kit of materials for schools, libraries and other museums. The material will include an activity booklet for students with games, science quizzes, mathematics and coloring sheets. Adults will receive an informative flier on Louisiana Native Americans and archaeological findings.

The exhibit will be tied to the LSU Indian Mounds (which are located less than 300 ft from the new exhibit selected site) and to the new Ancient *Mounds Driving Trail* (that is being developed by the Louisiana Dept of Culture, Recreation, and Tourism). The exhibit is set to launch this summer.

Student worker keeps data in order

Stephen Larson has been a student worker you can count on. Larson has been with **LSUMNS** for four years and will be graduating in May. He doesn't work with artifacts or perform insect experiments but his work is just as vital to the museum. Larson works on the museum's data entries by tackling notorious numbers.

" When I first got here they asked me what I wanted to do. I told them I was a good typer so they assigned me to data entry," **Larson** said.

" My first year, I got the museum caught up on their specimen data and took it from paper to an electronic database. The database was put on-line last year and it's always being updated."

He estimates that the museum has 165,000 birds' specimens dating back to the 1920s. His freshmen year, he processed the data on about 13,000 of them. It has been the best part of my job so far he said.

"It was a good feeling. You never know how long it would have taken.

Larson also likes the flexible schedule.

"I can work around my class schedule," **Larson** said. "I can work by myself and not have to worry about anyone showing up."

Larson plans to go to graduate school for a master's degree in accounting. He then wants to work for the accounting firm KPMG.

Herpetology News

New Species!

During field work in Borneo, **Chris Austin**, Assistant Curator of Reptiles and Amphibians, collected what he thought was a species of lizard new to science. In collaboration with Dr. Indraneil Das from the Institute of Biodiversity and Environmental Conservation at the Universiti Malaysia Sarawak they used morphological and DNA evidence to distinguish this species from other closely related species. The scientific publication describing this new species along with a color photograph will be published later this year in the *Journal of Herpetology*.

U.S. Research:

Due to a happy concomitance of space and time, PhD student **Nathan Jackson** and his wife, Heather, also a PhD student in the Department of Biological Sciences, were able to accompany one another on a field expedition this past summer throughout the southeastern US in pursuit of ground skinks (*Scincella lateralis*) and bess beetles (*Odontotaenius disjunctus*). As part of his dissertation research, Nathan is assessing the evolutionary history of the ground skink at different spatial scales using geographic and genetic data. For a month they collected from over 30 locations in 17 states from Florida, north to New Jersey and then west to Oklahoma and Texas, burdening their cozy Toyota Corolla with 8,300 additional miles. They were able to collect tissues for DNA work from 160 skinks and 180 beetles to use for their research. "Camping and generally living outside was definitely the best part," says Heather of the trip. "And if it hadn't been for a thrilling chance to see Tom Waits when passing through Memphis, I certainly would agree," replies Nathan without guile.

International Research:

Jamie Oaks spent one month in Cambodia and Malaysia working on this Masters thesis research on crocodylian systematics. He made great inroads with government officials in obtaining permission to work in Cambodia and was very successful in his first foray into international research. New PhD student **Christopher 'CJ' Hayden** joined the Museum of Natural Science Herpetology program officially this Fall. CJ received his undergraduate degree from the University of California at Berkeley where he conducted undergraduate research with Dr. Wayne Sousa (beetle ecology and systematics) and Dr. Jim McGuire (reptile systematics). CJ joined **Chris Austin** on a 3-month expedition to Papua New Guinea (PNG) this summer as part of Chris' ongoing National Science Foundation funded research.

CJ Hayden and local people help unload the chartered Cessna in Utai

The New Guinea field team included a student from the University of Papua New Guinea and three research scientists from the Papua New Guinea National Museum. The team chartered a plane to take them to a remote region in northwestern PNG.

During the flight CJ was "struck by the huge tracts of primary rainforest" as well as the "isolation of regions we visited, most accessible only by plane". The team also conducted an extensive herpetological survey of the eastern tip of New Guinea. Fieldwork by Chris and CJ in New Guinea (June-September) added over 2600 new specimens to the LSUMNS Herpetology collection.

Undergraduate Education: Where are they now?

During the last three years, several undergraduate students have been involved with the herpetology program in the Museum of Natural Science. PhD student **Alison Jennings** has proved to be a great mentor to a long series of fantastic undergraduate students. These undergraduates worked closely with Alison and her research examining the distribution, diversity, natural history, and population genetic structure of lizards in Vanuatu, a group of oceanic islands in the southwest Pacific. All of these students have begun successful careers.

Emily Hartfield: Emily completed an independent research project comparing gastrointestinal parasite loads between closely related sexual and asexual species of the gecko genus *Nactus*, and spent one field season conducting research in Vanuatu. She started work towards a Masters degree this fall in the Department of Biological Sciences at Auburn University in Alabama.

Mallory Eckstut: Mallory also studied *Nactus pelagicus* and *N. multicarinatus* in Vanuatu, and participated in one field season in this island group. Her research focused on the identification of morphological characters that differentiate these two closely related species, as they are virtually identical in appearance. Mallory started work towards a Masters in Biological Sciences at Southeastern Louisiana University in Hammond, Louisiana, this fall, and is continuing to collaborate with Alison. As part of her master's research, Mallory will examine the reproductive biology and cycles of reproduction in *Nactus* from Vanuatu.

Death Adder (*Acanthophis laevis*) from Papua New Guinea

Elaine Klein: Elaine spent two field seasons in Vanuatu collecting reptiles. She is currently studying the relationship between body size and clutch size in *Emoia sanfordi*, a skink endemic to Vanuatu. Elaine is employed as an instructor with the Center for the Urban Environment in Brooklyn, New York.

Kara Blaha: Kara participated in one field trip to Vanuatu to study the reptile fauna. She undertook a preliminary survey of the prevalence and distribution of external and internal parasites on *Nactus* in Vanuatu. Kara is currently in her second year of veterinary school at Cornell University, New York.

Kathryn Grazyk: Kathy spent one field season conducting research on the reptiles of Vanuatu. She is currently a second year Masters student in Global Health Promotion at the George Washington University School of Public Health and Health Services in Washington, D.C., and serves as the Program Assistant for the Children's Environmental Health Network. Kathy developed an interest in international public health issues while in Vanuatu.

Herpetology Research Publications:

Austin, C.C. (2006). Checklist and comments on the terrestrial reptile fauna of Kau Wildlife Area, Papua New Guinea. *Herpetological Review*, 37:167-170.

Austin, C.C. and S.L. Perkins. (2006). Parasites in a biodiversity hotspot: A survey of hematozoa and a molecular phylogenetic analysis of *Plasmodium* in New Guinea skinks. *Journal of Parasitology*, 92:770-777.

Das, I and C.C. Austin (2006, *in press*). A new species of *Lipinia* (Squamatia: Scincidae) from Borneo, revealed by molecular and morphological data. *Journal of Herpetology.*

Jennings, A. H. (2006 *in press*). Use of habitats and microenvironments by juvenile Florida box turtles, *Terrapene carolina bauri*, on Egmont Key. *Herpetologica*.

Piskurek, O., Austin, C.C. and N. Okada. (2006). Sauria SINEs: Genealogy of novel short interspersed retrotransposable elements that are widespread in reptile genomes. *Journal of Molecular Evolution*, 62:630-644.

J. Boundy and C. Kennedy. 2006. Status of the alligator snapping turtle (Macroclemys temminckii) in southeastern Louisiana, with comments on comparative surveys and exploitation. Chelonian Conservation Biolology 5:3-9.

W. Meshaka, S. Marshall, J. Boundy and A. Williams. 2006. Status and geographic expansion of the Mediterranean Gecko, Hemidactylus turcicus, in Louisiana: implications for the southeastern United States. Herpetological Conservation Biology 1:46-51.

Pennington Foundation finances new Museum audio-visual system

The **LSU Museum of Natural Science** received a grant of $14,852 to upgrade the exhibit hall with a modern audio-visual system.

The grant was awarded to **Dr. Sophie Warny** and **Dr. Fred Sheldon**.

This donation will facilitate the Saturday educational porgrams, the Friday natural science seminars, as well as the 2007-2008 Polar Palooza National event that the **Museum** will help host as part of International Polar Year. The **Museum** is one of four museums that will host the Polar Palooza in the Southeast region.

The new system includes a LCD projector, 115-inch screen with electrical control system, speakers, DVD/VCR, scope on the rope, cordless microphone and a laptop computer. It was successfully installed in October. The **Museum** faculty, staff, and students sincerely thanks the Pennington family for this generous donation, and Mrs. Lori Bertman and Mr. William E. Hodgkins for managing the Pennington Foundation granting process.

Entergy awards grant to LSUMNS

Entergy awarded the **LSU Museum of Natural Science** a Community Partnership grant of $500 for the Museum family program: Special Science Saturday. **Dr. Warny** and **Rebecca Tedford** will use these funds to purchase educational materials to support their children's programs. These focus on introducing children and their parents to the world of natural science.

The **Museum** was one of 36 Baton Rouge area projects to share the $90,000 in grant money.

"These grants partner Entergy with organizations that work to improve the quality of life in the Baton Rouge area and other communities throughout Louisiana," said Bill Benedetto, Entergy's Regional Manager-Customer Service for Baton Rouge. "We are proud to be partners in this effort."

"Entergy believes we all have to work together if we want our communities to thrive," he continued. "We are committed to improving and strengthening the communities we live in."

Entergy serves about one million Louisiana customers through the operating companies Entergy Louisiana and Entergy Gulf States, which together form the largest electricity provider in the state. With operations in southern, central and northeastern Louisiana, the companies are part of Entergy Corporation's electric system serving 2.7 million customers in Louisiana, Arkansas, Mississippi, and Texas.

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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 Walter Bridges, 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 article. Email your material to mused@lsu.edu or mail to:

The LSU Museum of Natural Science
Education Office
119 Foster Hall
Baton Rouge, LA 70803

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