

MUSEUM QUARTERLY

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Museum of Natural Science



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Desert Iguana (*Dipsosaurus dorsalis*) | Riverside County, California 2013
Photo by LSUMNS graduate student Oscar Johnson.

Letter from the Director...

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What kind of “Museum” is the LSU Museum of Natural Science?

The short answer is that the **LSU Museum of Natural Science** is a collections-based research unit within LSU’s College of Science. Administratively, the Museum is one of six departments within the College of Science, along with Biological Sciences, Chemistry, Geology & Geophysics, Mathematics, and Physics & Astronomy. The Museum’s curators and graduate students have academic appointments and teach courses in one of these departments. Of the current Museum Curators, all but Dr. Warny (Department of Geology & Geophysics) and Dr. Saunders (Department of Geography & Anthropology) hold their faculty appointments in the Department of Biological Sciences.

‘Museum’ is one of those words that means different things to different people, but to many folks it signifies an institution that has public exhibits displaying collections of artifacts in a pedagogical framework. Public exhibits are a small piece of what the Museum of Natural Science does, but the primary mission of the Museum’s curators, staff, students and associates is to conduct collections-based research, to raise extramural funds in support of that research, to publish the research in peer-reviewed journals, to grow the collections, to loan specimens to other scientists around the world, and to preserve the collections for future generations.

As part of that same research mission, we provide research training and science education to a diverse, international body of LSU undergraduates, graduate students, postdoctoral fellows, high school students and visiting scientists. Louisiana State University is classified by the Carnegie Classification of Institutions of Higher Education as “R1”, which means it is a university with the highest level of research activity. This designation is part of what makes LSU the flagship campus for the state. The Museum’s dedication to collections-based research aligns with the academic mission of the university. One of the great advantages for undergraduates attending LSU is the abundance of opportunities to conduct research.

Also as part of that same research mission, we provide education in collections-based research to Louisiana’s citizens through public exhibits in Foster Hall and the Howe Russell Geosciences Complex on campus, plus through the Louisiana Bird Resource Office, Special Saturdays, Night at the Museum, tours of the collections, public lectures, field trips, displays at wildlife and birding festivals, popular books, and a multitude of other outlets.

I hope you enjoy this edition of the Museum Newsletter, which provides some highlights of recent collections-based research and training activities at the Museum.

Robb



Forest Birds Past, Present, and Future: An Expedition to Borneo

by Ryan Burner

The LSUMNS has a long tradition of working in Southeast Asia, and the main focal point of this work has been the ecology and evolution of birds on the island of Borneo (an island that is split between three countries – Malaysia, Indonesia, and Brunei). We've learned a lot about the biogeographic history of the island's avifauna by comparing what we've learned from studies of the birds' DNA with advances in our understanding of the geological and landcover history of the whole Indo-Malayan region. LSUMNS Curator of Genetic Resources, **Dr. Frederick Sheldon**, leader of this effort, recently summarized the most important conclusions of decades of this work in a talk at the North American Ornithological Conference in Washington D.C. in August, entitled "40 years hacking through the jungles of Borneo: finally some biogeographic light". Borneo appears to have played the most important role in the diversification of bird species in Sundaland, the shallowly submerged continental shelf off of Southeast

Asia that includes Peninsular Malaysia, Sumatra, Java, Borneo, and Palawan. During periods of sea level fluctuation in the Pleistocene, much of Sundaland was likely dry land covered by savannah rather than the lush tropical rainforests that harbor the most species in the region today. Climate models and pollen cores provide evidence that pockets of rainforest were able to survive during these dry times in several mountainous parts of northern and eastern Borneo. The forest bird species that survived in these isolated moist pockets during these times became distinct from their ancestors on the mainland of Southeast Asia, and also from each other, resulting in higher numbers of endemic bird species in Borneo than anywhere else in Sundaland.

To understand these processes in more detail requires us to examine the genetic distinctiveness of individuals of montane bird species among these hypothesized historic forest refuges and as compared to

the rest of the island, the theme of Malaysia-born LSU PhD candidate **Vivien Chua**'s dissertation. In addition to genetic-based work on the history, distribution, and distinctiveness of montane bird species in Borneo, we are also working to better understand the ecology of Bornean montane birds – how they live in their habitats and interact with each other and the organisms around them.

Understanding how birds live and interact in the present not only provides insight into factors that may have contributed to their survival and diversification in the past, but it also helps us make good decisions in respect to their conservation for the future. This is especially important in a part of the world that is currently undergoing rapid deforestation. Issues pertaining to the ecology of Bornean montane birds are the focus of PhD candidate **Ryan Burner**'s dissertation. One way of addressing them involves a new technique to isolate and identify fragments of insect DNA from the poop of insectivorous species. Such examination allows us to learn more about what the birds are eating and to discover potential effects of competition for limited food resources.

To fill in sampling gaps from two key mountains, and to collect poop samples for bird diet analysis, Dr. Sheldon, his wife Jody Kennard (also very experienced in Borneo), and PhD candidates **Subir Shakya** and Ryan Burner flew to Sarawak, Malaysian Borneo, in May 2016. We were met there by Malaysian lecturer and LSUMNS Alumna **Dency Gawin**, picked up permits and equipment, purchased supplies in the town of Miri, and flew to the small airport at Mt. Mulu National Park.

Mt. Mulu National Park is a UNESCO World Heritage site, chosen largely because of its remarkable limestone caves, some of the largest in world, and the millions of bats that roost in them by day and emerge to feed in the surrounding forest at dusk. Our interest in Mt. Mulu, however, was the many montane bird species that live on the mountain (at 2,400 m it is one of Borneo's highest peaks). We are also interested in Mulu's birds because the mountain is located near the border of Sabah, the other state in Malaysian Borneo. The Sabah-Sarawak border area corresponds roughly to a major genetic divide in many Bornean species. An LSUMNS expedition to the area in 2014 collected many

significant specimens for the museum, including numerous hybrids. Our trip to Mulu sought to fill in some key gaps still missing in our collection from that area. The region of Mt. Mulu is home to the Penan people, whose traditional nomadic lifestyle in the forest makes them ideally suited to guide researchers and tourists and locate birds and other animals of the forest. We hiked up the mountain with a group of Penan guides and porters and stayed in some primitive shelters that are maintained by the Park at a variety of elevations from 300 m to 1800 m in elevation. Overall we spent 15 days on the mountain, with various guides and team members



Above: Camp on Mt. Pueh
Title Photo: Mulu Group Photo

coming and going during that time. We set and maintained mist nets to catch and collect birds across the elevational gradient and added some important samples to the LSU collection that will inform future studies about the region's ecology and evolution. We also collected over 100 fecal samples to analyze the diets of local bird species and to compare to the samples collected from these same species during our 2014 expedition.

Life on the mountain quickly falls into a simple rhythm: rise at first light, perhaps a bit chilled by the cool air at high elevation, and open the nets that had been furled through the night to avoid catching bats. Then drink coffee and eat breakfast, maybe a packet of instant noodles or some crackers with peanut butter. As the day warms up specimen preparation is broken up by periodic net checks and hopefully a break or two to eat lunch or watch birds feeding near camp. Poop is



Subir & Hose's Broadbill

collected from all of the birds we net by placing them inside clean, dry bags for a few minutes and then scooping their feces into sterile tubes filled with ethanol to preserve the samples and prevent contamination. Just after dark, as everyone is returning to camp from furling nets, someone will have made dinner, and we'll eat before turning in for an early night.

After descending Mt. Mulu and saying goodbye to park staff and our friendly guides, Subir Shakya and Ryan Burner flew to far western Sarawak to Mt. Pueh, a very isolated 1400 m peak near the coast. Pueh is unique in that it is far from the island's main mountain chain and so lacks many of the montane species common at Mulu. Those that do occur on Pueh are expected to be genetically isolated from populations on Mt. Mulu and elsewhere in the central mountains because of the distance that they would have to travel through inhospitable lowland terrain to reach other mountains. We climbed Mt. Pueh behind our trusty Selako guides for two days as they cut new trails and opened old ones on our way towards the summit. When we started seeing and hearing high elevation bird species that characterize the top of Mt. Pueh, at about 1200 m elevation,

we knew that we'd come far enough and began to set up camp. Hammocks and tents were set up, the guides quickly built a tarp-covered camp complete with tables and benches, and we started rehydrating and scouting for mist net locations.

While on Mt. Pueh we got a great look at a rare arboreal mammal, the binturong (a kind of civet), patched up a serious parang (machete) wound on our head guide's knee, waited out bone-soaking downpours under the meager tarp that covered our makeshift table and cooking area, and bathed under a long piece of bark that our guides used to transform a tiny stream near the camp into a powerful shower and water source. We also managed to capture nearly all of the montane species that we needed to complete our sampling in this unique region. After just under a week, we descended Mt. Pueh and began the long trip home.

As this article goes to press, samples from the trip are arriving in Baton Rouge, and we're looking forward to getting them in the lab and using them to improve our understanding of Borneo's past, present, and future.



Ornithological Expedition to Aripuanã River, Amazon Forest, Brasil

by Glaucia Del Rio

©Diego Cueva

I imagine that for LSU North American students, leaving the USA to work in a different country might be a big challenge. After all, you will be a foreigner in far away, isolated lands, counting on the help of local people to do a complicated, atypical, and potentially stressful job. However, when I left Baton Rouge in May 2016, I had an odd positive feeling. For me, to go to Brazil meant to go back to the birds that I knew better, back to the food I grew up eating, back to... my home. Brazil is a place where language and culture would not be barriers for me but bridges to work successfully in the Amazon Forest. When I arrived in my home country, I was happy and hopeful, looking forward to put my hands on my binoculars and watch my old winged friends.

Bret Whitney, LSU associate researcher, has been collecting birds in the Madeira-Tapajós interfluve, Western Amazon Forest since 2006. In 2011, collaboration between the LSU Museum of Natural Science and the Museum of Zoology of University of São Paulo (MZSUP) took these expeditions to a new level. The Madeira-Tapajós interfluve has unique biogeographic features such as evidence of secondary contact between the Harlequin Antbird and the White-breasted Antbird (both in *Rhegmatorhina* genus), and distribution breaks with no evident geographic barrier, like in the cases of

the Black-girdled Barbet and the Brown-chested Barbet, or the Orange-cheeked Parrot and the Bald Parrot. Because of these “odd” patterns, it was vital for us to sample the Central portion of the interfluve (the Aripuanã River), especially since it hadn’t been sampled before. These samples would aid in a better comprehension of the evolutionary processes that provided such interesting distribution patterns in an unexplored part of Amazon Forest.

Before I left for the field, I spent a few weeks in São Paulo, Brazil calling politicians, syndicates, farmers, justice promoters, priests - anyone that could help me find private lands where I could work collecting bird specimens. Based on my data, I knew I needed to go to the Aripuanã River in the city of Colniza. What I did not know was that Colniza is the most dangerous city in the state of Mato Grosso, mainly because of land ownership conflicts. The “grileiros” invade private lands covered by forests and burn, subdivide, and sell the lands using violence against the ones that try to stop their illegal activities. Fortunately, I got the help of Mr. Rubens who allowed me to work on his property’s safe and preserved areas. Not only that but he also showed interest in our research. He wanted a bird species list, pictures, and a report! The research would help him to sell carbon credits, a promising hope for such troubled



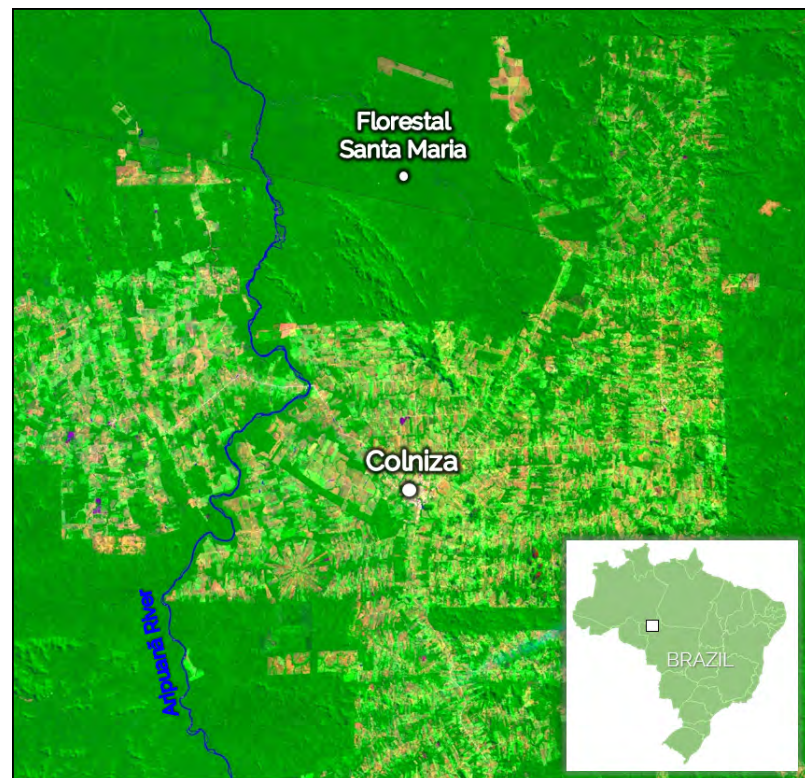
country and reach our field sites. To be honest, I imagined flat tires, car breakdowns, and all sorts of setbacks; luckily, none of these happened! The roads were better than anticipated and we arrived unharmed after a nice, safe trip.

I expected Colniza to be an isolated place in the Amazon Forest with traditional communities and lacking goods and equipment that would be essential in the field, but I could not be more wrong. To my surprise, Colniza had modern supermarkets, fast Internet, and liquid nitrogen delivery! Although “progress” was there, the city was behind in terms of environmental conservation. Fortunately, we had a wonderful place to work, Florestal Santa Maria, an oasis of continuous forest on the right bank of the Aripuanã River.

In the beginning, some of us suspected that Florestal Santa Maria Forest was not in good shape, however, uncommon species such as the Crimson Fruitcrow, the Crested Eagle and the Nocturnal Curassow, showed up right in front of us. Not to mention the daily appearances of the endangered Brown Woolly Monkey and the White-nosed Saki. Seeing these rare and difficult animals made us realize that it was actually a well-conserved piece of land with incredibly high richness and

Above: From Back L to R - Pixico, Diego Vargas, Marco Rego, Glauca Del-Rio, Felipe Arantes and Bret Whitney in the Aripuanã River.

Title Photo: Crimson-bellied Parakeets. Photo by Diego Cueva.



Map showing Colniza, Florestal Santa Maria and the Aripuanã River.

lands.

To work in Colniza, we would first need to get there, and it is not an easy destination to reach. In the USA, I am always surprised to see many of my colleagues driving from Baton Rouge to Michigan or Chicago. I think to myself, “how can they drive to places so far away?” Now I understand that this is not a big deal but, in Brazil, to drive more than 400 miles is craziness. In the less inhabited, or poor areas of the country, the roads are dangerous, in bad condition, and many are not paved. My friends and family would never take the challenge of driving 1600 miles from São Paulo to Colniza. However, I was not alone in the crazy decision to take on the journey by car. **Marco Rego**, my best ornithological partner and LSU graduate student, was by my side to join me in this big adventure. After three weeks of preparation, we left MZUSP to cross the



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Top Left - Razor-billed Curassow (Photo by Diego Cueva); **Bottom Left** - Black-fronted Nunbird (Photo by Marco Rego); **Right** - Black-necked Red Cottinga (Photo by Felipe Arantes).

diversity. Driving alone, I even saw a jaguar for the first time in my life! A couple of days after that, Bret and **Donna Schmitt** would arrive at camp exhilarated after seeing that same individual. We were in an amazing place, and we knew that we had to seize that opportunity to do the best job we could.

Overall, we had a productive and fun trip. We found poorly known species and worked alongside skilled ornithologists. We camped beside the Aripuanã River and right in the first days of work, Marco captured our target species in mist nets – 16 *Rhegmatorhina* Antbirds; some of them displayed hybridization signs (surprise!). The White-eyed Antwren and Gray Antwren represented good samples for phylogeographic studies. Furthermore, we recorded species that we did not expect like the Bamboo Antshrike (“What is this bird doing here? Doesn’t it occur only on the Right Bank of the Madeira River?”), or other species poorly represented in ornithological collections such as the White-winged Potoo (what an amazing bird!). Little by little, we would see the collection grow thanks to our wonderful skimmers, the efficient Marcelo, Fernando, and Greg and Donna Schmitt. Our team also consisted of Diego

Vargas, from Peru, and Diego Cueva, from Colombia, both students at the University of São Paulo. They were young guys, always in a good mood, and amazed by the birds they were seeing for the first time. My friend Felipe Arantes was there too and combined with the skills of Bret Whitney would not let any species pass unnoticed. Our assistant, Pixico, knew all the Aripuanã ways and provided comedic relief to make our days lighter.

Since 2009, when I went on my first expedition to the Amazon Forest, I have lived many amazing moments and experienced many different emotions. Nonetheless, the most intense feelings always arise from a simple moment of realization. During the afternoons, when everybody is working around a table and talking about birds, personal ambitions disappear. All of the preoccupations and deadlines do not exist and theses/dissertations are postponed in the name of building a legacy that is bigger than ourselves. While we talk and laugh, we leave a legacy to all the ones that will find utility in the specimens we collect. We simply prepare our specimens and dream about the birds we will see the next morning...



Peru Ornithology: Summer 2016

by Andre Moncrieff

The day after my last final of the semester, I was back in a plane to Peru for a summer of ornithological adventures. I arrived in Lima on May 5 and, although fieldwork wasn't beginning until the end of the month, I had a lot of groundwork to do. After a few days dealing with paperwork (I will kindly spare you the details!), I flew up to Tarapoto to figure out how to do an expedition here: -5.54°S , -75.73°N . This spot on the map is in the lowlands of North-Central Peru only about 60 km northeast of Yurimaguas, but about four hours by peque (dugout canoe with an outboard motor) from the nearest village 12 km away. I was attracted to this area by the presence of isolated upland and stunted forest visible in satellite imagery. Many bird species are only found in these habitats and a visit to this area would help a great deal in clarifying species distributions. There were several other interesting sites in the area including Mauritia palm swamps, a large oxbow lake, and several islands in the Huallaga River. From a research perspective, this looked like an excellent area for a general collecting expedition—particularly considering the lack of ornithological inventories from anywhere nearby.

Although I could tell you all about the field site's "satellite signature", I now needed to work out the lo-

gistics. After arriving in Tarapoto, I went straight to the Pollitos Park restaurant where I met up with biologist Fernando Rubio—a friend of a friend who turned out to be an incredible contact. Over the next couple of days, Fernando gave me a crash course in topics such as the region's native community bureaucracy, FEDECOCA (a federation of 62 native communities in the region), local logging practices, and formal letter writing. A huge breakthrough occurred when Fernando called up a non-profit environmental organization in Yurimaguas about my expedition plans. As Fernando started relating the details, the receptionist said "let me hand you over to the president of FEDECOCA"! Incredibly, the president, Victor Yaricahua, was visiting this NGO that day, and he was eager to hear about my project!

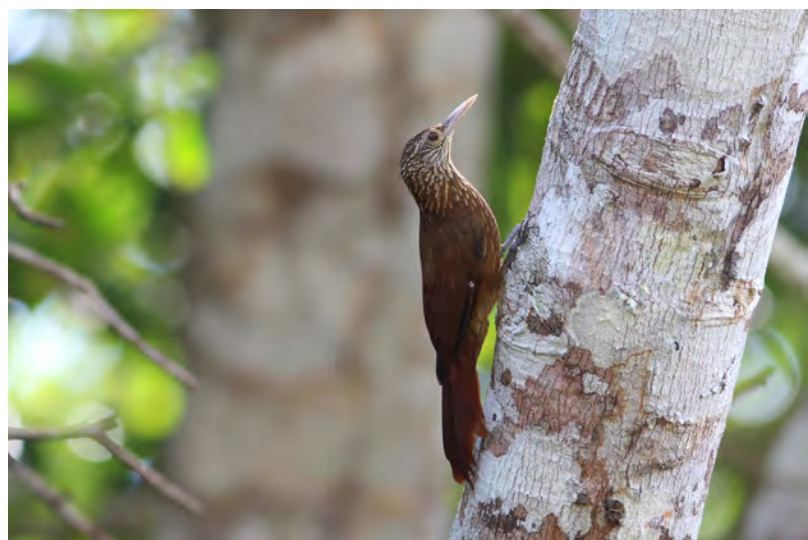
After further communication with Victor, I said goodbye to Fernando and made the two-hour trip to Yurimaguas—a city on the bank of the Huallaga River. A few minutes after arriving, I met up with Victor and another FEDECOCA leader, Juan Felix, to discuss my proposed expedition over some chaufa (Peruvian style chinese fried rice). Victor and Juan Felix, who were excited about bringing researchers and tourists into the region, kindly offered to accompany me to the two native communities located near the field site. Two days



Victor and Juan Felix.

I spent the next couple of weeks traveling and attending the national meeting of ornithologists in Chachapoyas, and then returned to Lima where I met up with **Oscar Johnson**, a fellow graduate student in the **Brumfield** lab. We did last minute planning, gear purchasing, and organizing, and I picked up my firearm licenses (a saga of its own) the evening before flying back to Tarapoto. On May 28, Oscar and I, along with Peruvian collaborators Flor Hernandez and Karen Verde, arrived in Tarapoto. There we met up with **Mike Harvey** and Mayori Soto, a Peruvian undergraduate volunteer, who in team spirit had both traveled 30 hours by bus to Tarapoto with our three full liquid nitrogen tanks. The next day we hired a bus to Yurimaguas and loaded up our mountain of expedition gear into a large longboat that I'd picked out two weeks before. Our 4 a.m. start on the 30th down the Huallaga was well intended, but the extreme fog made progress down the river very slow until sunrise. Thanks to a dependable contact in Esperanza there were eight peques waiting for us near the entrance to the Río Yuracyacu when we arrived at 9:00 a.m. We divided our gear evenly among the peques (they were riding very low!), and then boated five hours up the winding and log-ridden Río Yuracyacu to reach our home for the next month. With the arrival of **Dan Lane**, Sheila Figueroa, and Cristian Mur a few days later we were a nice-sized group—nine researchers, two cooks, and two guides.

Once we had settled into our camp we started fieldwork in earnest. We also tried to keep our guides oc-



Zimmer's Woodcreeper (*Dendroplex kienerii*). Photo by Oscar Johnson.

Above: Common Scale-backed Antbird (*Willisornis poecilinotus*). Photo by Oscar Johnson.

Title Photo: Laguna Achual Tipishca. Photo by Cristian Mur.

later we were on the six-hour boat trip to the first community—Esperanza de Yuracyacu. Once everyone assembled under a large shelter, Victor introduced me to the community, I shared some more specifics about the intended research, and then we fielded some questions from the community. I was pleasantly surprised by the overwhelming support for our ornithology expedition to the area. In return for the open invitation to work on their land, **LSUMNS** would donate a laptop to the local school. Victor, Juan Felix, and I then took a three-hour peque ride in the rain to Achual Tipishca, the second community. Thankfully, the meeting also went well there, although folks were a bit more inquisitive. I ended up reading large chunks of our federal research permit out loud to a group of some 80 locals! Our donation to Achual Tipishca was a projector for use in the school. At both communities I asked for a 36-day commitment from a cook and a guide, and within 1-2 minutes of asking I had confirmed the positions! Thus, with the contracts worked out, arrival logistics settled, and phone numbers swapped (amazingly Esperanza has a cell tower next to it), I headed back to Yurimaguas with



Expedition members. L to R. Back: Dan Lane, Michael Harvey. Middle: Mayori Soto, Oscar Johnson, Ronaldo Gomez (guide), Arbilido Caritimari (cook), Abner Valles (guide). Front: Karen Verde, Flor Hernandez, Cristian Mur, Sheila Figueroa, Andre Moncrieff. Not pictured: Edson Valles (guide).

cupied setting up mist nets or accompanying us on the trails rather than clearing large trees around camp—something they loved to do and were really good at! We collected specimens of a number of great birds while at this camp including White-bellied Dacnis, Yellow-throated Flycatcher, and an interesting Ocellated-type Woodcreeper with a unique call—probably a new taxon.

Of considerable interest to us was collecting topotypes for each of the 23 species or subspecies described from this area—mostly from the end of the 19th century. We were able to locate 22 and obtain topotypes of 19 of these taxa. The species level topotypes we documented were Plumbeous Antbird, Pearly Antshrike, Stipple-throated Antwren, Plain-throated Antwren, and Cinnamon Manakin-Tyrant.

After four weeks on the Río Yuracyacu we moved camp about 15 km NW to the oxbow lake of Achual

Tipishca. Our nine days here produced many exciting records including four LSUMNS firsts: first tissue of Black-collared Hawk, and first skins of Three-striped Flycatcher, Zimmer's Woodcreeper, and Amazonian Antshrike for Peru. We also documented large range extensions for river island specialists like Leaden Antwren (175 km) and Pearly-breasted Conebill (280 km).

This collections-based research expedition resulted in 790 specimens of 225 species. This was the first modern inventory of birds between the Lower Huallaga and Ucayali Rivers, giving us a baseline for future work in the area. For anyone interested, we have posted daily lists, voice recordings, and bird photos on eBird from all the localities we visited during the expedition. You'll notice large blank regions without any eBird sightings surrounding all our expedition localities—a sign that there is much more to discover in the area. Onward ornithology!!

Grand Isle Migratory Bird Celebration

by Donna Dittmann & Steve Cardiff

15-17 April 2016

Donna L. Dittmann and **Steven W. Cardiff** assisted with the 2016 Migratory Bird Celebration at Grand Isle, which included helping plan general logistics as well as leading birding field trips. Donna and Steve started off leading a large group on a birding walking tour on Friday afternoon. On Saturday, they were joined by co-leaders (and LSUMNS Section of Ornithology grad students) **Matt Brady**, **Oscar Johnson**, and **Ryan Terrill**, leading about 25 participants on the newly added “Grand Isle Big Day Tour.” Despite blustery conditions, this all day-trip was able to tally 120 species. Highlights included a Swallow-tailed Kite, Groove-billed Ani, 19 species of warblers (including “Lawrence’s” and Cape May warblers), and Yellow-headed Blackbird; full details can be viewed at:

<http://ebird.org/ebird/view/checklist/S29582311> &
<http://ebird.org/ebird/view/checklist/S29586767> .

Also on Saturday, Glenn Seeholzer manned an LSUMNS information table at the festival headquarters at the Grand Isle Multiplex. Donna and Steve stayed into Sunday morning to continue interacting with other birders encountered on the island’s birding trails. For information about next year’s Celebration visit: <http://www.btneep.org/BTNEP/home.aspx> or <http://www.townofgrandisle.com>; LSUMNS is an official sponsor of this event.



Steve Cardiff at the Grand Isle Multiplex getting the group ready for the Friday afternoon birding field trip. Photo by Donna Dittmann.

Shorebird Extravaganza

For the second consecutive year **Dittmann** and **Cardiff** organized an “experimental” spring festival dubbed “Waders in Working Wetlands: Shorebird Extravaganza.” This is another “agritourism” style event in the mold of the extremely successful fall “Yellow Rails and Rice Festival,” and is a cooperative project with local farmers highlighting Louisiana’s working wetlands- crawfish and rice. Unfortunately, with so many other spring festivals happening across the nation, and without a specific “magnet bird” such as the Yellow Rail, it is difficult to compete for participants. Thus, as

was the case in 2015, there was a disappointingly small turnout with only 20 registered participants representing five states. Nevertheless, it was a fun event. This festival has a workshop atmosphere, providing identification instruction in classroom and field situations as well as offering birding trips to the pineywoods of Kisatchie NF, and to the Cameron Parish coast. Participants were also able to partake of local cuisine at a catered reception at Mike’s Steak and Seafood Restaurant in Jennings, and at a crawfish boil at Tall Grass Farms near Roanoke. Many of the participants have



Above: The last couple of days of the festival were impacted by stormy weather resulting in localized flooding. Here, one of many rice country roads that were inundated. Photo by Donna Dittmann.



Above: WIWWE participants had the opportunity to take a ride on a crawfish boat to see firsthand how crawfish are harvested.

Left: Upland Sandpiper is usually one of the “most wanted” of the shorebird species. Here, one is foraging in a sprouting rice field. Both photos by Donna Dittmann.

also attended past Yellow Rails and Rice Festivals. LSUMNS graduate students **Matt Brady**, **Ryan Terrill**, and post-doctoral researcher **Jessica Oswald** assisted with leading the Cameron coast field trip.





Collecting in our Backyard: A Joint Ornithology-Mammalogy Field Trip

by Jon Nations, Matt Brady, & Vivien Chua

Situated at the confluence of the Red and Mississippi Rivers, Richard K. Yancey Wildlife Management Area, or ‘Yancey’ as it is affectionately known, is one of the most extensive stands of broadleaf bottomland forest in Louisiana. Located just two hours NW of Baton Rouge, Yancey is home to a rich community of wildlife, and its 70,000 acres make for an ideal location in which to conduct field work. Through the generous support of the Louisiana Department of Wildlife and Fisheries, which manages Yancey, ornithology graduate students **Matt Brady** and **Vivien Chua** joined forces with mammalogy graduate students **Jon Nations** and **Mark Swanson** on two exciting and productive field trips over the summer.

From an ornithological perspective, the main purpose of these trips was twofold: 1) to supplement our collections with specimens and tissues from a poorly-sampled time of year, and 2) to fill in a geographical sampling gap in the state. A huge portion of Louisiana specimens in the LSUMNS collections have been collected during the fall, winter, and spring, often from localities either close to Baton Rouge or along the coast. Specimens from both the summer and from inland sites

are relatively few. In fact, prior to this trip, there was but a single bird specimen from Concordia Parish, which is where Yancey is located. Thus, we saw the importance in filling this geographical and time gap of Louisiana birds.

With these goals in mind, our trips were exceptionally successful. We were able to sample almost all of the expected breeding bird species of the area, collecting a total of 148 specimens of 35 species. Birds such as Acadian Flycatcher, Prothonotary Warbler, Kentucky Warbler, and Painted Bunting were pleasingly common in our understory nets, while Downy Woodpeckers, Summer Tanagers and Yellow-billed Cuckoos sang and called from the canopy. We had a few nice surprises, including a Swainson’s Warbler and a Mississippi Kite, both of which are relatively poorly represented in the LSUMNS collection. Most importantly, perhaps, we collected series of a number of common birds, including Carolina Wren, Northern Cardinal, White-eyed Vireo, and Painted Bunting. Series of individuals, representing a variety of ages and sexes, are critical for comparative studies across species ranges.



Left: Painted Bunting; Inset: Young Painted Bunting; Right: Northern Cardinal. Photos by Matt Brady & Vivien Chua.

The past few decades have seen little work on the small mammals of Louisiana. Nevertheless, there are still many unanswered questions concerning the distribution, ecology, and even the taxonomic status of some of our states most common mammalian species. One species pair of particular interest is the Cotton Mouse (*Peromyscus gossypinus*) and the White-footed Mouse (*P. leucopus*). These sister species often occur in adjacent habitat, with the White-footed Mouse being the more upland species and the Cotton Mouse more lowland. However, in the area of the state encompassed by Yancey, the reverse is thought to be true, with the White-footed mouse being dominant in the lowlands. Mammalogy student Mark Swanson is interested in using phylogenetic methods along with the microbiome to understand how—or if—these two species maintain reproductive isolation, and if the microbiome is more similar between individuals of the same species or individuals living in the same habitat. This, of course, requires museum vouchers of both species, which led to

the two divisions coming together for this joint collecting trip.

While fewer mammals were collected—and not due to lack of effort!—we did collect several White-footed Mice in Yancey’s bottomwood forest, confirming that the two species do seem to swap habitats in this region of the state. Additional bonuses include a valuable frozen tissue of the Least Shrew (*Cryptotis parva*), and a significant range extension (60 miles) of the handsome Golden Mouse (*Ochrotomys nuttalli*) on the west side of the Mississippi River. This species is thought to be an upland specialist, and despite being common in Tunica Hills on the east side of the river and in the forests north of Alexandria, they were previously not thought to inhabit the floodplain that follows the river’s western bank. The mammal and bird specimens collected on this trip filled in significant gaps in both collections, and will be used to develop a better understanding of the vertebrate fauna in this fascinating part of the world



Cottonmouth found under a plank near headquarters. Photo by Vivien Chua.

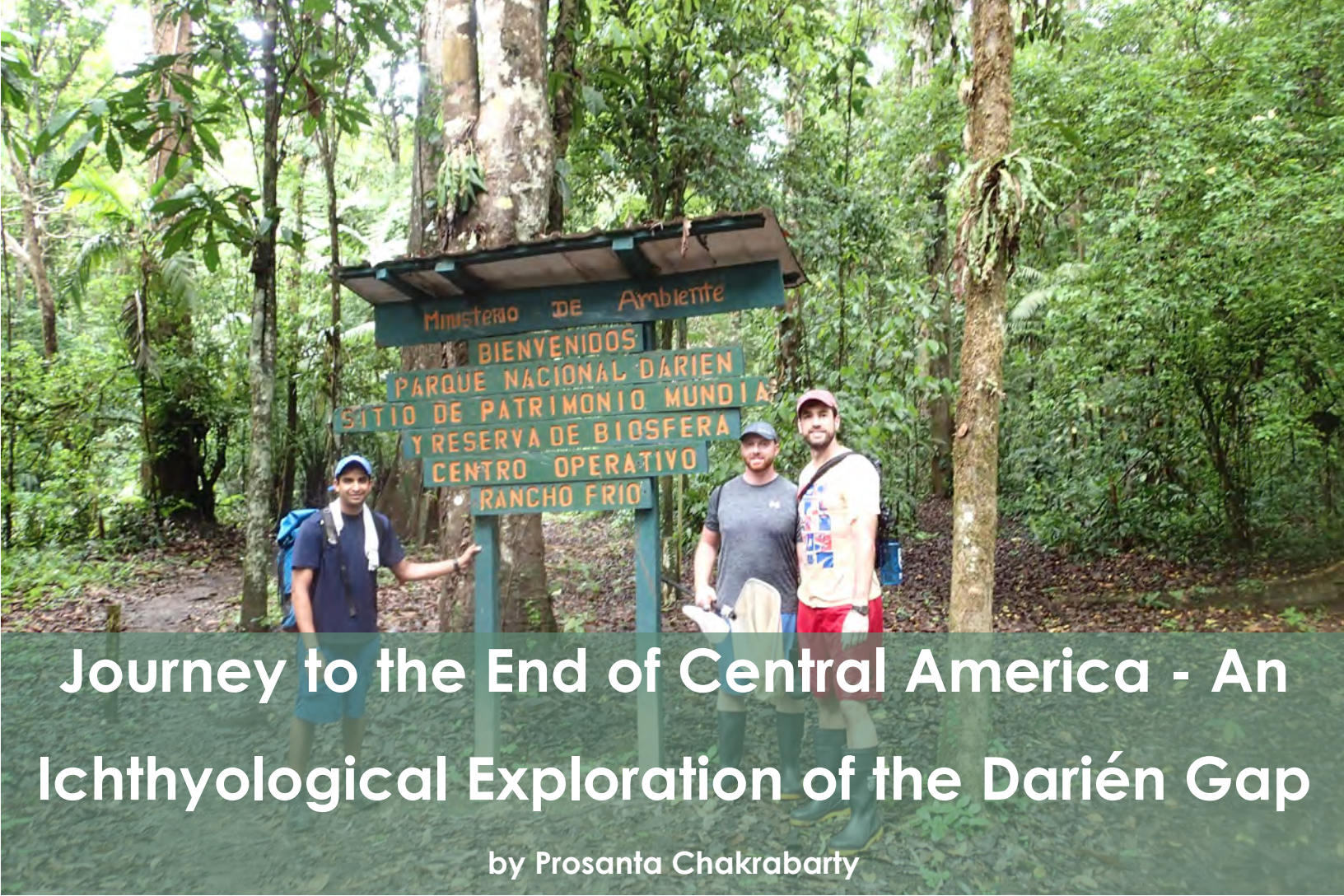
that we call home.

In addition to a successful collecting trip, we also had several exciting wildlife encounters. A major highlight of the trip was our sighting of a Louisiana Black Bear foraging slowly along the trail 150 meters head of us. One of the 16 subspecies of the American Black Bear, the Louisiana subspecies had been listed as federally Threatened, but was only removed from the list this past March, due to successful recovery efforts at Yancey and other sites around the state. We felt very fortunate to have had such an encounter. Other more common mammals that we observed were deer, swamp rabbits, and armadillos, and we spotted a passel of juvenile feral hogs during a night drive. Notable bird sightings included an early migrant Black-and-white Warbler, large kettles of south-bound Mississippi Kites, and several large flocks of Wood Storks. In addition to mammals and birds, we came across plenty of Golden Silk Orb-Weavers, commonly known as Banana Spiders due to their shape and color. They were abundant and found on every corner, their webs slung between every tree. The ones that we observed in June grew to almost terrifying size when we arrive in July. It was particularly difficult to observe or track birds through the understory, while at the same time weaving through the forest to avoid running into their webs.

To sum things up, our team had a great experience at Yancey and managed to collect in an area that is poorly sampled for Louisiana. Thanks to the support and help from the Louisiana Department of Wildlife Fisheries, LSU Museum of Natural Science managed to fill a gap from an area that is poorly sampled.



Top: Vivien Chua removing a bird from the mist net. Photo by M. Brady.
Bottom: Jon Nations digging holes for pitfall traps. Photo by J. Nations.



Journey to the End of Central America - An Ichthyological Exploration of the Darién Gap

by Prosanta Chakrabarty

*Or like stout Cortez when with eagle eyes
He star'd at the Pacific—and all his men
Look'd at each other with a wild surmise—
Silent, upon a peak in Darién.*

- from “On First Looking into Chapman’s Homer” by
John Keats

From May 12-24th postdoctoral fellow **Dr. Fernando Alda**, graduate student **A.J. Turner** and I journeyed south to Panama to collect fishes. Specifically, we were targeting the fishes from the Darién Gap – a region I have hoped to visit since I was a graduate student over 10 years ago doing my PhD on the biogeography of Central American fishes.

The Darién is one of the most forested areas in Central America, with the majority of forested area in the Darién National Park in the so-called “Darién Gap” – named so because it is the gap in the Pan-American Highway between the North and South American continents. The Darién Gap encompasses the borders be-

tween Colombia and Panama and is frequented by drug smugglers and illegal migrants – for that reason it is heavily protected by the armed military and it is difficult to get permits or even help to collect in the area. Fortunately, Fernando is incredibly patient, hardworking and resourceful. With some difficulty he organized an entire trip for us working with the local Emberá people who are endemic to the region and who have been on this land for hundreds, if not thousands, of years. Fernando also handled all the permits with STRI (the Smithsonian Tropical Research Institute) and the Panamanian government. He did an amazing job arranging this trip. My lab has previously attempted to get into the Darién Gap and failed.

Before we got into the Darién, we set up at STRI headquarters located in Panama City where we got our official Smithsonian badges and credentials. Our STRI-IDs (or “STRIdees” as we took to calling them) worked wonders around Panama. We were able to get big discounts on museums and entrance into the Panama Canal because of those IDs. We had some time to kill

before we got out into the field as we waited for all our permits, so we did some educational sight-seeing. The Miraflores Locks of the Panama Canal, and the newly opened Biomuseo were highlights. I read a book about the making of the canal, “I Took Panama: The Story of Philippe Bunau-Varilla” while we were in Panama and I recommend others to learn about the insane political events surrounding the creation of this engineering marvel – which also led to the creation of the country itself. A new set of expanded locks, which will make the canal almost twice its current size, was also visible in the distance.

In those first few days we also visited the local fish market in Panama City – the Mercado de Marisco. We were able to get nearly 40 species of marine fishes from this market; these included several species of snook, parrotfishes and croakers. Unfortunately we saw hundreds of shark bodies with their heads and fins cut off. They were all juveniles and according to A.J. he thought they were all taken from some nursery grounds – it was a sad sight. By sheer coincidence we met up with researchers from Conservation International working on the fisheries of this region while at a restaurant; they said they are working on this shark issue: I hope they get to it quickly.

We ran into lots of non-Panamanians in Panama City, which is unlike any other Central American city; it has a skyline that makes it look more like Dubai, and with a port and mangroves near it, it reminded me of it too. Many people spoke English, and we noted the strong American and European presence almost everywhere.

Although the city was interesting we wanted to get in the water. As we drove the five hours East to the Darién (there isn’t much of a North and South in Panama) we noted how different the rest of Panama is from Panama City. There are many rural communities strung together and lots of farmland. However, over 25% of Panama is protected forest. There are also many areas belonging to autonomous indigenous communities living independent of most Panamanian authority.

We entered the town of Yaviza in the Darién province on the 17th of May and spent the day heading up and sampling along the Río Chico in our long wooden boat (called a “piragua”). At our first field site we un-

rolled our brand new cast nets and I hurriedly made my first toss – I wanted to catch the first fish – and I got a nice little cichlid. Cichlids are my favorite group of fishes and the focus of much of my research. There have been some trips to Central American where we don’t get cichlids for a few days, and here was one – right off the bat. After that I took to doing my regular job, taking notes, GPS coordinates etc. We collected plenty at this first site on the Chico and it was a good omen for the rest of the trip. We learned pretty quickly, that as usual, despite being professional ichthyologists, the locals are always the best fishermen. Throughout the trip



Above: A hungry earth-eater cichlid.

Title Photo: At the entrance of Darien National Park

we really enjoyed working with and interacting with the local people. I always love reading about historical explorers interacting with locals and how they treated each other, there were the kind ones like James Cook (kind to most native people, killed by natives on Hawaii), and awful ones like Hernán Cortés (killed lots of native people, died peacefully back in Spain of old age). Side note – “Cortez” as mentioned by John Keats in the poem above, should actually be “Balboa.” Vasco Núñez de Balboa was the one to establish the Darién, and the first European to see the Pacific from the Americas.

We spent the next few days penetrating the Darién National Park. This required us (and sometimes a small horse) to carry our gear and food through the forest trails. This was fun, but exhausting given the heat and mosquitoes. We hiked to most of our sites when we



Above: Fernando talking to local Embera kids about our fish.

couldn't boat. The canopy was thick making the forest shaded all manner of green from top to bottom except for the forest floor, which was matted down with damp brown leaves. It was very beautiful. We walked with our guides like leaf-cutter ants in formation, one behind the other, carrying our packs like so many bits of foliage. Living in Baton Rouge you tend to forget about topography. The ups and downs of the hike are something we aren't accustomed to in this flat town of ours; the humidity and following someone carrying a machete might be a bit more familiar.

This was A.J. Turner's first field trip, and I had to remind myself of that sometimes. It couldn't have been easy for him to start his career as a tropical biologist hiking through the Darién Gap, but he did well, and I have no concerns that he will do many of these trips well into the future.

There were some scary moments in the field.

At one site near a banana plantation I kept hearing the sounds of tree branches falling. We were sampling in very muddy water so I was barefoot in the mud when one of our guides whistled to me to stop, I saw two men come out of the jungle holding machetes. One walked towards me without looking up and then, thankfully, walked past to cut down some plantains. When they talked to our guides – in the Emberá language, not Spanish – they seemed to be giving a warning. Our guides shuffled us out pretty quickly, which was fine with us. The Emberá are friendly but there is still a lingering wariness of outsiders.

We stayed part of our time in the village of Pijibasal and we sampled with the locals in the Río Peresénico and even had an amazingly fun soccer match with dozens of local kids. They also loved seeing our fish specimens. One of our guides even taught us how to fish for some of the armored catfishes with our hands. By feeling around the rocks you could grab them as

they were chewing off the algae. I was unable to do this successfully but the rest of the team all caught fish bare handed.

One of my favorite spots was on the Río Pirre. For some reason the rocks were all tinted a deep green, and others were so brittle they broke apart under your feet despite looking otherwise like ordinary stones. At this site Fernando caught one of the most beautiful fish I've ever seen, a big bull earth-eater cichlid, *Geophagus crassilabris*. This fish had giant fleshy red lips and had lost some of his scales – probably old war wounds from fights with other males for territory. He was a beauty. I was still thinking about the green rocks when we headed to the Cascades near another one of our camp-

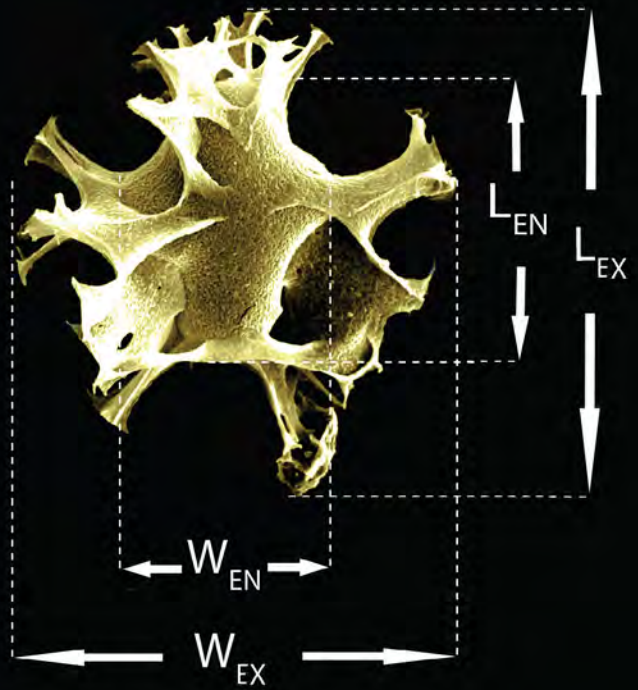
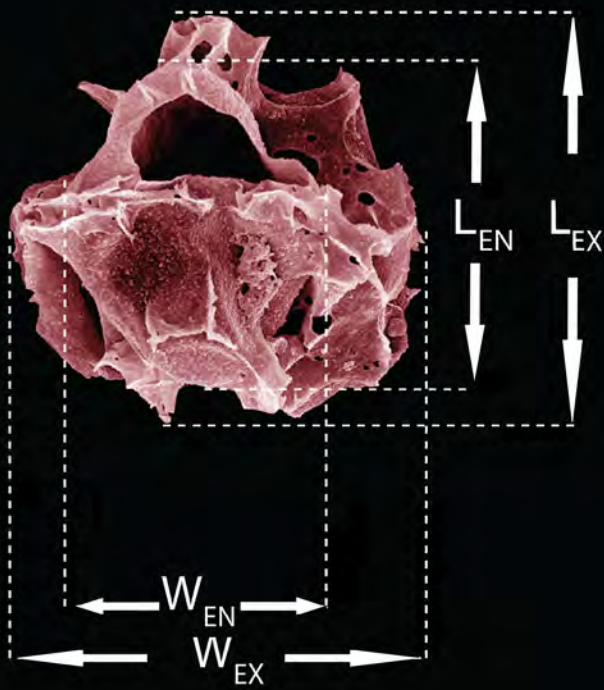


Above: Armored catfish (*Ancistrus*)

sites – Rancho Frío, home of the giant Harpy Eagle. The river was cool, which was a much-wanted relief given how hot and humid it was. We went up to the base of the falls and although the fish weren't as interesting as down river it was still an adventure. The guides and Fernando, the most dexterous of us, climbed along a steep (and very wet) rock cliff and got on a shelf above the lowest set of falls. They sampled in the pools above – but I wondered how they would get down. I found out when they slid down through the falls! It looked like fun and it was probably one of those things I would have done before I had kids.

On one night our guide Hayro Cunampio went out with my snorkel, diving flashlight and a spear. We watched while he shot spikey armored catfishes (*Ancistrus*) (pictured) and big characins that we hadn't seen earlier in the day. When we turned off our headlamps and watched him floating in the stream with his bright torch against the darkness it looked like he was floating in space. When he came up he mentioned seeing a striped “macana” – which is the local name for electricfishes. We hadn't seen any of these yet so I asked Fernando which one he means – “*Gymnotus*” he said. “We better go get it” I replied. My colleague at University of Louisiana Lafayette mentioned that he hoped we get a *Gymnotus* – something I thought was a weird request because I didn't think these were in Panama. It turns out that Fernando was the one that discovered they were there with the first record of its discovery in 2012 [<http://www.biotaxa.org/cl/article/view/9.3.655/0>]. Fernando rushed out and A.J. and I followed to help. Using a cheap portable amplifier with cut wires we were able to translate these electric fish signals into sound. We stuck the cables under root mats and listened for their calls – Fernando understood their language – and could recognize their species by listening to the pattern – by the volume he could even determine their size. I was with him when he heard what he thought was a big *Gymnotus* deep in the roots, we missed a couple times with the dipnet, and then on one attempt we saw the characteristic striped patterns of *Gymnotus*. I've never seen anyone so happy to get a fish. Fernando leapt and danced across the stream as if Real Madrid had just one the Superbowl – or whatever Fernando's favorite soccer club wins championships in. I was glad to see such passion for natural history. The fish was gorgeous too, a long dark-green headed relative of the electric eel; it was a fantastic fish and only the second record of the genus in Panama.

After a few more collecting days, we were back in Panama City – we were a disgusting mosquito bitten, unshaved, smelly lot – but happy. The edge of Central America was everything I had hoped for and more. Plus, I got to see my two newest lab members in the field and I couldn't be happier to have Fernando and A.J. out there with me and back here at LSU.



The Life of a Palynology Doctoral Student: Casework, Collections, and Cysts

by Shannon Ferguson

Last summer when toddler Bella Bond was found decomposing in a trash bag on shore of Deer Island beach, just outside of Boston, the police had their work cut out for them in order to figure out where the girl came from along with her identity. With the successful identification of rare localized pollen by Homeland Security's only Forensic Palynologist, under the leadership of my internship mentor Andy Laurence, the nationwide search was narrowed. Thanks to palynology, the little girl had her identity back before burial, and her mother and the mother's boyfriend are now in jail to await trial.

Homeland Security has since then been receiving an overwhelming influx of requests for pollen analysis from state and local police along with other agencies where geographic attribution could help crack a case, not to mention the high security clearance and routine Customs and Border Protection cases. This year, it was interesting to see the vast number of samples that had been sent to Dr. Laurence for pollen analysis compared to the much lower amount we processed last summer before and during the Bella Bond case. The media attention Homeland Security's forensic pollen program

received from the tragic case has led to many other similarly successful case developments across the country and internationally within the past year. Andy and I are hopeful for the expansion of Homeland's forensic palynology program in the near future.

Being an LSUMNS CA has given me the greatest opportunity to begin the curation and digitization of the museum's hefty pollen collection. With the recent completion of digitizing Shell's modern pollen collection of nearly 1000 different species (over 13,000 microphotographs), and the current digitalization of UNOCAL's pollen collection has not only helped me quickly identify many pollen grains as soon as I came across them during my internship these past two summers with the government but also with my own research. I'm proud that this work will continue to help CENEX students and collaborators in a multitude of ways in the future.

But our work is not just about pollen. At CENEX we specialize in all palynomorphs (organic-walled microfossils). If pollen and spore are a big part of our daily work, we also focus on dinoflagellate cysts as their



Just a few of the pollen species housed and curated here as part of the large LSUMNS/CENEX pollen collection. **From top left to right:** *Sonchus arvensis*, *Pachysandra procumbens*, *Leea quinensia*, *Fuschia arborescens*, and *Isoetes barbiger*.

Title Photo: The four measured dimensions illustrated on scanning electron microscope (SEM) images of *Galeacysta etrusca* (left), and *Spiniferites cruciformis* (right).

similar composition and size allow us to extract both these algae and pollen together from any marine sequences. Our latest publication is entitled “MIS 5 to 1 dinoflagellate cyst analyses and morphometric evaluation of *Galeacysta etrusca* and *Spiniferites cruciformis* in southwestern Black Sea.” In it we hunt for the morphological differences of two different dinoflagellate cysts species commonly found in the Black Sea by using various measurements and statistical analyzes. These data allowed us to characterize three groups; marine stenohaline, marine euryhaline, and brackish Ponto-Caspian endemic species; and use their distribution to reconstruct the history of the connection in between the Black Sea and the Mediterranean Basin.

You can find out more details about this study at:

Ferguson, S., Warny, S., Escarguel, G., Mudie, P.J., 2016. MIS 5e-1 dinoflagellate cyst analyses and morphometric evaluation of *Galeacysta etrusca* and *Spiniferites cruciformis* in southwestern Black Sea. *Quaternary International*. Available online at: <http://dx.doi.org/10.1016/j.quaint.2016.07.035>

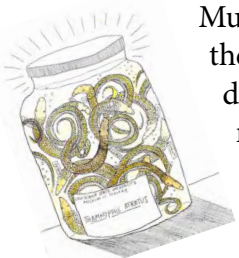
or at

<http://sites01.lsu.edu/faculty/swarny/wp-content/uploads/sites/30/2016/08/Ferguson-et-al.-2016.pdf>

Herpetology News

Undergraduate Research

In July the Herpetology Division hosted Vassar College undergraduate scholar India Futterman for a seven-day visit to conduct research on snake morphology and evolution. India started her interest in herpetology as a high school student working with postdoctoral scholar **Sara Ruane**, then at the American Museum of Natural History, now a postdoc at the **LSUMNS**. India has taken morphometric data for hundreds of Malagasy snakes. She recently had the opportunity as an REU student to continue working on snakes with **LSUMNS** alum **Dr. Frank Burbrink** (the new curator of amphibians and reptiles at the American Museum of Natural History). India's project focuses on size differences between male and female natricine snakes.



Vassar College undergraduate researcher India Futterman hard at work in the lab and checking out the local turtle diversity around Baton Rouge.

Inset: India Futterman's thank you card artwork.

Job News

Museum postdoctoral researcher **Dr. Sara Ruane** has landed an outstanding job as an Assistant Professor at Rutgers University. She starts her new position in the Biology Department in January 2017. She has

been exceptionally productive while at LSU and will be missed but we wish her well in her career.



Museum postdoctoral researcher Dr. Sara Ruane in Baja Mexico.

Scientific Meeting News

The entire Herpetology division went to the Evolution meetings this summer in Austin Texas. This is joint meeting between the Society for the Study of Evolution, Society of Systematic Biologists, and the American Society of Naturalists. Herpetology PhD students Genevive Mount, Cathy Newman, Zach Rodriguez, and postdoctoral scholar Dr. Sara Ruane all presented results from their recent research. In addition, the entire lab also went to Joint Meetings of Ichthyology and Herpetology in New Orleans and also presented research results.



Herpetology and Ornithology divisions had a strong presence at the Evolution meetings this summer in Austin, Texas.

Former Undergraduate Researcher earns PhD from the American Museum of Natural History

As an undergraduate researcher **Lauren Oliver** was highly productive with two peer-reviewed publications during the four years she worked in the Herpetology division. She graduated from LSU in 2012 with honors and went straight into the Richard Gilder graduate program at the American Museum of Natural History to pursue her PhD to work on Australasian frog systematics and taxonomy. She graduated with her PhD in four short years in May 2016. Congratulations Dr. Oliver!



New Species named after Amphibian and Reptile Curator Chris Austin

Sri Lankan herpetologist Sudesh Batuwita named a new species of scincid lizard (*Eutropis austini*) after curator Chris Austin “for his contributions to the systematics of the scincid fauna of Sri Lanka.” The paper was published in the latest issue of the *Journal of Herpetology* and uses morphology to distinguish this species as new to science. *Eutropis austini* is found only in the Central Hills of Sri Lanka above 500 meters in elevation. In order to describe a species as new to science researchers must follow a very rigorous procedure with strict rules put in place by the International Commission of Zoological Nomenclature (ICZN) and have it published in a peer-reviewed journal.



Eutropis austini



Top: Lauren Oliver and Chris Austin recording frogs during a 2013 expedition to Papua New Guinea.

Bottom: Former herpetology undergraduate Lauren Oliver defending her PhD dissertation at the American Museum of Natural History.

News from Paleontology

Vertebrate Paleontology

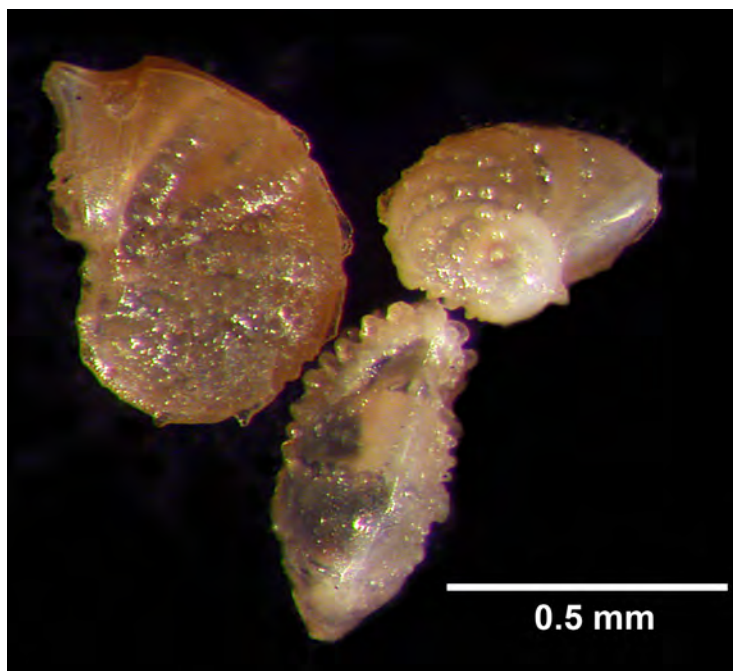
Student workers **William Dazet** and **Joshua Danna** have been working on the curation of the vertebrate paleontology collection donated by Tulane University. Congratulations to Joshua, who graduated in August with a B.S. in Geology.



William Dazet (top) and Joshua Danna (bottom). Photo by Lorene Smith.

Fossil Protists & Invertebrates

The Section of Fossil Protists and Invertebrates thanks Dr. Richard P. Zingula of Houston, Texas, for his donation this summer of microfossil specimens, micropaleontological supplies, and reference materials. Dick Zingula, LSU Geology alumnus and retired geologist and micropaleontologist for Humble Oil Company and Exxon, has made previous contributions of specimens to the H.V. Howe Type Collection of Microfossils. This latest donation includes foraminiferal topotypes as well as species from several different phyla.



Top Right: The foraminifer *Robulus lacerta* Garrett (Lower Miocene, Texas) is one of many species included in the Zingula donation. Photo by Lorene Smith.

Bottom Right: The scaphopod *Cadulus zingulai* Hodgkinson (Eocene, Texas) was named in honor of Dr. Zingula. Photo by Lorene Smith.

OUTREACH ROUNDUP

DUCKS UNLIMITED GREEN WINGS



On April 30, the LSUMNS participated in the Ducks Unlimited Green Wings Kid's Event at Bogue Balaya Park in Covington, LA. We brought specimens from our collections and taught kids about Louisiana biodiversity and

global conservation issues. Thanks to Alicia Reigel, **Seth Parker**, and **Cathy Newman** for helping out.

BUGBLITZ BIODIVERSITY FESTIVAL



On May 6, the LSUMNS participated in the BugBlitz Biodiversity University Science & Nature Festival at the Jean Lafitte National Historical Park in Marrero, LA. We had a table featuring

specimens from our mammal, fish, and amphibian & reptile collections, and spoke to >700 kids about Louisiana biodiversity.

MASTER NATURALISTS WORKSHOP



On May 14, the LSUMNS put on a workshop for the Louisiana Master Naturalists of Greater Baton Rouge on natural history museums. The day included a brief introduction to the LSU museum and the importance of natural

Photo Credit: John Oubre, Advocate

history museums; behind the scenes tours of the mammal, bird, fish, amphibian & reptile, and genetic resources collections; and a specimen prep demo. Thanks to **Steve Cardiff**, **Donna Dittmann**, **Bill Ludt**, **Mark Swanson**, and **Cathy Newman** for volunteering their time to help make the workshop a success!

USS KIDD FIRST FREE SUNDAY



On June 5th, the LSUMNS participated in the USS KIDD First Free Sunday. To go along with the theme "Our Finned Friends" we brought along fish from our fish collection includ-

ing things like a shortnose batfish, an armored sea robin, and a megalodon tooth. Thanks to **Bill Ludt** & **Fernando Alda** for helping out!

TWIN OAKS SCIENCE DAY



On May 17, the LSUMNS brought mammal specimens to Twin Oaks Elementary for their 4th grade Science Day. We used animals like the river otter, nutria, and brown bear to demonstrate adaptations in dentition. We also

brought along a pangolin, swamp rabbit, and hoary bat to talk about other adaptations in mammals. Thanks to Lorelei Patrick for helping out.

STEP OUTSIDE DAY



On May 7, the LSUMNS brought along specimens from our teaching and research collections to LDWF's Step Outside Day at the Sherburne Wildlife Management Area in Krotz Springs, LA. In addition to displaying

some of Louisiana's biodiversity, we also explained the process of preparing a museum specimen. Thanks to **Donna Dittmann**, **Steve Cardiff**, **Cathy Newman**, and **Zach Rodriguez** for helping with the event.

LOS SPRING MEETING



Steven W. Cardiff and **Donna L. Dittmann** (LOS Vice President) attended and assisted with the Louisiana Ornithological Society's annual Spring Meeting at Cameron on 22-24 April. Steve and Donna led one of the two Saturday field trips, accompanied by 23 participants. The field trip recorded a respectable 153 species (results can be viewed at: [http://ebird.org/ebird/view/checklist?subID=\\$29217171](http://ebird.org/ebird/view/checklist?subID=$29217171)) highlighted by a nice assortment of Neotropical migrants, including singing Cerulean and Golden-winged warblers, and other entertaining observations such as a Clapper Rail family with ten small downy chicks, Swainson's Hawk, Baird's Sandpiper, and a Great Kiskadee.

In other LOS news, Donna also assumed the role of Editor of the LOS Newsletter beginning with the Fall 2016 issue; visit the LOS website (losbird.org) to see her first effort.

Donna and Steve are also both Members of the LOS Louisiana Bird Records Committee. Steve is Chair and Donna is Secretary and editor of the LBRC Newsletter. The 2016 Newsletter, which includes the 19th Report of the LBRC is available online: <http://www.losbird.org/lbrc/lbrc.htm>.

The LOS Winter Meeting will be hosted by LSUMNS, 27-29 January 2017, and will include an open house and reception for meeting registrants Friday evening at LSUMNS. There will be Saturday morning field trips to local destinations. **Dr. J. V. Remsen** will be the Saturday evening speaker following a dinner banquet at "The Club" on campus.

Top: A cooperative Baird's Sandpiper was enjoyed by the Saturday LOS field trip group as it foraged on a flooded section of Jetty Park parking lot near Cameron.

Bottom: The field trip participants enjoyed colorful Neotropical migrants such as this male Cerulean Warbler, which can be a challenge to spot (and photograph) in chenier live oaks. Photos by Donna Dittmann.

UPCOMING OUTREACH EVENTS

October 15 - USFWS Wild Things
10am-4pm; Bayou Lacombe Center

October 24-26 - LSTA LATM Conference
Baton Rouge River Center

October 27 - Ocean Commotion
8:45am-1:30pm; Pete Maravich Assembly Center (LSU PMAC)

October 28-29 - LOS Fall Meeting
Cameron, LA

October 29 - Special Saturdays - Creepy Crawlers
10am-12pm; Museum of Natural Science (Foster Hall)

November 2-6 - Yellow Rails and Rice Festival
Jennings, LA

November 17 - Night at the Museum - Fish
6pm-8pm; Museum of Natural Science (Foster Hall)

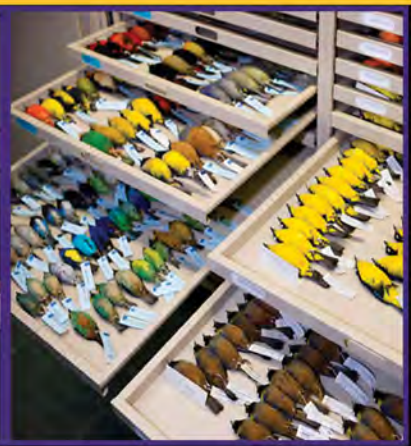
December 3 - Workshop: Master Naturalists of Greater Baton Rouge
8am-2pm; Museum of Natural Science (Foster Hall)

December 10 - Special Saturdays - Birds & Beaks
10am-12pm; Museum of Natural Science (Foster Hall)

January 14 - Special Saturdays - Exploring Mars
10am-12pm; Museum of Natural Science (Foster Hall)

January 26-27 - LOS Winter Meeting
Baton Rouge, LA

For more information on outreach events and museum tours, contact **Valerie Derouen** vderou1@lsu.edu. More photos on our Facebook page.



NIGHT AT THE MUSEUM 2016-2017 SCHEDULE

**SEPTEMBER 29
BIRDS**

**NOVEMBER 17
FISH**

**FEBRUARY 2
MAMMALS**

**APRIL 6
AMPHIBIANS &
REPTILES**

TOUR BEHIND THE SCENES | EXPLORE EXCITING RESEARCH | MEET LSUMNS SCIENTISTS

"Night at the Museum" will take place at the LSU Museum of Natural Science (Foster Hall) at 6pm. Join us for an experience you won't forget!

For more information and to reserve your spot on a tour visit our website



LSU

Museum of Natural Science

SPECIAL SATURDAY SCHEDULE 2016-2017

ADVENTURES IN ANTARCTICA

SEPTEMBER 24, 2016

Special Guests: Jade Lawrence² & Krista Myers²,
Geologists

Come learn about the ecology and climate of the Earth's southernmost continent, Antarctica, with Geologists Jade Lawrence and Krista Myers. Get a glimpse into the type of research they do including an up close view of what field work is like in such an extreme environment!

SKELETAL MYSTERIES

OCTOBER 8, 2016

Special Guest: Emily Wieggers³, Forensic Anthropologist
Ever wonder how human skeletal remains are identified? Come learn about research at the LSU Faces Lab with Forensic Anthropologist, Emily Wieggers.

CREEPY CRAWLERS

OCTOBER 29, 2016

Special Guest: Emily Kraus⁴, Entomologist
Bugs! Bugs! Bugs! Join us for our special halloween themed program with Entomologist Emily Kraus and friends as we learn about the amazing life cycle of insects and get an up close view of some really cool live arthropods!

BIRDS & BEAKS

DECEMBER 10, 2016

Special Guest: Glaucia Del-Rio¹, Ornithologist
A bird's beak is used to perform many functions like weaving nests, grooming feathers, and gathering and capturing food. They come in many different shapes and sizes. Come learn how the shape of a bird's beak relates to the type of food they eat and how they capture their food.

EXPLORING MARS

JANUARY 14, 2017

Special Guests: Don Hood³ & Nicki Button³,
Planetary Scientists

Mars is a fascinating planet that may have a history not too different from our own. We will explore the

history of this planet as observed by the rovers, landers, and satellites that we have sent over the past several decades. Come and learn about the geological and hydrological past of Mars, whether life ever existed there, and where we might find it today.

BIRD COLORATION

FEBRUARY 4, 2017

Special Guest: Rafael Marcondes¹, Ornithologist
Why are some birds brightly colored and others dull? Ornithologist Rafael Marcondes will speak about the function coloration plays in a bird's life.

HERPS AT RISK IN LOUISIANA

MARCH 4, 2017

Special Guest: Cathy Newman¹, Herpetologist
What are "herps"? Herps include frogs, salamanders, turtles, alligators, lizards, and snakes! Some of these animals are at risk for extinction in Louisiana. Herpetologist Cathy Newman will help us learn about these Louisiana amphibians and reptiles and tell us how we can help protect them.

MIKE'S NATIVE HABITAT

APRIL 1, 2017

Special Guest: Carol Wilson², Coastal Geologist
Ever wonder where Mike the Tiger would live in the wild? Geologist Carol Wilson will tell us what life is like in Sundarbans, Bangladesh - the native habitat of Mike the Tiger.

RISKY RODENTS

MAY 13, 2017

Special Guest: Dr. Jacob Esselstyn¹, Mammalogist
Rodents can be very diverse in terms of their coloration, size, teeth, body type, etc. Mammalogist Dr. Jake Esselstyn will explore why unique adaptations are great for some things, but also come with certain risks.

1-LSU Department of Biological Sciences, LSUMNS

2-LSU Department of Geology and Geophysics

3-LSU Department of Geography & Anthropology

4-LSU Department of Entomology

Special Saturdays is supported by the LSU College of Science, the Charles Lamar Family Foundation, and you!



To register for a Special Saturday, visit our website.

MNS NEWS & UPDATES

Patrick Baudoin receives AASP Undergrad Student Award

Congratulations to **Patrick Baudoin** who was awarded the Palynological Society's Undergraduate Student Award for his performance in a course with significant palynological content. Patrick is currently working on his Master's with Dr. Sophie Warny studying palynomorphs from debris deposited by various West Antarctic Ice Sheets.



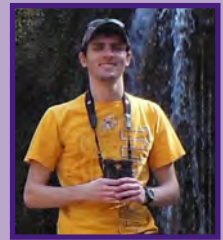
Rafael Marcondes receives student poster award

Congratulations to ornithology graduate student **Rafael Marcondes** who received the Ruth Patrick Award for the best student poster at the annual American Society of Naturalists meeting. He presented on "Interspecific variation in plumage brightness in relation to light environment among antbirds."



Ryan Eldridge receives Master's Degree

Congratulations to mammalogy student, **Ryan Eldridge**, on completing his Master's degree this summer. Ryan was advised by Dr. Jake Esselstyn. His thesis was on the "Biogeography and Population Genetics on Sulawesi, Indonesia: Unrecognized Diversity in the Shrew *Crocidura elongata*."



Oscar Johnson receives AOU Travel Award

Congratulations to ornithology grad student, **Oscar Johnson**, on receiving a \$265 travel award from the American Ornithologist's Union to attend the North American Ornithological Conference. While there, he presented on "Phylogeographic patterns of Amazonian river-island birds."



Dr. Judith Schiebout Appointed to Curator Emeritus

After 40 years of service, LSUMNS Curator of Vertebrate Paleontology, Dr. Judith Schiebout, has retired. She was appointed to Curator Emeritus on July 1st. Thank you Dr. Schiebout for your dedication and commitment to LSU and the Museum!

NEW STAFF/STUDENTS



Brandon Ballengeé

New associate post-doctoral fellow joining the Chakrabarty lab. Brandon is a visual artist, biologist, and environmental activist based at the School of Visual Arts in New York City.

Diego Elias

New Ph.D. student joining the Chakrabarty lab. Diego came to the US from Guatemala and obtained his Master's under Dr. Kyle Piller at Southeastern University in Hammond, LA.



Pamela Hart

New Ph.D. student joining the Chakrabarty Lab. Pam obtained her Master's degree from Auburn University under Dr. Jonathan Armbruster.

Anna Hiller

New Ph.D. student joining the Brumfield & Faircloth labs. She joins us after receiving her Bachelor's degree from the University of California, Berkeley.



- August 26** - **Museum Expedition Travelogues**
Ornithology in Borneo, Ornithology in Africa, Ichthyology in Panama, Ornithology & Mammalogy in Louisiana
- September 2** - **Diego Elias**, LSU Museum of Natural Science
Title: *“Phylogeography of fishes in Middle America”*
- September 9** - **Museum Expedition Travelogues**
Mammalogy in Sulawesi, Ornithology in Brazil, Ornithology in Peru, Herpetology in Louisiana
- September 16** - **Dr. Robert Thomson**, University of Hawaii at Manoa
Title: *“Evolution of the Map Turtles (Graptemys)”*
- September 23** - **Dr. Brandon Ballengée**, School of Visual Arts (NYC) & LSU Museum of Natural Science
Title: *“Praeter Naturam: An Art-Science Investigation of Ecosystems and Organisms Beyond Nature”*
- September 30** - **Karen Field**, Dept. of Biological Sciences, LSU
Topic: Chemosensory communication in an African cichlid fish
- October 7** - **No Seminar – Fall Break**
- October 14** - **Dr. Rodrigo Valverde**, Dept. of Plant Pathology and Crop Physiology, LSU
Title: *“Persistent plant viruses: mutualism or parasitism?”*
- October 21** - **Pamela Hart**, LSU Museum of Natural Science
Title: *“Diversity and Conservation of the Southern Cavefish”*
- October 28** - **Dr. Juan Lopez-Bautista**, University of Alabama
Title: *“Advances Toward a Green Algal Tree of Life”*
- November 4** - **No Seminar – Yellow Rails & Rice Festival**
- November 11** - **No Seminar – Museum Retreat**
- November 18** - **Oona Takano**, Texas A&M University.
Title: *“Host associations and biogeography of parasitic avian chewing lice across Sub-Saharan Africa”*
- November 25** - **No Seminar – Thanksgiving**
- December 2** - **Dr. Claudia Husseneder**, Dept. of Entomology, LSU
Title: *“Horse flies as bioindicators of marsh health after the 2010 Gulf of Mexico oil spill”*

For further information, please contact Rafael Marcondes - rmarco3@lsu.edu

Check out the
official blog for the



THE PURSUIT

lsuscienceblog.com



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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. 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 vderou1@lsu.edu or mail to:

The LSU Museum of Natural Science
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119 Foster Hall
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