LSU | Museum of Natural Science

NEWSLETTER

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Lilac-breasted roller (Coracias caudatus), Kenya
Photo by LSUMNS Postdoctoral Researcher
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Letter from the Director...

Dear Museum Friends and Family,

It has been a long tumultuous year. The end, however, is near. The sun is out, the air is warm, and spring has definitely sprung here in south Louisiana. Along with the joy to the end of winter we find ourselves at the end of a long pandemic year with vaccinations at an all-time high. This is good news for all of us as we move into the summer and return to a hopefully more normal fall. Despite all of the difficulties of the last year, I'm very proud of our Museum curators, staff and students who pivoted to accomplish some great science over the last year. On the next page curator Prosanta Chakrabartry writes about the importance of evolutionary biology in the development of vaccines. In this issue, you will also read about a literally large new species discovery in the Gulf of Mexico, our expanded infrastructure for our genetic resource collection, and some fantastic archeological research and more.

One of the greatest pleasures we curators enjoy is when Museum folks fledge and move on to accomplish great things. Museum postdoctoral researcher Janet Buckner will be leaving us in December to start as an Assistant Professor at the University of Texas at Arlington. Obtaining a tenure-track job is one of the most difficult hurdles in academia and we look forward to following Janet's career.

Despite the challenging year we were able to hire a new joint Ichthyology and Herpetology Collection Manager. David Boyd completed a master's degree at the University of Florida in December 2020, loaded his dog into his truck, drove to Baton Rouge, and started at the Museum in January 2021. David is a true museum scientist whose interests are in Southeast Asian freshwater fish taxonomy and systematics.

Finally, what would spring be without the birth of the next generation? I'm pleased to announce that just a few days ago Herpetology postdoctoral researcher Carl Hutter's wife Zo gave birth to a healthy baby boy, Aiky Ainala Hutter! He was born at 6 lbs, 10 oz (or 3 kg) and a height of 20 1/2 inches (52 cm). It is always nice to have a growing Museum family. Congratulations to Zo and Carl!

Thanks for teaching everyone about evolution SARS-CoV-2!

by Prosanta Chakrabarty PhD

What a time to be alive! These days, just staying alive feels like an accomplishment. As of late March 2021, at least two and a half million people have died worldwide from COVID-19 (the disease caused by the virus SARS-CoV-2). A little more than a year after it was first recognized in Wuhan, China, we have the first vaccines being distributed; a scientific feat brought to you by the study of evolution. *Yes, evolution*. If you learned anything during this pandemic, I hope it is a healthy dose of the 'forbidden science' (no one calls it that). Evolution is a topic that all the curators and students at the LSU Museum of Natural Science study in one way or another.

'Herd immunity', 'mRNA vaccines', 'mutations', 'phylogeny', what a great resource for our evolution lectures! Evolutionary biologists will no longer be relegated to being the bantering wit at cocktail parties (remember those) yapping about birds being dinosaurs, or how extinct Neanderthals live on in our DNA; no, now is a time for us evolutionary biologists to roll up our sleeves and explain to others what the people actually saving humanity are doing. Sure, we weren't those fabulous front-line workers actually risking their lives for the greater good, or the microbiologists, immuno-engineers, and Faucis heroically working to find an end to the scourge. Instead, we evolutionary biologists worked mostly behind the scenes, but you could say we've seen this play before and could help set the stage. Evolutionary biologists include those figuring out what this disease is and where it came from in the first place. We are used to thinking in geological time, so forgive our stumbling acceleration from our typical glacial pace; all this "evolution-in-action" data that came pouring out during this pandemic was hellishly exciting and horrifying at the same time.

Starting in late February and March 2020 many of us were drooling over the data coming off the science website NextStrain (https://nextstrain.org/) which proudly exclaims on its homepage to show 'real time tracking of pathogen evolution[1] (and it doesn't disappoint). On that site you can actually play (and replay, over and over) a day-by-day phylogeny (an evolutionary diagram depicting relatedness) and a corresponding world map showing the spread and growth of SARS-CoV-2 as it moved and mutated into new forms. Recently we learned of new even more virulent variants of SARS-CoV-2 first appearing in the United Kingdom, Brazil and South Africa[2,3]. These 'variants' (they aren't different enough to be considered different 'strains') are a result of mutations; mutations are errors in the copying of the genetic code of the virus as it is replicated, and are the raw material of evolution. Coronaviruses, like SARS-CoV-2, use the host cells to replicate and copying errors arise from this process.[4] They are called "coronaviruses" because they look spiky, like an evil monarch's crown ("corona" means "crown" in Latin); fun fact: several viruses that cause the 'common cold' are coronaviruses. The virus uses the crown to latch on to host cells; the vaccines being produced help your immune system recognize the proteins that make the spiky crown (via a messenger(m)RNA, hence 'mRNA vaccines'), thus priming you to fight off the real virus if you encounter it.[5] As the virus mutates into new variants it becomes harder for your immune system to recognize the disease compared to what the vaccine originally primed it to fight. That is why there is evidence that some of the available vaccines may not be so effective against the new variants.[6] That genetic variation caused by mutations is also why you need a different flu shot every year; the flu is evolving and changing so a different vaccine is needed each year to keep up.

Expect getting updated shots every few years or so for COVID too (especially if it evolves into new strains and not just new variants).

The more people that get the virus the more opportunities it has to reproduce and mutate resulting in new variants and new complications for scientists trying to stop it (which is why avoiding other people is so important right now)[7]. Eventually, if enough people do receive protection from the vaccines we will achieve 'herd immunity'. For the anti-vax crowd, herd immunity is when everyone gets the disease and those that survive will be part of a new immune population. While that is very Darwinian of them, survival of the fittest shouldn't be used to "trim the herd" of our most vulnerable e.g., the elderly, the immunocompromised, and those exposed to the virus like front-line workers and fast-food employees and others forced to work. Natural selection is brutal, 'applying' natural selection to humans is really just eugenics (since you would really just be sparing the privileged who can afford to avoid the virus). It isn't 'survival of the richest' you know.

In the 'age of COVID' we also learned about human variation; not all populations are impacted by the virus in the same way, revealing the biased nature of our healthcare system.[8] Worse still is that the vaccine may not be as effective on Black and Asian populations due to our different histories and genetic makeup.[9,10] We also see big geographic discrepancies in where COVID genetic samples come from,[11] which will also hurt our chances for finding new variants before they spread around the globe.

When the virus first emerged researchers didn't know what it was until it was included in an evolutionary tree and found to be a SARS (Severe Acute Respiratory Syndrome) coronavirus[12], then with further evolutionary detective work we learned it originated from pangolins or bats[13,14], and definitely was not man-made in a lab as some conspiracy theorist and past-presidents suggested.[15] Learning the origin of this disease helped demonstrate another reason why natural history collections (like those at the Museum of Natural Science) should be supported so they can help identify and detect these disease vectors as they emerge[16] (natural history and taxonomy being an important part of the study of evolution). New zoonoses (diseases coming from wild animal populations) can be better tracked if we have a good understanding of what organisms exist out there and what disease they carry (and how they live with those diseases, i.e., after they get herd immunity the hard way) and how those organisms and diseases relate to each other in the evolutionary Tree of Life.[17,18]

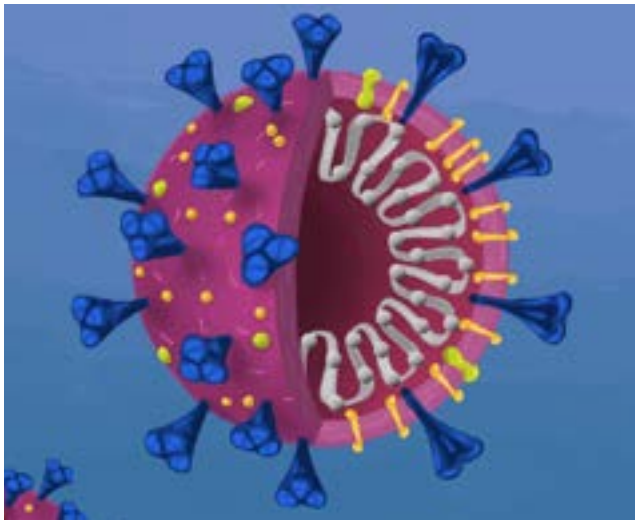
So as we watch the virus evolve, and the vaccines do their work, let's keep in mind the evolutionary biology that went into the study of both. And after we've thanked the real heroes of this pandemic, remember to keep learning a little bit of that evolutionary biology that can teach us the nature of these pandemics in the past, present and future. And who knows, it might be a Museum scientist that helps track down the source of the next pandemic from the collections at the LSU Museum of Natural Science.[16]

Stay safe and wear a mask or two, your friendly neighborhood evolutionary biologist,

Prosanta Chakrabarty (Professor/Curator of Fishes, LSUMNS, currently on sabbatical in Canada)

Thanks to Dr. Vicky Forster for help and discussion on this topic.

Below F1: opensource illiustration of a coronavirus



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Old specimen contributes to a new discovery

by Jacob Esselstyn PhD

Natural history museums take a long view of biodiversity science. Among our collections of recent vertebrates, the earliest specimens were collected in 1866. The researchers and naturalists that preserved those specimens had no idea that scientists would someday be isolating stable isotopes, sequencing DNA, or modeling geographic range evolution using their specimens. Most of the organisms that museum staff and students now preserve are collected to meet current research needs, but we also grow and maintain collections with an eye to the future uses we cannot fully anticipate. A great example of this is now apparent with the recent discovery of a new species of baleen whale endemic to the Gulf of Mexico.

In June of 1954, Edouard Morgan found a whale stranded on Chandeleur Island and brought its skull to the MNS. It was cataloged and added to our collection, but its identity was uncertain and remained so for decades. In his 1974 book *The Mammals of Louisiana and its Adjacent Waters*, George Lowery noted that experts in whale taxonomy were unable to reach a consensus on the identity of this particular animal. F. A. Fraser of the British Museum indicated it was a specimen of a Bryde's Whale (*Balaenoptera edeni*), but other experts expressed uncertainty.

Back in 2014, Patricia Rosel and Lynsey Wilcox of the National Marine Fisheries Service documented a distinctive genetic population of *Balaenoptera* in the northern Gulf of Mexico. After their initial paper was published, they continued to investigate this distinctive population of Bryde's-like whales. Having read Lowery's account of the LSU specimen from Chandeleur, they came to examine it. They took measurements and photographs to compare against other specimens and collected some very small bone fragments to be used in genetic analyses. Their results would later show that this specimen is a member of that distinctive northern Gulf of Mexico population first reported in 2014, and they concluded that the morphological and genetic evidence was sufficient to recognize this population as a new species, which they named Rice's Whale (*Balaenoptera ricei*). It's not every day that a new species of whale is discovered, so this was an exciting find. Moreover, Rice's Whale appears to have a very restricted geographic distribution in the Gulf of Mexico, which is unusual for such a large, mobile animal.

I have no doubt it was a major hassle for Edouard Morgan to transport that specimen from Chandeleur to Baton Rouge. Whale carcasses are notoriously

Below F1: A Bryde's-like whale in the Gulf of Mexico, courtesy of NOAA SEFSC taken under MMPA Permit No 779-1633.

Above: A Bryde's in the Gulf of Mexico, courtesy of NOAA.

stinky and moving a whale's head requires heavy equipment or remarkable ingenuity. I am sure Mr. Morgan would be thrilled to know this specimen played a critical role in researchers' ability to document a species of whale that seems to be endemic to the Gulf of Mexico.

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Genetic Resources Collection's liquid nitrogen system grows and moves to its new location

by Donna Dittmann

Following delays due to the State-mandated Covid-19 pandemic shutdown, and later implementation of LSU Covid-19 policy, and toss on Hurricane Laura, it wasn't until September 2020 that the LSUMNS Genetic Resources Liquid Nitrogen (LN) expansion project was back on track. On September 22nd, contractors cored through Foster Hall's thick concrete wall (Fig. 1) to allow for a liquid nitrogen supply line to enter the building to connect the 5500 L supply tank already in place to 9 LN freezers inside. Interior LN piping was constructed to supply the LN freezers (Fig. 2); the piping system included shut-off valves for each pair of LN freezers and, importantly, an emergency LN shut-off to stop LN from entering the building from the supply tank in case of an emergency. In anticipation of moving the LN freezers to their new room, the exterior supply tank received its first fill of LN on September 23rd.(Fig. 3). Everything needed to be in place so that the existing LN freezers could be disconnected from their current LN supply and immediately attached to the new supply from the exterior tank. In addition to our six existing freezers, three new Abeyance LN archive tanks were received on October 1st. With the assistance of Scientific Resources Southwest and Abeyance Cryosolutions personnel (Fig. 4), all nine tanks were moved to the new LN room and attached to the interior piping. The new Abeyance freezers were not only state of the art, but rather attractive as well. Once all freezers were in place,

Above F1&2: Foster Hall has a very thick concrete wall. Impressive 5" dia. core samples were the result when the building was drilled to add the LN piping.

Below F3: LN piping wraps around the freezer room to supply up to ten LN freezers. Photo shows piping work in progress along the wall where it enters the building.

Left F4: Praxair's Marvin does the first fill of the exterior supply tank from the cryoshuttle.

the main valve was opened, and LN flowed from the supply tank into the building. First to fill were the three new Abeyance freezers (Fig. 4). During this process, however, a few issues emerged with the LN supply tank delivery system. The incoming pressure to the building was too high and tripped a relief valve on one of the Abeyance freezers; that valve had to be replaced. Also, the emergency shut-off system wasn't working properly. So, once the freezers were topped off, LN had to be shut off to the building as a safety precaution. Hurricane Delta slowed resolution, but *most* problems appeared to be resolved by October 14th with the addition of a new low-pressure gauge added to the supply tank and a solenoid and safety coil replaced on the emergency shut-off system. With the big red emergency shut-off button now in proper working condition (Fig. 6) and a diffuser installed to dispense LN to travel dewars, everything seemed to be working. However, during a supply tank fill on October 15th pressure was still too high and tripped one of the older freezer's relief valve and that valve needed to be replaced. We had yet another delay, the Toxgard II oxygen sensor, which was installed when the room was created to monitor oxygen loss given an LN overflow, needed a new sensor. At this time the Toxgard was the only oxygen sensor in the room, and it was critical for LN safety to be in working order. And then, yet another hurricane! Zeta fortunately came ashore to the east and on the "good side" of Baton Rouge. With the oxygen sensor again in working order, the new LN room was fully functional. The last item to finish the LN project was a new alarm system, which was ordered to replace our aging Rees system. The Rees system had monitored the ever-growing Genetic Resources collection in various iterations since the mid-80s and served the collection well – notifying us of many incidents (freezers breaking down, electrical outages, oxygen losses, flooding) through the years – but it had become unreliable. We switched to an Elpro system and that now monitors all of the our older freezers as well as the three new LN freezers. Like its predecessor, it monitors for water on the floor to alert us of a potential flood event (which has occurred several times in the museum's past) and it monitors ambient temperature to make sure the building AC is working properly because when the AC is off then the electrical ultracold freezers generate considerable heat, which causes them to run more and generate more heat. The new alarm system has already been tested. During the Christmas holiday, the *Elpro* system notified us of a problem originating with one of the new LN freezers. This freezer's relief valve failed (probably due to a high-pressure incident following a supply tank fill). The entire LN freezer was replaced by the manufacturer on January 12th, just in case there may have been other damage caused by LN during the failure of the relief valve. And last but not least, an escape door (Fig. 7) added to the LN room on January 25th was the finale to the project. Yay! It's been a long time planning the expansion, raising funds for new LN freezers and the Elpro alarm system, renovating

Left F5: Each tank was carefully moved to its new location in LN room. The floor was protected with plywood.

Above F6: The new fancy Abeyance freezers. A lot of vapor was generated during the fill of these 'warm' units.

Left F7: Escape door from the inside and outside of the building – just in case there's a second exit.

new space, obtaining the huge outdoor supply tank (with fencing and bollards), and finally moving our LN system to a designated room with a more cost-efficient large outdoor LN supply. In the end, this improved safety, not only of the collection but also people, and it increased our tissue storage capacity substantially. In addition to the three new LN freezers, we are now using new slim and light weight 5-box racks (Fig. 8), with a maximum capacity of 100 1.5mL vials per box. Now, *each freezer* can hold up to 44,000 tissue samples! One new LN freezer will expand the storage capacity of the mammal collection, the other two will house bird tissues. An exterior LN supply and two oxygen sensors to monitor the LN room greatly improves LN safety for LSUMNS personnel. The new alarm system provides security for the entire GR collection.

Support for this project was supplied by an NSF grant and a grant from the Louisiana Board of Regents to LSUMNS Curators Robb Brumfield, Fred Sheldon, and Jake Esselstyn, as well as an NSF grant to Chris Austin and Prosanta Chakrabarty to renovate the Fish and Herp collections. During the entire process, we received huge support and help from LSU administrators and Facilities Services.

Above F8 & 9: Escape door from the inside and outside of the building – just in case there's a second exit.

Below F10&11: Mark Swanson transfers a rack of mammal tissues. The new slim and lightweight racks as they are added to the new LN freezer.

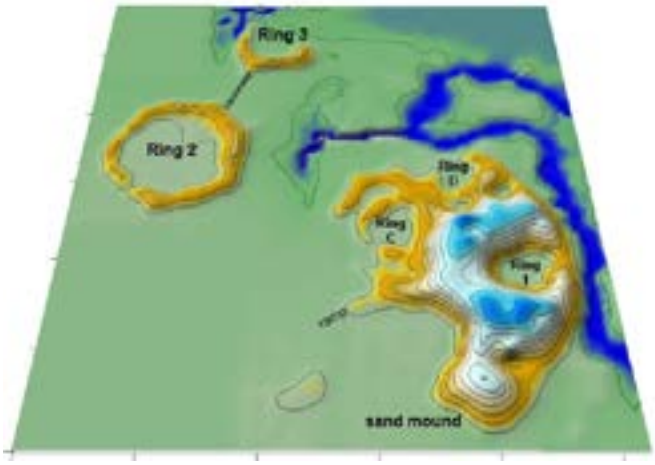
The Ring People
by Rebecca Saunders

Between 2017 and 2019, Dr. Rebecca Saunders participated in the filming of "*The Ring People*," a documentary video produced by Koelker and Associates, LLC. *The Ring People,* was first broadcast (on two different livestream South Carolina educational stations) in December, 2019. It got wider circulation in 2020. *The Ring People* was an "Official Selection" for the Archaeology Channel International Film Festival in May 2020; it was another "Official Selection" for the October 2020, Arkhaios Film Festival, where it won the award for the best South Carolina Heritage Film as well as the Founders Award for Public Archaeology. The video is available at: https://vimeo.com/353379476.

Above F1: The Fig Island site, in Charleston County, South Carolina. The Fig Island site has three rings, Fig Island 1 (middle left), Fig Island 2 (the hexagonal ring), and Fig Island 3, the U-shaped ring. There is a (now submerged) shell walkway between Fig Island 2 and 3. Saunders and her colleague from the National Park Service, Michael Russo, investigated the site in 2001. Fig Island itself is the large island in the upper right. There is no evidence of Archaic period occupation there. Figure is a still from the video; courtesy of Jamie Koelker.

The documentary describes current research into Late Archaic Period (ca. 3000 – 500 BCE) "shell rings" that dot the lower Atlantic coastline from South Carolina to central Florida. These "rings" (see the footprint maps below for configurations and diameters) were built from ca. 2600 – 1300 BCE, and ranged in height from ca. 50 cm at Sea Pines to the massive walls of Fig Island 1 (image above), which attained a height of over 6 meters. The ring walls were constructed primarily of oyster shell, and the walls contained other common food remains and artifacts like pottery, along with tools made of bone and shell. This led many researches to believe either that the rings were simply middens (garbage piles) that reflected the discard of kitchen garbage behind circular villages or were special purpose camps where shellfish and other foods were processed for consumption elsewhere.

However, this was before a concerted effort on the part of researchers interviewed in the film (along with many others) produced detailed topographic maps and analyses of the artifacts and 'ecofacts' found in the rings. In particular, radiocarbon dates, shell growth rings, and isotopic evidence from fish otoliths (ear stones) indicate there were periods of rapid deposition of shell, which occurred at specific times of the year. While the function of the rings is still a matter of debate—and there likely were changes in use over time and over space—it is now clear that many rings served as locations for large gatherings of people, probably on a seasonal basis, for ceremony and feasting. Rather than resulting from casual discard, rings were purposefully built from the remains of feasting to memorialize the success of the societies that constructed them.



Above F2: Fig Island topographic map based on depth of shell.

Above F3: Footprints of selected rings along the lower Atlantic coast; all are to the same scale. Note the disparity in size between the Georgia and South Carolina rings and rings in Florida.

Invertebrate Paleontology News

by Lorene Smith

Visiting researcher Ray Perreault has published in the journal *Zootaxa* the description of a new species of barnacle that he found among the slides and samples of the museum's Section of Fossil Protists and Invertebrates. While examining material that Henry Howe had collected in 1941 from the Eocene of Alabama, Ray discovered the plates of the fossil barnacle which he named *Verruca alabamensis* Perreault & Buckeridge. The holotype and paratypes of the species are now part of the museum's Invertebrate Type Collection.

According to Perreault and Buckeridge (2019), *Verruca alabamensis* is an uncommon deeper-water member of the cirripede family Verrucidae, and it lived during the Priabonian stage of the Eocene (between 37.8 and 33.9 million years ago). Samples with this species also contained an abundance of brachiopods, branching bryozoans, and crinoids, as well as internal molds of mollusks and solitary corals formed from phosphate deposition.

A retired former geologist, Ray has been lending his taxonomic expertise to the invertebrate paleontology collection while conducting his own research on cirripede diversity.

Below F1: Cirripede expert Ray Perreault uses the locality sample collections at LSU to study the fossil barnacles of the Gulf Coastal Plain. Photo by Lorene Smith.

Reference

Perreault, R. T., & Buckeridge, J. S. (2019). Paleogene Verrucidae (Cirripedia: Verrucomorpha) of North America, with descriptions of three new species. Zootaxa, 4712(1), 34–50. doi: 10.11646/zootaxa.4712.1.2

Above F2: Exterior of a movable tergum (paratype LSUMG-I-10728); scale bar = 1 mm. Photomicrograph by Ray Perreault.

Below F3: Plates of the fossil barnacle *Verruca alabamensis* Perreault & Buckeridge, topotype specimens. 1, movable tergum (interior); 2, fixed scutum; 3, carina; 4, fixed tergum; 5, rostrum. Photomicrograph by Lorene Smith.

Vertebrate Paleontology News

by Lorene Smith and Suyin Ting

In December, the Vertebrate Paleontology section had two distinguished visitors, Jun Ebersole, Director of Collections at the McWane Science Center in Birmingham, and Dave Cicimurri, Curator of Natural History at the South Carolina State Museum. The two, in collaboration with Gary Stringer, Professor Emeritus of Geology at ULM, are preparing a chapter on Louisiana fossil fishes, part of the book project *Vertebrate Fossils of Louisiana*, organized by the late Curator of Vertebrate Paleontology Judith Schiebout and VP Collections Manager Suyin Ting.

With extensive knowledge of the fossil remains of sharks, rays, skates, and bony fishes, Dave and Jun had a very productive day, photographing and identifying specimens in LSU's collection. Their visit was very welcome since many of the collection's fossil fish specimens have never been studied until now.

Below F1: 38 million years old shark teeth from Bossier Parish, Louisiana. Photo by Jun Ebersole.

Below F2: Dave Cicimurri of the South Carolina State Museum and Jun Ebersole of the McWane Science Center visited the Vertebrate Paleontology Collection housed in LSU's Howe-Russell-Kniffen Geoscience Complex. Photo by Lorene Smith.

OUTREACH ROUNDUP

Above F1 & 2: Owner and head instructor of Baton Rouge Yoga Company, Elena Keegan, leads local Baton Rouge kids through Cat Pose the Museum of Natural Science's pilot Yoga Program.

Intro to Animal Science Through Yoga

We are ramping up our successful pilot Animal Yoga project. This is a program specifically geared towards a younger audience with the program combining movement, meditation, and science. We are hoping to turn this into a full-length program! This will include a "yoga library" where schools can rent yoga equipment at no cost to the schools and will be accompanied by instructional videos and flashcards. The flashcards will be available in both Spanish and French.

Above F3 & 4: Owner and head instructor of Baton Rouge Yoga Company, Elena Keegan, leads local Baton Rouge kids through Tree Pose.

Virtual Outreach

Virtual Tours are still available for schools and home school groups. If you are interested in taking a behind-the-scenes look at the LSUMNS, please contact our Outreach Coordinator Emma Reynolds at ereynolds1@lsu.edu.

6Th Grade Day

6th Grade Day was held virtually this year. The museum participated by creating a video that gave the kids a behind-the-scenes look at our collection.

Outreach Updates

Girls Day at the Museum

This fun-filled program will be virtual this year! We will be taking advantage of being virtual, by collaborating with the Natural History Museum of Los Angeles County and the Florida Museum to take the girls behind the scenes. Every girl participating will receive a goodie bag that will include a College of Science swag bag and fun at-home experiments and activities. The girls will also have an opportunity to talk with an LSU scientist!

Special Saturday and Night at the Museum

While these popular programs are still on temporary hold, we are hopeful these programs will be back up and running once we are able to move past the constraints of the pandemic.

Below F1 & 2: some of the girls who participated in our 2019 and 2020 Girls Day at the Museum!

MNS NEWS

Grants and Awards

Sophie Warny, PhD

Curator of Palynology Sophie Warny and scientists from universities in the UK, US, and Argentina are joining forces in a $1M research project to discover what impact an increase in global temperatures could have on the millions of species of fungi around the world.

Jeremy Brown, PhD

LSU Museum of Natural Science Faculty Associate Jeremy M. Brown and collaborator Robert C. Thomson at the University of Hawaii were awarded a $215,000 grant from the National Science Foundation. This award supports research to understand how evolutionary processes vary across the tree of life and how this variation influences the outcomes of phylogenomic studies.

Anna Hiller

As a PhD candidate researching Ornithology in the Brant C. Faircloth Lab and Brumfield Lab, Anna Hiller received an award from the Lewis & Clark Fund for Exploration and Field Research to support a Bolivia expedition for her dissertation.

Tenure-Track Faculty Position

Janet Buckner, PhD,

Current post-doctoral researcher Janet Buckner working in Ornithology and Mammalogy, has accepted a tenure-track faculty position and will be joining the Department of Biology at the University of Texas Arlington in Spring 2022. Her lab will primarily focus on macroevolution of living and extinct tetrapods, with an emphasis on adaptive genetics, trait evolution, and biogeography in waterfowl and Central and South American primates.

MNS NEWS

Fellowships

Oscar Johnson

PhD candidate Oscar Johnson, studying Ornithology in the Brumfield Lab, received the LSU Dissertation Year Fellowship in 2020.

Carl Hutter, PhD

Carl Hutter received the NSF Postdoctoral Fellowship in Biology, where he will be advised by Chris Austin in Herpetology. Carl will continue his dissertation work of understanding how acoustic communication evolves across frog communities on a global scale using phylogenomic, acoustic recording, and CT scan data.

Genevieve Mount, PhD

Genevieve Mount who was advised by Jeremy Brown, and Chris Austin, will be starting a Natural Science Foundation Postdoctoral Fellowship in the lab of Molly Womack at Utah State University and collaborating with Rebecca Tarvin at University of California, Berkeley.

Jonathan Nations

Jonathan Nations, a PhD student in mammalogy advised by Jacob Esselstyn defended his dissertation in Dec. 2020. This March he began a NSF Postdoctoral Fellowship. He is hosted by Graham Slater at the University of Chicago, Larry Heaney at the Field Museum of Natural History and Noé de la Sancha as well as Molly McDonough at Chicago State University.

Welcome New Staff

David Boyd

The LSU Museum of Natural Science would like to welcome David Boyd to our staff! David is our new Collections Manager for Herpetology & Ichthyology. When asked about his work David responded, “I’m interested in the organization and digitization of biological specimen collections and my research background is in freshwater fish taxonomy and systematics in Southeast Asia.”

2020 LSUMNS PUBLICATIONS

Anthropology

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Email your material to ereynolds1@lsu.edu

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