MUSEUM QUARTERLY







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Female Red-headed Barbet | Puntarenas, Costa Rica 2014 Photo by LSUMNS Graduate Student Oscar Johnson

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Letter from the Director...



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Prosanta Chakrabarty Curator of Fishes

Jacob A. Esselstyn Curator of Mammals

J. V. Remsen John Stauffer McIlhenny Professor and Curator of Birds

Rebecca Saunders Curator of Anthropology

Judith A. Schiebout Curator of Vertebrate Paleontology

Sophie Warny AASP Associate Professor Curator of Palynology & Director of Education



A massive deficit has Louisiana's new governor and legislature wringing their hands. We are in the fortunate position that Louisiana's citizens and LSU's administrators value the Museum's rich collections and the collections-based research, training, and service the Museum's curators and staff provide. Nonetheless, our continued prosperity is very dependent on bringing in competitive federal grants, funding rates of which are in the 5 - 10% range. Fortunately, our outstanding cura-

tors have been successful in this arena.

I received the wonderful and timely news yesterday that the National Science Foundation is funding a \$485,000 Collections in Support of Biological Collections Research grant in support of the Museum's Ichthyology and Herpetology collections. This award will allow us to finally move the Fish Collection from the Gym Armory into Foster Hall and to consolidate the Herpetology Collection from its various overflow spaces on campus into Foster Hall. We'll also be able to outfit the fish and herp collections with state of the art compactor shelving and stainless steel tanks. Congratulations to **Prosanta** and **Chris** for submitting an outstanding grant proposal!

The award is timely because this summer the Museum will begin expanding into new space in the basement of Foster Hall (the Art Department's printmaking facility is moving to Hatcher Hall). The rapidly growing fish and herp collections will now have great space, with plenty of room for growth. This is very exciting news!

My vision is that all of the Museum's collections will be housed in a renovated Foster Hall, rather than scattered across four (or more) buildings on campus. These are positive steps in that direction.



Robb

Ornithological Expedition to Central Peru

By Andre Moncrieff

In September and October 2015, I was involved in my first LSU ornithological expedition something I'd been looking forward to for a long time! The expedition crew included two other **Brumfield** lab graduate students, Glenn Seeholzer and Oscar Johnson, as well as Peruvians Emil Bautista, Karen Verde, and Rainer de la Cruz Gonzalez. The main goal of our expedition was to revisit areas in the Gran Pajonal and Cerros del Sira of central Peru that Glenn, Mike Harvey, Ben Winger, and Daniel Caceres had surveyed in 2008. During their 2008 expedition, they observed, but could not collect, many notable species. These included a host of grassland species known from only a handful of dry inter-Andean valleys in Peru or from the Pampas del Heath. They also encountered many interesting species on the higher slopes and ridgetops of the Sira that warranted further documentation, including the aptly named Sira Tanager. These species constituted the targets of our 2015 expedition, but we also hoped to collect

a representative sample of all the birds we encountered, since very few specimens exist from this region of Peru.

This was the first expedition LSU had conducted in Peru since 2011 so we had a lot of organizing and permit wrangling to do prior to fieldwork. I arrived in Lima in early June and set up base camp outside the permitting offices. As anticipated, the permit acquisition process required lots of attention—frequent friendly reminders, many phone calls and meetings, and a revision—but after three months we thankfully got an excellent permit valid for the next five years! Oscar flew down for a couple of weeks in June and July, helping me tackle the permits. We also made a trip to the Gran Pajonal where we made arrangements for the upcoming expedition with the indigenous community of Kirahuanero.

In mid-September, Oscar and Glenn arrived in

Lima for the expedition. We spent a frantic day and a half running around Lima buying supplies and packing before loading everything up on a night bus to Satipo. From there, we took a 6-hour truck ride to the town of Oventeni, which is the hub of the Gran Pajonal (literally "Big Grassland"). Glenn observed that this town



Above: Our research team. From left to right: Oscar Johnson, Glenn Seeholzer, Karen Verde, Andre Moncrieff, Emil Bautista, and Rainer de la Cruz Gonzalez.

Title Photo: View from on top of Cumbre Kankichancheñago.

had one rustic restaurant when he visited in 2008 and no electricity. Now, in 2015, the town was a veritable metropolis with three restaurants and electricity from 6-9 pm. From Oventeni, we continued north to Kirahuanero, which was also the base for 2008 operations and thankfully was still very welcoming.

The plan was to work in the surrounding grasslands and lower elevations of the Sira for a few days while we planned our ascent into the Sira highlands. We collected a number of interesting species around Kirahuanero including Wing-banded Wren and Creamy-bellied Antwren. However, most of the excitement came from the pajonales a few km south of the community, where we collected target species such as Spot-tailed Nightjar, Rusty-backed Antwren, Wedgetailed Grass-Finch, and Yellow-browed Tyrant, all of which represent isolated and previously unsampled populations.

After three days we had found enough porters to begin our march into the Sira. The plan was to ascend a dry streambed (the Santeni River) to around 1800 m, where our guides knew there would be running water. We left at 6 am and made it to the water around 4 pm in one of the most grueling days I've ever experienced. Halfway through the march, our porters decided to change how they were carrying the 70-pound liquid nitrogen tank (used for storing and freezing tissue samples): rather than attached to a pole carried by two porters, they would simply take turns hauling it on their backs. Our guides assured us that this was the best way to transport the tank up 800 m of overgrown, narrow trails, muddy descents, and slippery streambed rocks. They continued on with good cheer and general merriment. Simply incredible. We set up camp that evening at 1750 m and crashed. For the next 6 days we collected in the surrounding pristine humid montane forest-a privilege indeed.

In 2008, Glenn had found the Sira Tanager to be common along the stunted ridgeline forest at the highest elevations, and so we spent many of our mornings hiking up to the 2000 m ridgeline nearest the camp. The name of this ridge was Cumbre Kankichancheñago. Try saying that three times fast and then writing it on specimen tags for 6 days. After a few days we were able to get a nice series of six specimens including two adult males, one subadult male, one adult female, and two juveniles. This endemic of the Cerros del Sira was previously known only from four specimens and a handful of sight records.

Our general collecting efforts also resulted in some important specimens. We collected a single Plainbacked Antpitta and heard many others. Before finding it in the Sira in 2008, the southernmost record of this species was from San Martín, Peru, 650 km to the north. Other highlights included Semicollared Hawk (a first departmental record), Wattled Guan, Chestnut-crested Cotinga, and Lemon-browed Flycatcher. Many populations of highland birds in the Sira are at least 100 km from other populations of their species, and the genetic samples we obtained will help us determine how divergent these populations are from each other.

After our time in the remote Sira highlands, we descended into the furnace of the Amazon Basin for a couple of weeks. Most of our efforts were focused on

documenting river island specialists in the vicinity of Atalaya, about 6 hours by truck from Oventeni. This portion of our expedition involved substantial boat travel, which was a fun change of pace and gave our knees a break. Glenn had done some sampling of the river island avifauna in 2011, so our time in Atalaya was as much a chance for Oscar to get acquainted with his dissertation study system as it was about collecting. We focused not only on the river island specialists, but also on the water birds along the rivers and obtained specimens of Black Skimmer, Large-billed Tern, and Pied Lapwing, as well as island specialists such as Black-andwhite Antbird, Parker's Spinetail, and Castelnau's Antshrike.

Once all our collecting was completed, and we returned to Lima, there was one final hurdle to jump:

getting the permit to export specimens back to the states. Oscar took on this challenge and planned to remain in Peru until he got what we needed. Thanks to his efforts, we received the specimens and tissues at LSU in early November. At least in recent history, this quick acquisition of the export permit is unheard of! Hopefully our substantial time investment in working with the Peruvian biologists at the permit headquarters during 2015 will continue to facilitate good communication and efficiency in upcoming years.

I think I can safely say that the anticipation for my first LSU expedition was well deserved. It was very rewarding to continue in the tradition of ornithology at LSU and to contribute to our knowledge of Neotropical birds. Looking forward to next field season!



Above: One of the many pajonales, or grasslands, within the Gran Pajonal Region.

7th Annual Yellow Rails and Rice Festival

By Donna Dittmann and Steve Cardiff

The LSU College of Science showcased this year's Yellow Rails and Rice Festival (YRARF) in their annual publication *The Pursuit* (article by Michelle Watson 2015, pp. 38-39). The LSUMNS is a festival sponsor and each year LSUMNS staff and graduate students assist the event in many ways from being volunteer field trip leaders and/or rail field "facilitators," manning an information booth, or by providing logistical support. LSUMNS 2015 YRARF volunteers included (alphabetical order): Matt Brady, Robb Brumfield, Steve Cardiff, Vivien Chua, Valerie Derouen, Donna Dittmann, held 28 October to 1 November and was based in Jennings, Louisiana in the heart of the state's southwestern rice-growing region. The sold-out festival drew participants from 27 US states and Canada to rice harvest sites near the community of Thornwell, which is the state's official Yellow Rail Capital of the World. The festival's prime objective is to show visitors the festival's namesake, the secretive Yellow Rail (*Coturnicops noveboracensis*), but the event also showcases the area's "working rice-crawfish wetlands" and their abundance of birds. It is truly a unique experience, combining "agritourism"

Tammie Jackson, Dan Lane, Andre Moncrief, Jessica Oswald, Iessie Salter. Fred Sheldon, and Ryan Terrill. LSUMNS personnel were able to share with festival participants their enthusiasm and knowledge of Louisiana's birds, as well as information about their research activities farther afield.

The Seventh Annual festival was



Above: Ceramic mug design by Donna L. Dittmann for YRARF 2015 illustrates the elusive Yellow Rail in Rice habitat

Title Photo: Reported by participants as just as much fun as riding on the combine, is riding along side the combine in one of the festival's ATVs. LSUMNS graduate student Ryan Terrill pilots the one closest to the combine during Friday's field day. The weather was getting progressively gloomy as a cold front approached.

and "ecotourism."

Yellow Rail numbers were lower in 2015 than in 2014. About 35 were estimated during the pre-festival Beatthe-Crowds session on Wednesday 10/28 and, fortunately, another 30-35 were seen during the "main event" on Thursday 10/29. Less favorable, wetter fields on Friday 10/30 yielded only about five Yellows, and participants



Above: LSUMNS Collections Manager Steve Cardiff (right hand orange vest) after positioning the ATV to watch for rails that may be flushed into the Banding Workshop's mist nets by the approaching combine.

who had not yet seen the bird grew nervous as rain threatened to move in. But, in the end, everyone was able to see "the bird" before harvest operations were shut down. And, of course, there were plenty of other rails and non-rails to look at, e.g., the Banding Workshop was able to catch and band an incredible 48 Soras during Friday afternoon! Luckily, we got in three days of harvesting and everyone was able to see Yellow Rails and ride the rice combine because, as feared, Saturday 10/31 was a total rain-out.

As in previous years, participants were able to observe Louisiana's spectacular abundance and diversity of birds during field trips through rice country, to the coast of Cameron Parish, and to the longleaf pineywoods of the Kisatchie National Forest in Vernon Parish. By covering a diversity of habitats, participants had a chance to see over 200 bird species as well as to enjoy



Above: LSUMNS Director Robb Brumfield (beige cap) acting as a facilitator positioned on the outside of the combine during Thursday's field day.

the area's culture, cuisine, and hospitality. Many vowed to return next year and bring their friends!

Plans are in progress for the **Eighth Annu**al YRARF 2016 – if you would like to be on the festival email list contact: yellowrailsandrice@gmail.com. Also, keep an eye on the website for information updates about this year's event: http://www.snowyegretenterprises.com/Snowy_Egret_Enterprises/Yellow_ Rails_%26_Rice_Festival.html. Registration will open on 1 August 2016 and spaces do fill quickly!

If you are looking for an LSUMNS-sponsored birding event a bit sooner, then you may want to consider the **Grand Isle Migratory Bird Celebration** (15-17 April 2016) or the **Shorebird Extravaganza** (29 April-1 May 2016, based in Jennings and also organized by the authors), as well as the **Louisiana Ornithological Society's Spring Meeting** in Cameron (22-24 April 2016).



Above: LSUMNS graduate student Matt Brady (green vest) acts as a facilitator on the "back up" combine on Friday's field day.



Above: Steve Cardiff (green t-shirt center) explains rice field bird distribution to participants during a local morning field trip.



LSUMNS Section of Ornithology Continues to Support South Louisiana Christmas Bird Counts During the 2015-2016 CBC Season

By Steve Cardiff and Donna Dittmann

The 116th season of the National Audubon Society's Christmas Bird Count (CBC) Program was recently completed from 14 December 2014 to 5 January 2015, and the LSUMNS "bird group" once again provided significant manpower for this important longterm early winter census effort. Despite the overlap with the holidays, with many of us out of town, seven different members of the Section of Ornithology invested 19 person-days of effort among six of 16 southern Louisiana counts. CBCs are standardized surveys that involve a one-calendar-day census of bird density and diversity within a fixed 15-mile-diameter circle (about 176 square miles). In addition to absolute species diversity (=number of species reported on count day) and total bird abundance, abundances can be compared among species and among years as "# individuals divided by total party-hours" (with a party-hour = each hour of effort by teams of observers covering discreet sections of the circle). Although this type of analysis is relatively crude and subject to various pitfalls, CBC data

have proven useful in revealing short-term and long-term trends in winter bird populations.

Three Louisiana CBCs co-sponsored by LSUMNS (Lacassine NWR-Thornwell, Sweet Lake-Cameron Prairie NWR, and White Lake) are summarized below. These counts were founded by LSUMNS Collection Managers **Steven W. Cardiff** and **Donna L. Dittmann**, who also served as "compilers" (observer recruitment, coordination of field coverage, and data analysis) for many years. But, as of the 2015-2016 season, Cardiff and Dittmann opted to step down as Compilers.

White Lake, Monday 14 December 2015



This was just the fifth running of the White Lake CBC, which is in Vermilion Parish south of Gueydan and west of Forked Island. This is another

very rural circle dominated by freshwater marsh, rice farms, crawfish ponds, and patches of hardwood forest and which also includes the recently created White Lake Wetland Conservation Area. Although many areas were flooded and inaccessible due to recent heavy rains, the weather was otherwise excellent. Under the new leadership of Compiler Michael A. Seymour, 15 observers (including LSUMNS's Cardiff, Dittmann, and Daniel F. Lane) split up into six parties to cover accessible areas, generating 54 party-hours and managing to locate almost 210,000 individual birds representing 141 species. Rarities included Purple Gallinule, 2 Sandhill Cranes, 1 Willet, 2 Marbled Godwits, 4 Groove-billed Anis, 1 Say's Phoebe (likely a returnee first detected in 2012), 2 Great Kiskadees (pair at Outside Island, a new location for the species in LA), a Couch's Kingbird (returning for its third consecutive winter), 1 Blackand-white Warbler, and 1 American Redstart. Also of interest were an impressive 2500 Black-bellied Whistling-Ducks, 198 Hooded Mergansers, 16 Bald Eagles, 4 Crested Caracaras, and 11 Vermilion Flycatchers. Not counting towards the species total was a Whooping Crane found by Dittmann & Cardiff just east of White Lake Wetlands Conservation Area; this individual was obviously one that had been released as part of the LA reintroduction effort.

Lacassine N.W.R.-Thornwell, Friday 18 December 2015



Centered a few miles south of the community of Thornwell in southern Jefferson Davis Parish, the "Lac-Thorn CBC" includes most of Lacassine National Wildlife Refuge

and stretches from the town of Lake Arthur west to the town of Hayes, incorporating a swath of northeastern Cameron Parish and a small chunk of eastern Calcasieu Parish. The landscape is dominated by rice agriculture but also includes portions of Lacassine NWR, and wooded areas along scenic Lacassine Bayou and the Mermentau River/Lake Arthur. This was the 14th running of the count since being established in December 1997, and the seventh consecutive year after the count was revived in 2009 following a 5-year hiatus from 2004-2008. Under the leadership of new Compiler Rob C. Dobbs, this year's count attracted 21 observers (including LSUMNS's Cardiff, Dittmann, **Van**



Above: Photo of Louisiana's first record of Pyrrhuloxia. Photo by Dan O'Malley, 12/18/15.

Title Photo: Say's Phoebe on a truck during the White Lake CBC.

Remsen, and Oscar Johnson), who were divided into as many 11 teams covering the circle from 6:15 AM-6:00 PM and generating about 108 party-hours. Good weather prevailed. Another strong team effort produced about 863,000 individual birds representing 159 species (which is close to the count average). Number of species will likely be the second-highest total among Louisiana CBCs this season. The biggest surprise by far was Louisiana's first-ever Pyrrhuloxia, a cardinal-like bird normally occurring in the desert SW, found by Dan O'Malley (see photo); the bird was subsequently seen by birders for another two weeks. Other unusual species or high counts included, 38 Bald Eagles, 6 Sandhill Cranes, 153 American Avocets, 59 Semipalmated Plovers, 1 Marbled Godwit, 1 Ruff, 2 Common Ground-Doves, 1 Eastern Whip-poor-will, 10 Crested Caracaras, 1 Red-breasted Nuthatch, 5 Black-and-white Warblers, 1 Prairie Warbler, 3 Nelson's Sparrows, 1 Bullock's Oriole, and 6 Pine Siskins. "Worst misses" were the normally reliable American Bittern, Short-eared Owl, Sprague's Pipit, and Lincoln's Sparrow.

<u>Sweet Lake-Cameron Prairie N.W.R., Sunday 20</u> <u>December 2015</u>



Centered on the Calcasieu-Cameron parish line at Hwy. 27 between Holmwood and Sweet Lake, the "Sweet-Cam CBC" circle includes all of Cameron Prairie Na-



Above: A banded endangered Piping Plover during the Grand Isle CBC.

tional Wildlife Refuge and is otherwise dominated by farmland and pastures largely owned by co-sponsor Sweet Lake Land and Oil Company. The seventh running of the count, under the new leadership of Compiler Dan O'Malley, started off with some fog and overcast but things quickly improved and it was overall a very nice day to be afield. Twenty-three observers (including LSUMNS's Cardiff, Dittmann, and Remsen) covered the area in nine teams generating over 91 party-hours. About 550,000 individual birds were tallied representing 149 species. We were once again disappointed to fall just short of the coveted 150 species threshold, but 149 species may still end up ranking third or fourth among Louisiana CBCs this season. Not counting towards the species total were the count's first Whooping Cranes (found by Erik Johnson towards the NW edge of the circle), a pair traceable to the ongoing Louisiana reintroduction program. Other unusual species included 1 Purple Gallinule, 3 Solitary Sandpipers (all at one site), 1 Willet, 29 Long-billed Curlews, 2 Say's Phoebes, 20 Vermilion Flycatchers, an amazing 5 Ash-throated Flycatchers, 5 Horned Larks, 1 Bewick's Wren, 1 Summer Tanager, 7 Yellow-headed Blackbirds, 7 Bronzed Cowbirds, and 1 Pine Siskin. Also noteworthy were 6 Bald Eagles, 7 American Avocets, 10 Semipalmated Plovers, and 38,000 Boat-tailed Grackles. Numbers of the count's "signature" species, Sandhill Crane and Crested Caracara, remained strong. About 55 caracaras were spotted, and crane numbers exploded to an incredible 6,000 individuals. We try to be conservative in estimating both species because they can move long distances during the day dispersing from roosts in the AM and returning in the evening. Worst misses were Black-bellied Plover, Laughing Gull, Sprague's Pipit, and Chipping Sparrow.

Other CBCs assisted by LSUMNS observers during the 2015-2016 season, included Grand Isle (16 Dec.; Cardiff, Dittmann), Sabine N.W.R. (19 Dec.; Cardiff, Dittmann), and Baton Rouge (2 Jan.; **Brady**, **Brumfield**, Cardiff, Dittmann, Remsen).



Above: Four Groove-Billed Anis in a bush during the White Lake CBC.

Learning "R" in Spain

By Dr. Prosanta Chakrabarty

From January 17-23 my new PhD student A.J. Turner and I went to a small town near Barcelona in Cataluña, Spain. We were there to take a morphometrics course in R. For the uninitiated, R is a programming language and environment that can be used to manipulate data, conduct analyses, and make beautiful figures - among other things. We would like to use R to measure and compare shapes of various fish species to better understand how body shapes change over the life of an organism; how these shapes evolve among/between groups; and how to use information about shape to better understand the changing forms of of fishes over time. A.J. is quite clever and smart and he will one day be able to use this tool to make his cutting-edge dissertation even more cutting-edge. I was once clever and smart too but I've felt a little dumb post-tenure. I saw this class as an opportunity to retool, and to reshape (pun intended) some old projects and to think of new ones. It didn't hurt that the course took place in beautiful Spain. The course was taught by Julien Claude, who is the author of a book "Morphometrics in R," and he also wrote an R package called "ape" that has been cited thousands of times. There were about twenty other students from around the world there, some were studying shapes of dinosaur bones, or fruits, or flowers - among

countless other projects. Almost all brought data to play with and manipulate. From 9am to 7pm for five days we were on our computers going through dozens of examples and exercises. It was rather intense, especially for me – not having been a student since I got my PhD almost 10 years ago. Except for some short breaks and meals, we were engrossed in R all day. The group of students and instructors were a disparate mix of international students, postdocs and PIs. Luckily everyone was very nice and A.J. and I ended up with twenty or so new friends and maybe some future co-authors. I particularly liked Julien. He and I share a rather silly and nerdy sense of humor. A running joke about one of the students being from the future and taking this class to destroy R like the Terminator had us giggling for days for some strange reason. (It might be that writing ten hours of computer code a day makes almost everything else hilarious.) Speaking of bad jokes: Do you know the favorite coding language of pirates? ... R!) By Day 4 my brain was full and I needed to take a bit of a break from the dark classroom and spend some time outdoors. A.J. and I got up at 5am and took a cab to the top of beautiful Montserrat and watched the sun rise over Cataluña. A.J. and I found ourselves walking around the grounds of a rather breathtaking Basilica at the top of Montserrat.



Above: AJ Turner at the Sagrada Familia.

Title Photo: Sunrise from Monserrat

There were monks chanting, bells ringing, and beautiful rows of multicolored candles lit for prayer. The sun rising over the mountains was stunningly beautiful as were the paintings and décor inside the monastery. The monastery has a famous dark skinned Virgin Mary statue that reminded us of this part of Spain's rich African history. Cataluña houses an interesting mix of cultures, something that is notably distinct from the rest of Spain. We were often greeted with 'Bom dia" in the morning (similar to the Portuguese "Bon dia"), and with "merci" in place of "gracias." But alas we only had time to learn one new language, and we were back learning the grammar and culture of R in our classroom that same morning. In R we say hello like this setwd("/Users/Prosanta/Desktop/MorphometricswithR2016/datasets").

Our visit to Montserrat was just a few hours but luckily we also had a few free hours when we landed in Barcelona. My postdoc Fernando Alda is from Spain and I wouldn't have been able to look him in the eyes if I didn't tell him we saw at least some sites while we were in his home country. Luckily we were able to also see the Sagrada Familia on our way to the course on the day we landed. The Sagrada Familia is the infamously beautiful/hideous giant church designed by Spain's most influential architect Antoni Gaudi. Inspired by biological shapes (apparently all biological shapes all at once), Gaudi initiated construction of this building in 1882 and it won't be finished until 2020 (maybe). The building is impossible to describe with words, but let's just say I don't think Gaudi would have been good at R. Although I think our instructor Julien Claude can probably make anyone good at R.

Julien is a patient and kind instructor who made sure every student was getting the current set of skills being taught before moving on; and he also understood that we each had different goals, projects, and kinds of data. For me learning elegant new tests of hypotheses for modularity (the independent changing of shape in one body part versus another) or fluctuating asymmetry (the unbalanced growth across a body's axis of symmetry) were worth the price of admission. I already have new projects in mind and hope to help some students learn new morphometric techniques. A.J. and I are extremely grateful to our Department of Biological Sciences and Office of Research and Economic Development for the opportunity to attend the R class in morphometrics.



Above: Studying a turtleshell with R.



TED Selects LSU MNS Curator as 2016 TED Fellow

By Alison Satake

BATON ROUGE – TED, the international nonprofit organization dedicated to spreading ideas — usually in the form of short, powerful talks – has selected LSU Associate Professor and Museum of Natural Science Curator of Fishes **Prosanta Chakrabarty** as one of 21 TED Fellows for 2016. TED selects thought leaders and trailblazers in various disciplines from around the world to be a TED Fellow.

"I feel honored to be recognized by TED, because conveying my science in a way that's understandable and relatable to people is such an important part of what I do," Chakrabarty said.

As the Curator of Fishes at the LSU Museum of Natural Science, Chakrabarty's research focuses on the evolution of both marine and freshwater fishes including cavefishes, bioluminescent species and lineages that help explain ancient geological events. He and his students conduct fieldwork around the world including Central America, Southeast Asia, the Middle East and Louisiana. He received his doctorate from the University of Michigan, Ann Arbor. He was a postdoctoral fellow at the American Museum of Natural History in New York, and he joined the LSU faculty in 2008. Chakrabarty gave a TEDx talk at LSU titled "The Immortal Naturalist: Collecting the World" in 2015.

As a TED Fellow, Chakrabarty is invited to become part of the exclusive network of more than 360 artists, scientists and entrepreneurs. He will participate in the annual TED conference, which aims to grow each fellows' potential. He will present a new TED talk on natural history at the conference in Vancouver in February. "When the program started, we thought the main benefit was the opportunity to give a TED talk and gain access to the TED community. But over time, we've realized the real benefit is the other Fellows – the mutual support, professional and personal, and the deep, lasting connections. The collaborative spirit of the program yields a powerful network where each person profoundly influences each other person, and the group as a whole functions like a supercomputer. It's a powerful thing to witness and be part of," said TED Fellows founder and director Tom Rielly.

"I look forward to the opportunity to network with this group of international experts and develop unique collaborations I would not otherwise have the chance to build," Chakrabarty said. Follow Chakrabarty's work on **Twitter @LSU_FISH**.

About the TED Fellows program

The TED Fellows program brings together young innovators from around the world and across disciplines, who display both outstanding achievement and exemplary character, to ignite their careers. The program offers Fellows full participation in the TED or TEDGlobal Conference, a two-day pre-conference of workshops and activities, a biannual Fellows Retreat, ongoing professional coaching and mentoring through the SupporTED program, dedicated PR coaching and active participation in the TED community, including the global TED Fellows network. Founded in 2009, the TED Fellows program now includes 397 Fellows from 86 countries.

Carnegie Museum Donates Palynomorph Holotype Collection to the LSUMNS

By Valerie Derouen

CARNEGIE MUSEUM OF **NATURAL** HISTORY

> As of January 20, 2016, The Section of Paleobotany at the Carnegie Museum of Natural History (CMNH) in Pittsburgh, PA has donated its Palynomorph Type Collection to the LSU Museum of Natural Science (LSUMNS) due to the resignation of their last employed palynologist, Jim King, in 1995. The collection includes 255 catalogued palynomorphs originally received in a series of donations made by Reed Wicander, a palynologist at Central Michigan University. The palynomorphs will be housed in the Howe Russell Geoscience Complex on LSU's campus as part of the **CENEX** palynological collection. AASP Associate Professor and LSUMNS Curator of Palynology, Dr. Sophie Warny, will be curating the collection under the guidelines outlined in the original Memorandum of Understanding between the Carnegie Museum of Natural History and the American Association of Statigraphic Palynologists, dated November 1993. The collection will be made available to the public for use in scientific research. Special thanks to Amy Henrici (CMNH) for helping with the donation process.



of Natural Science



About Palynomorphs

Palynomorphs are organic-walled microfossils ranging in size between 5 and 500 micrometers. They are commonly found in sediments and include pollen, spores, fungi, dinoflagellate cysts, and acritarchs; but also scolecodonts, chitinozoans and linings of foraminifers. Applications of studying palymorphs include forensic science, palaeoecology and climate change, biostratigraphy, and evolutionary studies among others. They are usually mounted on microscope slides for scientific study.

New Staff at the LSUMNS



Dr. Sara Ruane

Prior to coming to LSU, I was a postdoctoral researcher working at the American Museum of Natural History in the Department of Herpetology. I completed my doctorate in the Biology EEB program at City University of New York in 2013 under the mentorship of LSUMNS alum **Dr. Frank Burbrink**.

My main research interests are in herpetology, especially squamates, and this goes back as far as I can recall; I can remember telling my 5th grade teacher that I was going to be a herpetologist when I grew up. My work seeks to simultaneously inform reptile and amphibian systematics while also answering broad, contemporary

questions in evolutionary biology. Some of my recent research has focused on the phylogenetics of the Malagasy pseudoxyrhophiine snakes, which includes the use of molecular data in the form of next-generation sequencing and traditional Sanger-sequencing approaches, as well as ecological and morphological data to aid in understanding what factors promote speciation in these snakes. While my interests in herpetology are broad, I focus primarily on snakes, especially with respect to evolution, systematics, phylogenetics, and phylogeography, as well as ecology. During my time here at LSUMNS, I am excited to begin working on some new projects, including collaboration with curator Dr. Austin on elucidating and describing the cryptic species of snakes of New Guinea, a region that I have not worked on prior but that holds many poorly-studied taxa very much in need of taxonomic revision. Besides snakes, I love the color pink, poodles, and eating chicken wings.

Seth Parker

As the new collections manager, my focus will be on the ichthyology and herpetology collections, particularly beginning with the transition into the new space. While my background is in herpetology, you're more likely to catch me with a fly rod in my hands than a potato rake, although my boots are always ready for a good herping. Before arriving at the museum in January, I was a forestry research technician with the Savannah River Ecology Lab in Aiken, South Carolina. Collaborating with a plant ecologist and the USDA Forest Service I conducted tree physiology and sap flow research with commercial timber species. Prior to this, I attended Georgia Southern University to complete a master's degree in biology, using the Florida scrub lizard as a model species for bipedal performance, behavior and population dynamics. While attending GSU I also worked as

a graduate assistant in the herpetology and ichthyology collections, though I cut my teeth on collections during my time as an undergraduate instructor in the herpetology lab at Appalachian State University. I originate from a small farm in the mountains of North Carolina, but don't let the accent fool you. I'm



eager to set my roots among the swamps of Baton Rouge where one can be free to hunt, fish, and enjoy the crawfish. Geaux Panthers! ...and Tigers!

News from Fossil Protists & Invertebrates

by Lorene Smith



During a visit to the museum's invertebrate paleontology collections last November, barnacle specialist Ray Perreault photographed an undescribed species from the Eocene. The specimens were collected by LSU micropaleontologist Henry Howe in 1941.

Left: Ray Perreault identifying barnacles

News from Vertebrate Paleontology

by Judith Schiebout

Dr. Julia Sankey (California State University Stanislaus) visited the **LSUMNS Vertebrate Paleontology Lab** in December to return a loan of vertebrate fossils from Big Bend in west Texas and gave an informal talk on her current research project on sites around Turlock Lake in California: *"Giant, tusk-toothed salmon, Galapagos-sized tortoises, and other extinct wildlife of Central California"*.

Dr. Schiebout and Dr. Gary Stringer of ULM have organized a session entitled *"Fossil Vertebrates from the Gulf Coastal Plain"* for the 50th Annual Meeting, South-Central Section of the Geological Society of America scheduled for March 22nd in Baton Rouge. Dr. Schiebout is also arranging a field trip for the meeting to a roughly 5-million-year-old site in the Pascagoula Formation in the Tunica Hills.

OUTREACH ROUNDUP

MASTER NATURALISTS WORKSHOP



The LSUMNS put on a day long workshop for the board of the newly formed Louisiana Master Naturalists of Greater Baton Rouge on September 26, 2015. The overall goal was to give them a better understanding of the importance of natu-

ral history museums and learn how we operate. They listened to talks about our mammal, amphibian & reptile, fish, genetic resources, and bird collections; received behind the scenes tours of the collections; and watched a specimen prep demonstration. We will be doing another workshop for the first official cohort in May. Thanks to the curators (**Dr. Robb Brumfield, Dr. Prosanta Chakrabarty, Dr. Van Remsen, Dr. Fred Sheldon**), staff (**Steve Cardiff, Donna Dittmann, Fernando Alda**), and graduate students (**Cathy Newman, Mark Swanson, Bill Ludt, Glaucia Del-Rio**) for helping make this event possible!

6TH GRADE DAY



On November 17, January 14, and January 28th the LSUMNS took part in "6th Grade Day" at LSU. 6th Grade Day is an initiative from the LSU President's office aimed to aid in college readiness for Loui-

siana students. The goal of 6th Grade Day is to have every 6th grader in Louisiana visit LSU's campus and learn what it has to offer in terms of education and careers. Over 2,000 6th graders participated in the event where they were exposed to Music and Dramatic Arts; education, sciences, and humanities; the Museum of Natural Science; and the LSU AgCenter. The LSUMNS had a table at the "Education, Humanities, and Sciences Experience" filled with specimens from our collections. The students were also able to do a brief walkthrough of our public exhibits. Thanks to **Dr. Jessica Oswald, Matt Brady, Vivien Chua, Oscar Johnson, Clare Brown, Cathy Newman, Zach Rodriguez, Dr. Prosanta Chakrabarty, AJ Turner, Rafael Marcondes, Andre Moncrieff, Genevieve Mount,** and **Jon Nations** for helping out with this event.

LSU FALL FEST



On October 2 the LSUMNS participated in LSU Fall Fest - an annual festival to welcome back students, faculty, and staff to the university and gives them the opportunity to learn about campus departments, receive

free giveaways, see performances, enjoy free food, and more. We brought specimens from our mammal, bird, amphibian & reptile, and fish collections. Mike the Tiger even stopped by to say hello! Thanks to **Cathy Newman, Link Morgan, Jon Nations, Jessie Salter, Chris Reglen,** and **Ryan Burner** for volunteering!

LOS FALL MEETING



The LOS Fall Meeting kicked off Friday evening 23 Oct with a social hosted by the First Baptist Church of Cameron, which was followed by the evening slide

presentation by LOS members Joelle Finley and Ken Harris, who discussed their recent travels to SE Arizona. On Saturday 24 Oct, three all day birding field trips departed the Cameron Motel. Donna Dittmann (LOS Vice President) and Steve Cardiff lead one of the trips for about 20 participants. The remnants of Hurricane Patricia caused intermittent rain during the day but their group had fun nonetheless and managed to muster 135 species during 9.75 hours of birding (list can be viewed at: http://ebird.org/ebird/view/ checklist?subID=S25554778). An immature Great Blackbacked Gull spotted by Donna at the Jetty Park observation tower (sheltered from the rain!) was the rarity of the day. A total of about 175 species were reported in Cameron Parish during the weekend. LSUMNS grad student Matt Brady gave the Saturday evening presentation about his thesis research, the Louisiana Summer and Winter Bird Atlas Projects, but also introduced a new project looking at Frequency of Bird Window/Building Strikes in Downtown Baton Rouge.

USFWS WILD THINGS

OCEAN COMMOTION



On October 17th the LSUMNS participated in Wild Things put on by the US Fish and Wildlife Service. It is an awesome outdoor family event that attracted around 6000 guests this year. We brought specimens from our mam-

mal, bird, and fish collection. Thanks to **Donna Dittmann** and **Steve Cardiff** for helping with our table.

LATM LSTA JOINT CONFERENCE



From November 9 - November 11, the LSUMNS was represented at the Joint LATM LSTA conference for Louisiana math and science teachers. Our goal was to show local teachers what the museum has to offer them in

regards to museum education and field trips. In addition to selfguided field trips, we offer hands on options for all ages including behind the scenes tours, themed education programs featuring specimens, and scavenger hunts. We also brought a few specimens from our bird, mammal, and amphibian & reptile collections. It was great to connect with teachers at this conference and we look forward to participating in the future! Thanks to **Vivien Chua, Cathy Newman,** and **Oscar Johnson** for volunteering.



On October 27th the LSUMNS participated in Ocean Commotion and had a table filled with modern and fossil sea monsters. About 2500 elementary students attended the event. We featured

specimens from our marine fish collection (modern) and a basilosaurus vertebra and jawbone (cast) from our vertebrate paleontology collection (fossil). Thanks to **Bill Ludt, Madison Kymes, Melissa DeBiasse, Mitch Gregory, Link Morgan, AJ Turner,** and **Sophie Warny** for volunteering.

LPB FAMILY FUN FEST



On December 5 the LSUMNS participated in the LPB Family Fun Fest held at the LSU Parker Coliseum. This was a great event for families to experience together. Kids got to meet Thomas the Tank Engine and partici-

pated in various activities at booths set up around the Coliseum. We brought along specimens from our bird, fish, and amphibian & reptile collections as well as written fish activities. Thanks to Link Morgan and Zach Rodriguez for volunteering.



February 19-20: LEEC Symposium February 25-27: Eagle Expo April 2: BioBlitz April 15-17: Grand Isle Migratory Bird Festival

April 17: Earth Day April 27-May 1: Shorebird Extravaganza May 7: LDWF Step Outside Day May 14: Master Naturalist Workshop

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

MNS NEWS & UPDATES

Dr. Warny & Dr. Schiebout Honored by Senate

Congratulations to **Dr. Sophie Warny** and **Dr. Judith Schiebout** who were commended for outstanding service in Faculty Senate Resolution 15-13 for "leading both a university and a public movement in opposition to locating the aforementioned, dangerous facility (Tubal-Cain Marine Services Barge Cleaning) in close quarters with LSU's Baton Rouge Campus." Judith Schiebout, Sophie Bart, and Rebecca Saunders had sponsored the initial resolution 15-6 that got the ball rolling, "Support for Inviting DEQ to Hold a Public Hearing on the LSU Campus about Location of a Barge Cleaning Facility Close to the South Side of LSU".

Keith Barker & Tyler Imfield Visit the LSUMNS Collection

Dr. Keith Barker and his Ph.D. student Tyler Imfield from the University of Minnesota visited the LSUMNS in November to collect data from specimens on the reproductive condition of birds.

Genevieve Mount Elected to SSB Student Council

Congratulations to herpetology Ph.D. student, Genevieve Mount, who was elected to be a student council member for the Society of Systematic Biology (SSB).

Mike Harvey receives his Ph.D

Dr. Michael Harvey studied the population genomics of neotropical forest birds under LSUMNS Director and Curator of Genetic Resources, Dr. Robb Brumfield. He received his Ph.D. in December and is headed for a post-doctoral fellowship under Dan Rabosky at the University of Michigan.

New Master's Student

Welcome Patrick Baudoin! He will be working under Dr. Sophie Warny as a M.S. student.

Dr. Warny awarded Erasmus+ Fellowship and Guest Professorship

Congratulations to Dr. Sophie Warny who was awarded an ERASMUS+ fellowship at the Universite Grenoble Alpes, France.

She was also awarded a Guest Professorship at the Universite of Lille, France.











Recent Publications by LSUMNS Curators, Students, & Staff

Akyuz, I., Warny, S., Oyebode, F., and Bhattacharya, J., 2016. Palynology of the Turonian Ferron-Notom Sandstone, Utah: identification of marine flooding surfaces and Milankovitch cycles in subtropical, ever-wet, paralic to non-marine paleoenvironments. *Palynology*, 2015. http://dx.doi.org/10.1080/01916122.2015.1014525

Bacon, C.D., Silvestro, D., Jaramillo, C.A., **Smith, B.T., Chakrabarty, P.**, Antonelli, A. (2015) Biological evidence supports an early and complex emergence of the Isthmus of Panama. *Proceedings of the National Academy of Sciences* 112: 6110-6115.

Bart, P.J., Coquereau, L., **Warny, S.** and Majewski, W., accepted, 2016. On the possibility that in situ benthic foraminifera can be isolated from Grounding Zone Wedge diamict: implications for radiocarbon dating Antarctic Ice Sheet grounding events. Cambridge University Press, *Antarctic Science*.

Brady, M.L. and **Burner, R.C.**, 2015. First Description of the Nest of Whitehead's Spiderhunter (Arachnothera juliae Aves: Nectariniidae). *The Wilson Journal of Ornithology* 127 (4): 752

Chakrabarty, P., Sparks, J.S. (2015) Formalizing the names of subfamilies and tribes of ponyfishes (Leiognathidae Gill 1893). *Zootaxa* 3964: 298-299.

Chua, V. L., Q. Phillipps, **H. C. Lim**, S. S. Taylor, **D. F. Gawin**, M. A. Rahman, R. G. Moyle, and **F. H. Sheldon**. 2015. Phylogeography of three endemic birds of Maratua Island, a potential archive of Bornean biogeography. *Raffles Bulletin of Zoology* 63:259-269.

Clauzon, G., Suc, J.-P., Jouannic, G., DoCouto, D., Melinte-Dobrinescu, M.C., Jolivet, L., Lebret, N., Mocochain, L., Popescu, S.-M., Martinell, J., Domenech, R., Rubino, J.-L., **Warny, S.**, Gorini, C., Bache, F., Rabineau, M., Estrada, F., 2015. New insights on the Sorbas Basin (SE Spain): the onshore reference of the Messinian Salinity Crisis. *For Marine and Petroleum Geology*, 66, 71-100. http://www.sciencedirect.com/science/article/pii/S0264817215000483

Esselstyn, J. A., A. S. Achmadi, H. Handika & K. C. Rowe. 2015. A hog-nosed shrew rat (Rodentia: Muri- dae) from Sulawesi Island, Indonesia. *Journal of Mammalogy*. 96:895-907. DOI: 10.1093/jmammal/gyv093.

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Gomes, M.P., H. Vital, P.P.B. Eichler, **B.K. Sen Gupta**. 2015. The investigation of a mixed carbonate-siliciclastic shelf, NE Brazil: side-scan sonar imagery, underwater photography, and surface-sediment data. *Italian Journal of Geosciences* 134: 9-22.

Griener, K. and **Warny, S.**, 2015. Nothofagus pollen grain size as a proxy for long-term climate change: an applied study on Antarctic Eocene, Oligocene, and Miocene cores. *Review of Palaeobotany and Palynology*.

Griener, K., Warny, S., Askin, R.E., Acton, G., 2015. Early to middle Miocene vegetation history of Antarctica supports eccentricity-paced warming intervals during the Antarctic icehouse phase. *Global and Planetary Change*, 2015. http://dx.doi.org/10.1016/j.gloplacha.2015.01.006

Hafner, M. S. 2015. Family Geomyidae Bonaparte, 1845. In *Mammals of South America*. Volume 2, Rodents, ed. J. L. Patton, U. F. J. Pardiñas, and G. D'Elía, pp. 49-51. The University of Chicago Press, Chicago, IL.

Justiniano, R., J. J. Schenk, D. S. Balete, E. A. Rickart, **J. A. Esselstyn**, L. R. Heaney & S. J. Steppan. 2015. Testing diversification models of endemic Philippine forest mice (Apomys) with nuclear phylogenies across elevational gradients reveals repeated colonization of isolated mountain ranges. *Journal of Biogeography*. 42:51-64. DOI: 10.1111/jbi.12401. **Lim, H.C.**, F. Zou, and **F.H. Sheldon**. 2015. Genetic differentiation in two widespread, open-forest bird species of Southeast Asia (Copsychus saularis andMegalaima haemacephala): Insights from ecological niche modeling. *Current Zoology* 61:922-934.

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McMahan, C.D., Matamoros, W.A., Piller, K.R., **Chakrabarty, P.** (2015) Taxonomy and systematics of the herichthyins (Cichlidae: Tribe Heroini), with the description of eight new Middle American Genera. *Zootaxa* 3999 (2): 211-234

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Oswald, J. A. and D. W. Steadman 2015. The changing diversity and distribution of dry forest passerine birds in north-western Peru since the last ice age. The Auk: Ornithological Advances 132:836-862

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Sheldon, F.H. 2015. Gazetteer and site-based history of the ornithology of Sabah, Malaysian Borneo. *Occasional Papers of the Museum of Natural Science*, Louisiana State University 86:1-91.

Sheldon, F.H., H.C. Lim, and R.G. Moyle. 2015. Return to the Malay Archipelago: the biogeography of Sundaic rainforest birds. *Journal of Ornithology* 156 (Supplement 1):S91-S113.

Spradling, T. A., J. W. Demastes, D. J. Hafner, P. L. Milbach, F. A. Cervantes, and **M. S. Hafner.** 2016. Systematic revision of the pocket gopher genus Orthogeomys. *Journal of Mammalogy* (in press).

Sparks, J.S., **Chakrabarty**, **P.** (2015) Description of a new genus of ponyfishes (Teleostei: Leiognathidae), with a discussion of the current generic-level composition of the family. *Zootaxa* 3947:181-190.

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Warny, S., Kymes, M., Askin, R., Krajewski, K. and Bart, P.J., 2016. Remnants of Antarctic vegetation on King George Island during the early miocene melville glaciation. *Palynology*, 2015. http://dx.doi.org/10.1080/01916122.2014.999954



Museum of Natural Science

Spring 2016

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*Seminars begin at 3:30 in the main gallery of Foster Hall

Museum Seminar Schedule

1		No Seminar: "Welcome Back" Informal Beer Social @ 3:30pm		
January 22	-	Andre Moncrieff, Seth Parker, Joey O'Keefe, L. Rivers Berryhill, and Dr. Sara Ruane LSUMNS*, Louisiana State University Title: "Travelogues and lightning talks"		
January 29	-	Dr. Juliet Brophy , Dept. of Geography & Anthropology, Louisiana State University Title: "Discovering Homo naledi"		
February 05	-	No Seminar: Mardi Gras Holiday		
February 12	-	Dr. Vincent Richards , Dept. of Biological Sciences, Clemson University Title: "Comparative genomics, transcriptomics, phylogenomics, and community profiling of bacteria pathogens"		
February 19	-	Dr. Morgan Kelly , Dept. of Biological Science, Louisiana State University Title: "The price of victory: Consequences of environmental stress adaptation in marine invertebrates"		
February 26	-	Peter Scott , Dept. of Biological Sciences, University of Alabama Title: <i>"Speciation, hybridization, and conservation of musk turtles in the southeastern U.S."</i>		
March 04	-	Brittany Owens , Dept. of Entomology & LSAM**, Louisiana State University Title: <i>TBA</i> . Research Interests: " <i>Pselaphine, Staphylinid beetle systematics</i> "		
March 11	-	Dr. Peter Hosner , Dept. of Biology, University of Florida Title: "Landfowl phylogenomics: evolution of the avian model clade"		
March 18	-	Dr. Michael Grace , Dept. of Biological Sciences, Florida Institute of Technology Title: <i>TBA</i> . Research Interests: <i>"Sensory neuroscience, infrared imaging systems, and</i>		
		visual system development"		
March 25	-			
March 25 April 01	-	visual system development"		
		visual system development" No Seminar: Spring Break Dr. Andrea Bonisoli-Alquati, School of Renewable Natural Resources, Louisiana State University. Title: "Chernobyl and Fukushima: Ecological and evolutionary lessons from		
April 01 April 08	-	visual system development" No Seminar: Spring Break Dr. Andrea Bonisoli-Alquati, School of Renewable Natural Resources, Louisiana State University. Title: "Chernobyl and Fukushima: Ecological and evolutionary lessons from nuclear disasters" Vitek Jirinec, School of Renewable Natural Resources, Louisiana State University		
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For further information, contact Zach Rodriguez: zrodri3[at]lsu.edu



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Email your material to vderou1@lsu.edu or mail to:

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