

T Tracks



Sam Noble Museum

Fall 2016 Newsletter Vol. 28, No. 3



IN THIS ISSUE

"Mystery of the Mayan Medallion"

"When the Earth Shakes"

Meet Matthew Miller

Women in Science

Undergraduate Research

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TRACKS, FALL 2016

VOLUME 28, NO. 3

MUSEUM INFORMATION

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OUR MISSION

The Sam Noble Museum at the University of Oklahoma inspires minds to understand the world through collection-based research, interpretation and education.

OUR VISION

As one of the finest museums, we are at the heart of our community, collectively working to inspire understanding, appreciation and stewardship of the earth and its peoples.

TRACKS

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Contents



FEATURES AND DEPARTMENTS

4 FROM THE DIRECTOR

6 EXHIBITIONS

"Mystery of the Mayan Medallion"

8 EXHIBITIONS

"When the Earth Shakes"

9 NEWS

Meet Matthew Miller

11 COLLECTIONS

Aquilops in Japan

14 COLLECTIONS

Women in Science

16 COLLECTIONS

Museum-led Course Turns Class Into
Published Authors

ON THE FRONT COVER:

"Mystery of the Mayan Medallion" is an interactive mystery exhibit for all ages.

ON THE BACK COVER:

Visitors explore the "Roots of Wisdom" exhibit, coming to the Sam Noble Museum in January 2017. Photo courtesy of the Oregon Museum of Science and Industry.

Thanks to our 2016 Corporate Sponsors and partners: Love's Travel Stops and Country Stores, Arvest Bank, Republic Bank & Trust, 2 Green Chicks, Visit Norman, BancFirst, Sam's Club of Norman, Sonic, America's Drive-In, the *Oklahoma Gazette* and the Adventure Road.



From the Director



In fall 2011 I wrote about us entering a new era. We had said farewell to five longtime staff – Don Wyckoff, Ph.D.; Laurie Vitt, Ph.D.; Janalee Caldwell, Ph.D.; Gary Schnell, Ph.D.; and associate director Peter Tirrell. Each contributed to the museum’s development and played an important role in research, collections, exhibits and educational programs.

As this year ends, I can say that we are well into another era – exciting and challenging at the same time. Marc Levine, Ph.D., and Cameron Siler, Ph.D., came on board in archaeology and herpetology, respectively, and now, Matthew Miller, Ph.D., in ornithology, joined the staff in June. We are hopeful that new curators in mammalogy and Native American languages will be on staff by fall 2017.

I wondered about our economy in letters to you over the years. In 2008, I questioned whether the economic downturn that was being seen around the country would reach Oklahoma. Given what we have experienced in our energy industry this year, I would say it has hit our state hard. The tough economic year has had an impact on education, higher education and, therefore, the museum.

In May, as we were working on budgets for this fiscal year, I was notified that the museum’s budget cut was projected to be 19 percent. That projected cut would have been devastating for the museum. It would have resulted in almost a one-third reduction in staff and operations. It would have been by far the largest reduction I have seen in my 35 years at OU.

Working with OU’s Leadership, which recognized and appreciated the museum’s national and international accomplishments and successes, we were able to reduce the cut from 19 percent to 11 percent. Although this meant adjustments in maintenance and operations, we didn’t lose additional staff. In 2008, we had 91 full-time staff members; in 2015, we had 74. Next fiscal year, due to retirements, we may have about 65 staff members.

Museums are both academic institutions and service organizations, but unlike academic departments, which may get larger or smaller with enrollment changes, when museum staff is cut, that cut can extend for decades. Despite our reduced staff, we will continue to maintain excellence in our programs and operations.

Excellence is the standard we have set for decades. When we began the long journey to a new building, a larger staff, expanded collections, outstanding exhibits, education and outreach programs, and cutting-edge research, excellence is what we sought.

And, it is what we will continue to do.

Thank you for your support. The patronage from our Board of Visitors, donors, sponsors and members – past and present – has been instrumental to sustaining the museum in so many ways, from collections and research to operations, exhibits and educational programs. We have been through tough times before. Together with the new curators and all the staff I look forward to leading the museum into the new year.



The museum on a sunny fall day.

Next year will mark the museum's 30th anniversary as the state's natural history museum. The Sam Noble Oklahoma Museum of Natural History will endure. It will continue to protect the state's heritage, educate students to be tomorrow's researchers, display Oklahoma's unique story to visitors from around the world, serve Oklahoma's students by making them more aware of the state's natural world and its history, and serve the people of Oklahoma with opportunities for lifelong learning, entertainment and quality family time.

This year, we had outstanding exhibits from "First Folio! The Book That Gave Us Shakespeare" to "Mystery of the Mayan Medallion." We have continued to host special events that were fun, exciting and educational, such as Eggstravaganza, Science In Action and Spike's Spooktacular Fall Fest. The ExplorOlogy program is one of the finest outreach educational programs in the nation, and the Oklahoma Native American Youth Language Fair had record participation and attendance. Our curators have traveled the globe to continue their outstanding research, providing new knowledge to better understand how our world developed, how it functions and where this complex planet may be heading in the future.

We look forward with hope to the coming year and we wish you and your family a happy holiday period and a peaceful New Year.

M. Mares

Michael A. Mares, Ph.D.
Director

“Mystery of the Mayan Medallion”

Travel to Palenque, Mexico, where an archaeological team has mysteriously disappeared from a dig site while investigating rumors of a priceless jade medallion in the temporary exhibit, “Mystery of the Mayan Medallion,” on display through Jan. 16, 2017.

Visitors will follow the clues the team left behind to locate the precious medallion while avoiding the dangers lurking in the ruins.

“I hope the exhibit sparks a greater curiosity and interest about archaeology and the past for both children and adults,” said Marc Levine, assistant curator of archaeology at the Sam Noble Museum and assistant professor of anthropology at the University of Oklahoma. I also hope they learn that we need to actively preserve and protect archaeological sites and cultural heritage in general.”

Kids will love the hands-on components of this exhibit, but any museum visitor is likely to learn a great deal from it, and it may ignite in viewers a greater curiosity for archaeology and history, Levine said.

“The exhibit really gets at the ‘how we know what we know’ about the past,” said Levine, who also teaches the course “Maya, Aztec, Inca” at OU. “It shows people how we use discoveries in the archaeological record — artifacts and buildings, for example — to create knowledge about the past.”

Exhibit components include archaeology, biology and astro-mathematic field stations, an observatory and a tomb area that yield clues to the medallion’s whereabouts. In the exhibit, you can translate glyphs, discover which rainforest animals are poisonous, learn how the Maya recorded dates, take rubbings from a sarcophagus and more.

The Arkansas Discovery Network, a group of seven museums and educational centers that focuses on creating interactive museum experiences, developed the traveling exhibit in 2006.

“‘Mystery of the Mayan Medallion’ has been popular everywhere it’s been experienced, and we know museum visitors young and old alike will enjoy engaging with the many components of the exhibit,” said Kelley Bass, CEO of the Museum of Discovery, a member of the Arkansas Discovery Network. “It is a fun mix of science, history and intrigue.”

Left: Visitors can immerse themselves in an archaeology field station as part of the “Mystery of the Mayan Medallion” exhibit.

Right: Panels teaching visitors how to match glyphs with their meanings adorn a tunnel in the heart of “Mystery of the Mayan Medallion.”





Match the description to the Maize God Symbol

Long, flattened

Maize leaves

Corn silks



One of the most important Mayan Gods was the Maize God, the god of corn. The Maize God was a symbol of beauty.



Match the description to the Death God Symbol



One of the most important Mayan Gods was the Death God, the god of death. The Death God was a symbol of beauty.

“When the Earth Shakes”

Get ready for a world of earthquakes in “When the Earth Shakes,” an interactive earthquake exhibit that teaches people of all ages about the science of earthquakes, tsunamis and tectonic plates.

Visitors can be an earthquake by jumping up and down on a platform, changing how hard they jump, to match the seismogram from a historic earthquake. They also can watch how continents move and re-form as they spin the dial through geologic history, from 600 million years ago to 200 million years in the future, and see where earthquakes happen all around the world on the seismic monitor that shows them in real time.

Museum-goers will see fast-paced videos of engineers working to make our world safer as they use amazing tools and technology to test and improve building techniques and materials. In the “Puzzled Earth” display, visitors can see how quickly they can assemble a map of giant tectonic plates before the clock runs out and all the pieces fall. On the “Shake Table” platform, they can test their engineering skills by using blocks and reinforcing rods to design and build a model of an earthquake-safe building. They can even test their structure against an earthquake to see if it holds up and then redesign the building to make it even safer.

“When the Earth Shakes” is sponsored by NEES, the National Network for Earthquake Engineering Simulation, a group of 14 university research facilities where engineers and scientists have tested buildings and structures with giant shake tables, centrifuges, a tsunami wave basin and other large-scale equipment. The exhibition was developed by Sciencenter in Ithaca, New York, with funding from the National Science Foundation and NEES.

“When the Earth Shakes” is on display through Jan. 2, 2017. The exhibit is locally sponsored by Love’s Travel Stops and Country Stores.



Two children jump on a sensor to mimic the force of an earthquake in “Quake Karaoke.” Photo courtesy of Sciencenter.

Meet Matthew Miller



Matthew Miller views his path to his position at the Sam Noble Museum as an evolution, with every academic experience and adventure shaping who he is and what his career should be.

"I dreamed of being this Victorian naturalist, of going out into the jungle and collecting critters no one had ever seen before and then advocating for their conservation," the museum's newest assistant curator of ornithology said.

The Cleveland native didn't land far off. In fact, he describes his role at the Sam Noble Museum as his dream job and feels lucky every day to step through the doors of the state's natural history museum. Since

arriving at the museum in June, Miller has continued his research passion of using DNA sequences to understand how bird species develop, and also to harness DNA biology to understand the ecological context of emerging tropical diseases such as Zika, Chikungunya and Leishmaniasis.

He recalls a turning point while earning his bachelor's degree in biology at Swarthmore College in Pennsylvania. During his sophomore year, Miller decided to take a trip to Mexico to practice the Spanish language, but he ended up finding himself with an urge to learn more about the tropics and the biodiversity he could discover there.

"The biologist E. O. Wilson talks about biophilia, this notion that humans have this special love of nature," Miller said.

“Well, my biophilia was recalibrated. Instead of pointing to the American West, it was pointed south.”

The following spring, Miller sought out more biodiversity as he explored Costa Rica with his father. He eventually moved there to teach for a year and, while there, ignited a fascination with birds. Armed with child-size binoculars (a gift from his father), he made a habit of exploring the nature trail across the street from his home.

“Every afternoon I could go with my little binoculars in my backyard and, after a long day teaching middle school, do birdwatching and try to see new birds,” he said.

He went on to earn a master’s degree in ecology and evolutionary biology from the University of Arizona, and a doctorate in biological sciences from the University of Alaska Fairbanks. His doctoral time was split between Alaska and Panama.

Miller most recently worked at the Smithsonian Tropical Research Institute in Panama, where he was a Research Fellow and founder of the STRI Bird Collection, which in seven years became one of the leading research ornithological collections in Central America.

Miller, who also serves as an assistant professor of biology at the University of Oklahoma, is joined in Norman by his wife, Peggy, a field ornithologist and specimen preparator born in Lima, Peru, and their two daughters, Gaia and Sitka.

In December, Miller will travel to Bolivia, a South American country that has seen significant reduction in biodiversity, which has led to the outbreak of diseases such as Zika. He will train Bolivian scientists on field and lab techniques related to the Zika virus. A main goal, he said, is to understand the role birds and other vertebrates play in these diseases so that he can influence decision-makers to protect and restore habitats and, ultimately, reduce human suffering.

And that, he said, is a pretty exciting spot to be in for someone who’s dreamed of traveling the world, discovering new species and effecting positive change for others’ well-being.

“Not only can I be a Victorian naturalist going out and finding rare birds in the jungle, but I can also do good by trying to figure out how to combat emerging diseases,” he said. “For me this is a win-win. We can conserve biodiversity as a good, but we can also improve human health.”

Below: Birds from the Sam Noble Museum’s ornithology collection within their storage drawer.



Aquilops in Japan

Go figure one of the Sam Noble Museum's teensiest dinosaurs would be one of its biggest world travelers.

The museum's *Aquilops* skull, which is about the size of a lemon, recently returned home to Norman after a trip to the Fukui Prefectural Dinosaur Museum in the city of Katsuyama in Japan's Fukui Prefecture. Acting as a bodyguard of sorts, the Sam Noble Museum's fossil preparator, Kyle Davies, escorted the original skull to and from the Japanese museum, where it was shown in the temporary exhibit "The Great Journey of Dinosaurs," which was on display July 8 through Oct. 10.

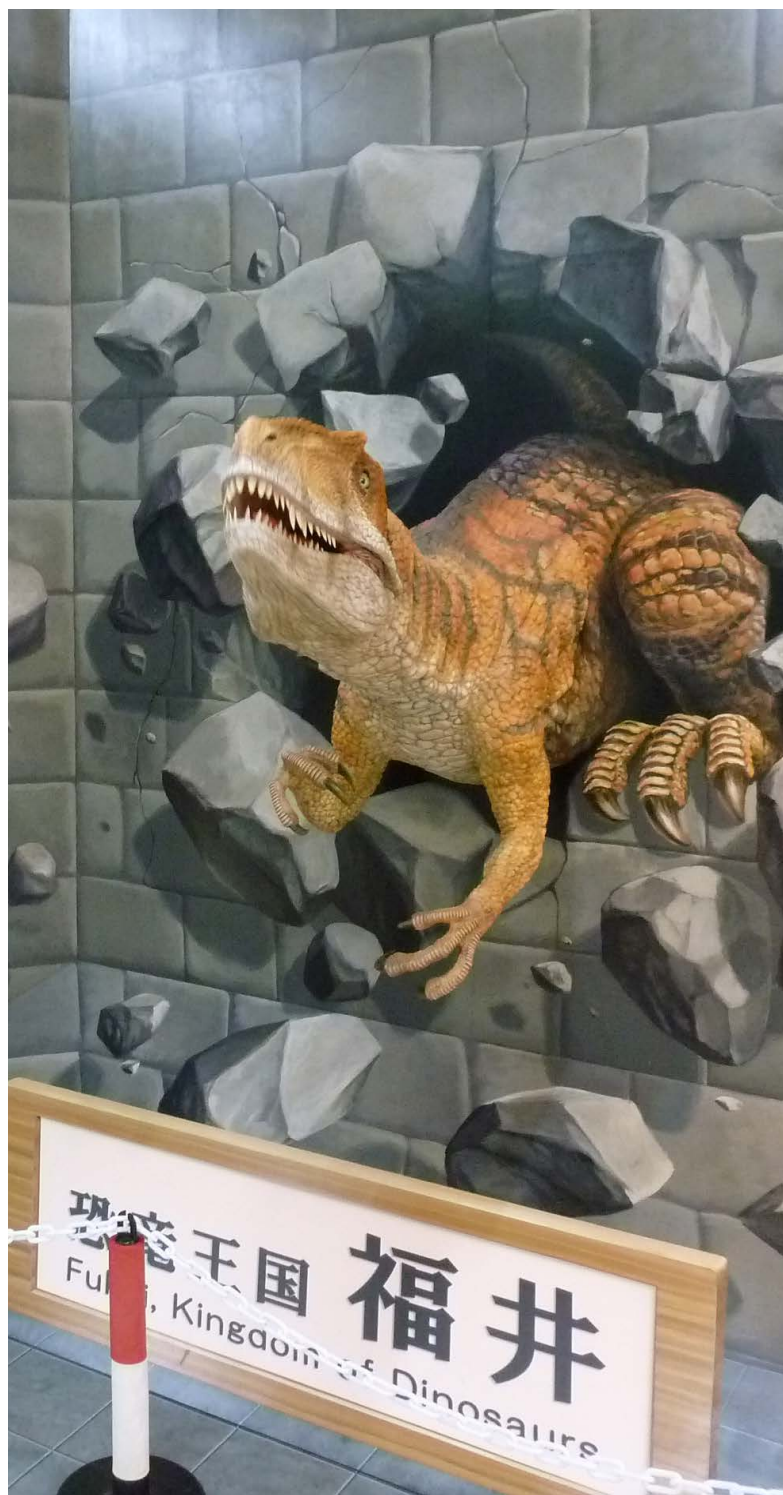
The special exhibit demonstrated the interchange of dinosaurs between Asia and North America, focusing on tyrannosaurs, or bipedal carnivores whose name translates to "tyrant lizards," and ceratopsians, the group of herbivorous, horned dinosaurs. *Tyrannosaurus* fossils have been found only in North America and Asia, and ceratopsian fossils have been found only in North America, Europe and Asia.

"That's where *Aquilops* comes in," Davies said. "He's the earliest ceratopsian known from North America. When you look at the ceratopsian family tree, his closest relatives were in China, indicating that there had to be some sort of connection between North America and China sometime before this guy appears here in North America."

About *Aquilops*

A team of paleontologists led by Rich Cifelli, Sam Noble Museum's curator of vertebrate paleontology, unearthed the beak-nosed dinosaur in southern Montana during a 1997 expedition funded by the National Geographic Society's Committee for Research and Exploration.

*Right: An airport advertisement of "The Great Journey of Dinosaurs," in which the museum's *Aquilops americanus* skull was displayed during the summer of 2016.*



Aquilops is now considered the oldest named member of the horned dinosaur lineage from North America and provides important new information on vertebrate history during the latter part of the age of dinosaurs.

Aquilops americanus (meaning “American eagle face”) represents a 3-pound relative of triceratops, which weighed up to 4,000 times more. A “no frills” ceratopsian, *Aquilops* also lacks the trademark head shield and facial horns of its distant cousins. Roughly the size of a small cat, it is estimated to have been 2 feet long — another point of contrast with its truck-sized relatives.

The expedition team’s findings were published in the Dec. 10, 2014, issue of the scientific journal PLOS ONE. Andrew Farke, a paleontologist from the Raymond M. Alf Museum of Paleontology in Claremont, California, and a specialist on horned dinosaurs, acted as lead on the study.

The fossil record suggests that horned dinosaurs arose in Asia and dispersed to North America via a land-bridge at the present-day Bering Strait by about 108 million years ago, the age of *Aquilops*. Surprisingly, however, the study by Farke and colleagues places *Aquilops* near the base of the ceratopsian family tree, far removed from horn-bearing triceratops and other North American relatives. Relationships among these upper branches of the genealogical tree suggest that two or more additional immigration events happened later in the Cretaceous.

Museum Partnership

In 2015, the *Aquilops* skull found its new home in an exhibit inside the Sam Noble Museum’s Hall of Ancient Life alongside the museum’s pentaceratops, which holds the Guinness World Record for being the largest dinosaur skull ever found. The *Aquilops* display shows

Below: The Aquilops americanus skull on display at the Sam Noble Museum.



three versions of the skull: the original fragmentary skull and jaw, a skull and jaws with missing parts restored, and a computer-generated, complete and undistorted 3D reconstruction.

The Fukui Prefectural Dinosaur Museum mimicked this three-version display in its special exhibit to help educate the public about the condition in which fossils are found and their transformation into display specimens, Davies said.

“When you’re looking at fossils, you shouldn’t think of nice, pristine skeletons; you should think of roadkill, because geologic forces like the compression of the sediments usually crush the things, distorting their shape,” he said. “When you’re thinking about them and analyzing these animals, you have to undistort them.”

And that’s exactly Davies’ specialty: As a museum preparator, he prepares vertebrate fossils for scientific research and education.

Davies, a Japanophile, was elated to make two trips to the Fukui Prefectural Dinosaur Museum for the *Aquilops* skull’s arrival and departure, and to facilitate an international loan of an important holotype (a specimen forming the basis for a species name).

He said he found the museum’s origins particularly fascinating. Although you’re much less likely to find dinosaur fossils in a highly vegetated place such as Japan, a quarry just 15 minutes away from the dinosaur museum has proved fruitful in producing specimens. Those include a sauropod, *Fukuititan*; two iguanodonts, *Fukuisaurus* and *Koshisaurus*; and two theropods, *Fukuiraptor* and *Fukuivenator*.

“I learned a lot about their museum through this partnership,” Davies said of the museum that’s dedicated solely to dinosaurs. “I got into all this as a little kid because I was excited about dinosaurs, so what can I say? It was fun and interesting to see a different museum over there and how elaborate it can actually get.”



Above: Part of the extensive display in “The Great Journey of Dinosaurs” exhibit in Katsuyama, Japan.

*Below: Teppei Sonoda, the museum’s primary contact person and Kyle Davies’ host during the *Aquilops* transfer.*



Women in Science

Without women, the world would be without several significant discoveries and inventions. Without Martha Coston, the signal flare never would have been invented. Without Mary Anderson, the world wouldn't have windshield wipers. Without Sarah Mather, there'd be no underwater telescope. Without Maria Beasley, there would be no life rafts.

Despite significant contributions to the scientific community, women continue to be underrepresented and underappreciated in science, technology, engineering and math (STEM) fields.

Gertrude Elion, biochemist, pharmacologist and winner of the Nobel Peace Prize in medicine in 1988, said: "I hadn't been aware that there were doors closed to me until I started knocking on them. I went to an all-girls school. There were 75 chemistry majors in that class, but most were going to teach it... When I got out and they didn't want women in the laboratory, it was a shock. It was the Depression and nobody was getting jobs. But I had taken that to mean nobody was getting jobs... (then I heard) 'You're qualified. But we've never had a woman in the laboratory before, and we think you'd be a distracting influence.'"

Elion's description of her situation comes from the Depression era, but all too often, it still holds true today. While as a rule women are not traditionally told they are not wanted in STEM fields, discrimination that is more subversive continues to hold them back.

In 2012, the American Institute of Physics released a study that surveyed 15,000 male and female

scientists in 130 countries. They found, across the board, that female scientists, in comparison to their male counterparts, received less lab space and office support, fewer grants for travel and, overall, less financing. According to a study done by the Association for Women in Science, women in biological science fields were only awarded 30 percent of scholarly awards in the years 2011 to 2014 (including grant funding). In addition, according to the U.S. Department of Commerce in a report released in 2011, women working in STEM fields earned, on average, \$5.23 an hour less than their male counterparts.

Despite these troubling statistics, women in science persevere. At the Sam Noble Museum, thus far, they have flourished. Despite the fact that on average women hold far fewer positions than men in STEM fields, eight of the museum's 10 collection managers are women. In addition, a woman, Janet Braun, Ph.D., is the head curator; she also is the curator of the mammalogy collection and the Oklahoma Collection of Genetic Resources and the interim curator for the ichthyology collection.

For some, the journey to a prominent position in science was a long and hard one.

"There have always been some women in most of the places I've been, but at a lot of the other ones, women would be maybe a quarter of the entire faculty or staff, not like the statistics here at the museum," observed Margaret Landis, collection manager of the paleobotany, micropaleontology and mineralogy collection.

Her lifelong, natural love of science, particularly fossils and rocks, eventually led her to pursue geology as her field of study in college.

“My parents were scientists, and that’s what got me started and involved in science,” Landis said. “I got interested in paleobotany because in college I was able to work for the Johnston Geology Museum, and therefore I got even more captivated with fossils and rocks than I was when I was a kid.”

She was eventually mentored by a curator, a woman named Shya Chitley, Ph.D., who was on her second scientific career and nearly 80 years old at the time, whom she met at the Cleveland Museum of Natural History as an intern.

“Shya taught me that I could do anything I wanted to and to not let things get in the way of my pursuit of science,” Landis said.

When Landis arrived in graduate school, she said about half of her class in her department were women, but only three of the 15 faculty members for the department were women. Moreover, although she received a lot of encouragement from Chitley during her internship at the Cleveland Museum of Natural History, she often did not receive the same kind of support from her program.

“It’s one of those things where I was asked many times by peers and faculty members why I was even interested in mineralogy and paleontology and why I wanted to pursue it as a possible occupation,” Landis said. “Some students and non-departmental faculty also asked why I was even in science.”

While pursuing her master’s, she ended up leaving her original program and for a different school after

completing much work toward her thesis. As it turned out at her original program, departmental politics and support, including some on her advisory committee, did not seem to adequately support women in science, and therefore was not especially helpful in her pursue her research. Landis indicated that she unfortunately knows other women scientists who have similar stories — not just women who went before her, but also peers. However, she does see things improving.

Here at the Sam Noble Museum, Landis said her experiences have been much more positive and supportive.

“Part of it is because, yes, there are more women here, but also that the museum fosters the idea that everyone’s important,” Landis said. “We collaborate a lot more, and while your idea might not be the one at the forefront, when we work together we pick the best ideas from each person and move forward.”

Institutions like the Sam Noble Museum and other research facilities — indeed, the world — need strong scientists like Landis to persevere,

despite all obstacles. Despite the obstacles thrown their way, women have risen to the top, and taken every curve thrown at them. It’s up to the science community to support them and treat them as equals. After all, what if Marie Curie had never conducted her groundbreaking research on radioactivity because the science community had encouraged her to take up pottery or knitting instead?

“You’re qualified,
but we’ve never
had a woman in
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think you’d be
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influence.”

—Gertrude Elion

Museum-led Course Turns Class Into Published Authors

Brandon Heitz is on the road to a career in sports administration, but that didn't stop him from enrolling in an undergraduate biology course that put him face to face with snakes, frogs, lizards and a slew of other amphibians and reptiles. Along with his classmates, Heitz authored and published species descriptions for three Philippine lizards — a responsibility not typically entrusted to undergraduates.

Heitz, who has since graduated from the University of Oklahoma with a degree in biology, opted in spring 2015 to take an immersive and hands-on class with Cameron Siler, Ph.D., the Sam Noble Museum's assistant curator of herpetology and assistant professor of biology at OU. Like many students in the class, Heitz didn't plan for a career working with creatures that shimmy and slither, and he never imagined he'd co-author a professional manuscript describing a new species, but he says he's all the better for it.

"This shows you've had a unique experience, no matter what field you're going into," he said.

That was one of the goals, Siler explained. He wanted to give his students — many of whom are in a pre-medicine or pre-veterinary track — an unexpected, eye-opening experience in biology that they couldn't get anywhere else. That's why he split his class into three teams to tackle species descriptions for three Philippine lizards discovered by museum researchers and housed in the museum's herpetology collection.

"This herpetology research provides them a really neat opportunity to not only get out in the field and explore,



Alyssa Anwar holds a snake she caught while on a "herping" trip with her professor, Cameron Siler, Ph.D.

but to do real research and follow through on a project that would end in a publication for them," Siler said.

"This exposes them to the scientific writing process and peer review, and without this, they'd have no exposure to this kind of experience."

The groups, each composed of about seven students, were tasked with researching their respective species, all



Above: Cameron Siler's spring 2015 class takes a break during an April trip into the backwoods of Oklahoma to catch "herps."

in the genus *Brachymeles* and part of a species complex of small, stub-limbed burrowing skinks from Lubang Island, the northern Philippines and Tablas Island. They met deadlines throughout the semester, attended lectures about writing mechanics, created outlines for their projects, attended labs to examine the species and describe their holotype specimen, named the new species, and went through the peer review process.

One student even created scientific illustrations for all three species using a Wacom tablet and Adobe Illustrator software, based on specimen photos taken on the StackShot photo system used by the museum's invertebrate paleontology collection.

Over the summer, all manuscripts were published in the peer-reviewed scientific journal *Zootaxa* and are now available for anyone to view online, thanks to support from the National Science Foundation and OU's Office of the Vice President of Research. This kind of research, made possible through a current National Science Foundation grant, fits perfectly into the university's

mission to enhance undergraduate research across campus, Siler said.

The published species descriptions also benefit the Sam Noble Museum because students were able to chip away at the herpetology department's queue of species that were waiting to be described.

"We find this new diversity and we end up sitting on stuff in a backlog because we just can't work quickly enough to have everything described," Siler said.

For Josh D. Kouri, a senior biology major, the undergraduate research experience will help propel him toward a career as a wildlife biologist. Kouri, who is applying for graduate schools, can show he's a published author who understands the process of writing a scientific paper.

"I was so excited when I learned I'd get to publish a new species description as part of Dr. Siler's class," he said. "I don't think many professors would be willing to let



undergrads be equal contributors on a paper like this, let alone provide as much help and mentorship as Dr. Siler did.”

Not only that, but the project instilled confidence in him and his ability to complete his graduate school work.

“My experience in this project really underscored how much I enjoy learning about the amazing wildlife we share the planet with,” Kouri added. “There are so many incredible creatures just waiting to be discovered. Writing new species descriptions is the first step in ensuring our planet’s amazing diversity can be protected for generations to come.”

Elyse Ellsworth, who graduated from OU in May with a degree in biology, said the experience will give her a leg up applying for graduate schools and prepared her for the kind of work she’ll do in grad school.

“It opened the door to say, ‘OK, this is how you do real science. This is how you do a professional paper. This is how to get ahead of the game,’” Ellsworth said. “You can do these things before you actually get into grad school and it’s time to publish that big grad school project.”

And for Heitz, he was amazed that he and his classmates had no guarantee their hard work would be published — and that’s a reality for any researcher who writes a scientific paper for publication.

“We stepped into the role of writing, field collection and determining that these papers should even be written.

“... Just the fact you’ve done all the steps and you still have to sit and cross your fingers that it’s accepted somewhere — that was definitely an eye-opening experience to me on how academia works,” he said.

Jessa Watters, collection manager for the herpetology department, worked with Siler and his class and was pleased to help offer a career-advancing opportunity to students that also was built into their coursework.

“I think doing it through a class makes it even more special in some ways, because they got to do something while also getting credit that they needed to graduate.”

Left: Marie Ngyuen and Alyssa Anwar present their findings to the camera during a herpetology class trip into the field.

Lower left: Teaching assistant Aaron Geheber fishes for frogs and other amphibians.

Lower right: Traps designed to catch assorted amphibians, such as frogs, dry in the sun after a long day of use.





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Coming Soon!

Roots of Wisdom

Saturday, Jan. 28, 2017, through Sunday, May 7, 2017