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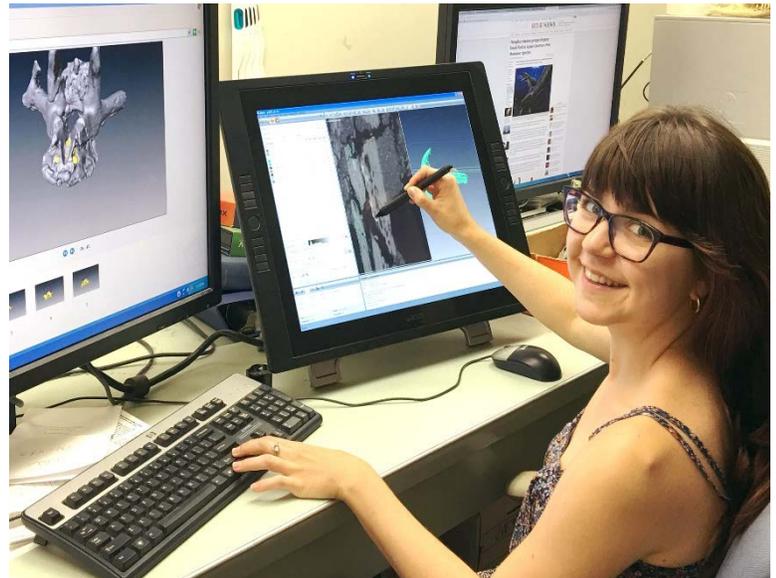
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PROJECTO PALEOANGOLA EXHIBIT MOVES FORWARD AT SMITHSONIAN AND SMU

Planning has begun for an exhibit inspired by SMU and ISEM-based **Projecto PaleoAngola**, to open at the Smithsonian Institution in November 2018. This exhibit will focus on the geological formation of the South Atlantic Ocean, which resulted in the puzzle-like fit of Africa and South America, on the northward drift of Africa through geologic time, which modified environments and led to the evolution of humans, and on the fossils from Angola in southwest Africa recovered by the SMU and Projecto PaleoAngola team, which tell that story. SMU third year geology major and Gaffney Family Scholar **Myria Perez** has been approved as an undergraduate intern by Smithsonian Project Director **Jill Johnson**. Myria is pursuing a career in paleontology and museum studies. She began volunteering at the Houston Museum of Science when she was twelve.



“This internship will allow me to use my knowledge of geology and paleontology learned at SMU,” Myria says.

For the past two years Myria has worked in the lab on Projecto PaleoAngola fossils, preparing bones out of their enclosing rock and digitally imaging the braincases of mosasaurs (large marine lizards that went extinct with the dinosaurs). But Myria is not the only student involved in this work. Dozens of students have worked on the project since 2006.

The Smithsonian Institution’s **National Museum of Natural History**, on the National Mall in Washington DC, is the most visited natural history museum in the world, receiving seven million visitors per year.

“It’s the culmination of my life’s passion in science and museums thus far,” says Myria, “a culmination that will be shared with millions of people.”



No whales, but gigantic marine lizards, the evolving ocean was much different from today. (By Karen Carr)

Benefiting the community by promoting and supporting interdisciplinary research at the interface of people, Earth, and the environment.

ISEM NEWS provides a summary of the latest research projects, current events, and contributions to science. The generous support of our donors makes possible programs for students and faculty. Thank you for your continued interest in ISEM.

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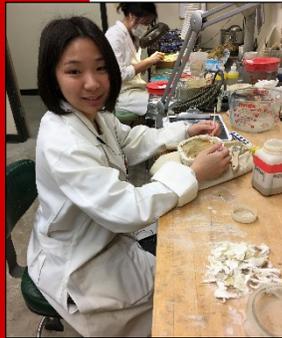


DOWNEY FAMILY AWARD for Faculty Excellence

The Downey Family Award for Faculty Excellence was established by Marea and former ISEM Trustee Marlan Downey to facilitate faculty advancement in Earth Sciences and Archaeology. This year's \$5000 award

recipient is **Dr. K. Ann Horsburgh**, Assistant Professor in SMU's Department of Anthropology, a graduate of Stanford, and an Honorary Research Fellow in the School of Geography, Archaeology and Environmental Studies at the University of the Witwatersrand, South Africa. Ann is a molecular anthropologist who focuses on the interaction between genetics, culture, and history. She uses both modern and ancient DNA from humans and animals to study patterns of genetic variation necessary for understanding domestication of animals.

As Ann is establishing an ancient DNA laboratory at SMU, she is also working with Earth Sciences Adjunct Professor **Dr. Anthony Fiorillo** of the Perot Museum of Nature and Science to establish protocols for sampling the museum's modern mammal collection for DNA analysis. She will engage SMU students as Wendorf Student Scholars. Funding for Wendorf Scholars derives from the Combined Prehistoric Expeditions Foundation (CPEF), which was founded by Professor **Fred Wendorf**, who also founded the Department of Anthropology at SMU and was a member of the US National Academy of Sciences.



Sharon Yang



Ryan Lozano



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Roe Higgins

SMU Alumna Directs Culture of Her Country

Dr. Elizabeth Gomani Chindebvu (MS '93, PhD '99) is now the Director of Culture for the Republic of Malawi in southeastern Africa. As a graduate student, Elizabeth studied the fossil crocodiles and dinosaurs from the northern portion of her country. Her focus was a detailed analysis of the iconic dinosaur *Malawisaurus*, a model of which can be seen in the foyer of the Perot Museum of Nature and Science, along with a picture of Elizabeth in the field collecting the original specimen. While the original is in Lilongwe, the capital of Malawi, there is another model in the northern city of Karonga near where *Malawisaurus* was excavated. The museum's motto, *Dinosaurs to Democracy*, is the story of the land and its people. There is also Dinosaur Radio 91.0 FM, "The People's Voice." Elizabeth, as Director of Culture, is not only in charge of antiquities and museums, but also the Masterpieces of the Oral and Intangible Heritage of Humanity as recognized by the United Nations Educational, Scientific and Cultural Organization (UNESCO).



Dr. Chindebvu (right) before the dinosaur she studied at the Karonga Museum and Karen Carr's rendering (left) of other extinct animals Elizabeth named from Malawi.



After a full day of high-level discussions at the **ISEM-Game Creek Ranch Energy Roundtable**, organized by ISEM Trustees **Herbert Hunt**, **Peter Gaffney**, and **Mike Forrest**, and former trustee **Marlan Downey**, graduate student representative **Madeline Jones** (right) takes to the saddle for relaxation and fun. Madie is defending her thesis, “*What Caused the 1959 Hebgen Lake Seiche?: An Investigation Incorporating 1959 Tide Gauge Data, Newly Acquired Chirp Seismic Data and Numerical Wave Modeling*,” this semester. Her fieldwork was funded by the ISEM-Game Creek Ranch Energy Roundtable in honor of **Steve Inbusch**.



Anthropology Club Día de los Muertos Celebration

The SMU Anthropology Club hosts an annual Dia De Los Muertos celebration each October to remember those special friends and family who have gone on by enjoying food, music, and camaraderie. ISEM is proud to have joined their tradition by providing tamales year after year, a small but well-meant gesture.



Anthropology Professor **Sunday Eiselt** directed graduate student Rachel Burger and three undergraduate Marr Scholars (below) in 3D scanning ceramic vessels in cooperation with the Caddo Nation of Oklahoma.



Christine Nestleroth, Samantha Schwartz, Lauren King

ISEM has employed 117 undergraduates of various majors since 2006! Above and right: Ray Marr Scholars; Left: Shuler Museum Hamilton Lab Assistants



Harrison Schumann, Evan Snyder

In my opinion, the most creative research at a university is done by the most energetic investigators, by which I mean students. Those are who we can support best.

Louis L. Jacobs, President



Collin Wilkie, Monique Scales, Elizabeth Layton

Ray Marr Supports Scholars and Society

ISEM Trustee **Ray Marr** with the Society of Vertebrate Paleontology logo, vertebrae of a Texas fossil collected in the 19th Century by Jacob Boll, for whom Boll Street in Dallas was named. Ray’s Shade Tree Studios produced a video about the logo for the 75th Annual Meeting of the Society held in Dallas. He is holding a volume presented to him by the Society, which contains lithographs of the original fossils collected by Boll. The video can be seen at <http://vertpaleo.org/the-Society/About-the-SVP-logo.aspx>. It contains cameo appearances by SMU undergraduate **Myria Perez** and Jacob Boll descendant **Laura Hornbach**. Below is a rendering of the animal in the logo by **Karen Carr**.



Undergraduate **Alexandre Santos** from Angola, shown with Professor **Matt Hornbach**, is a Gibbs Scholar and a geophysics major with research interests in numerical modeling and geothermal reservoir characterization.



KAREN CARR BRINGS THE PAST TO LIFE



New Mexico artist **Karen Carr** is an important part of the team producing the Smithsonian PaleoAngola exhibit about life along the opening Atlantic. As a student she received a prestigious Ford Foundation scholarship in recognition of her illustration and life-drawing skills. One of her first major accomplishments in wildlife and natural history art was a series of paintings, now at the Fort Worth Museum of Science and History, for the book *Lone Star Dinosaurs* by **Louis Jacobs** and a traveling exhibit based upon it.

Since then, Karen's work has been displayed at the Smithsonian Institution, the Perot Museum of Nature and Science, the Audubon Institute, the Field Museum, the Royal Tyrrell Museum of Paleontology, and in publications including *Science*, *Nature*, and *Scientific American*. She has authored or illustrated more than a half-dozen recent books for young readers published by HarperCollins, Random House, Barnes & Noble, and Scholastic Press.

Importantly, Karen has made the research of SMU students and faculty accessible to a much broader audience by providing illustrations that bring their work to life for the public. Some of these illustrations are shown here.

visit www.karencarr.com



A 94 million-year-old flying reptile from DFW named by Scott Myers, now Research Assistant Professor at SMU.



Early duck-billed dinosaur from DFW, its skull on display at the Perot. Named by Jason Head, now Lecturer and Curator at Cambridge University, England.



A Mongolian dinosaur from the Gobi Desert, studied by Yuong-Nam Lee, now a professor at Seoul National University, Korea.



Armored dinosaur, on display at the Fort Worth Museum of Science and History. A new species is now being studied by SMU graduate student Matthew Clemens.



Glen Rose dinosaurs, from the traveling exhibit *Lone Star Dinosaurs* that appeared in the capitol rotunda in Austin. Footprints of these dinosaurs were studied by Thomas Adams, now curator at the Witte Museum, San Antonio.



95 million-year-old snake-with-legs from the Israel, studied by Mike Polcyn, ISEM Senior Fellow.

visit blog.smu.edu/research/tag/louis-l-jacobs

Artwork by Karen Carr, @ Karen Carr Studio, Inc.