



Sam Noble Museum

Tracks

Spring 2018 Newsletter Vol. 30, No. 1



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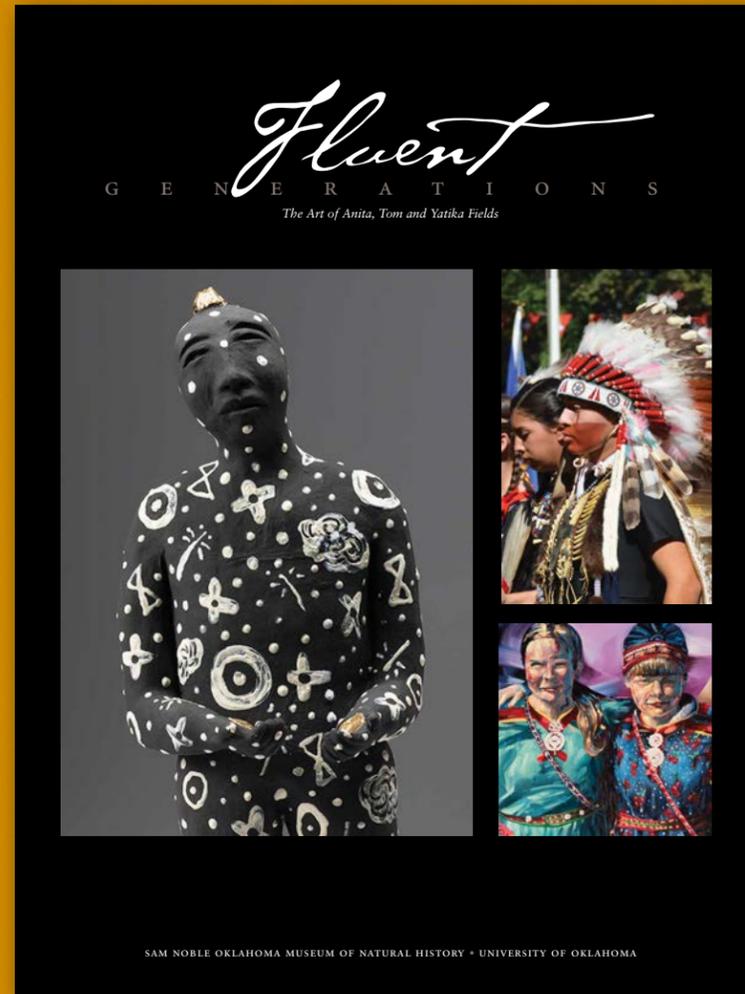
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Available in Excavations
the Museum Store
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OUR MISSION

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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Thirty Years at the Helm



Michael Mares and granddaughter, Abigail

My goal as a college freshman was to be a medical doctor, but I was not very firm in my career choice. I enjoyed reading and writing most of all, but was uncertain what kind of future that would hold. A college student's goals are often unformed and uninformed. In my junior year, I took a course in mammalogy, the study of mammals, and made a field trip to Mexico collecting mammals far down the west coast of Mexico. I had found my life's work—to study mammals around the world. I loved the hard work and adventures living in the field. Of course, discovering new things about mammal species was uniquely exciting. If I had made a list of 100 career choices that I might pursue, museum director would have been at or near the bottom.

I did my doctoral research on mammals of the deserts of Argentina and the United States from late 1970 through 1973. I returned from Argentina and moved to the University of Pittsburgh in 1973, returning to Argentina in 1974. At Pitt, I was able to do field research in U.S. deserts and in Egypt, Iran, Argentina and Brazil.

After a sabbatical year living in Tucson and conducting research in the Arizona and California deserts, returning to Pittsburgh was difficult to contemplate. I missed the west with its vistas so I looked for a job farther west. I interviewed at Texas Tech and at OU for a position in zoology and a curator position at the Stovall Museum. I chose Norman and remember telling my wife on the phone that, unlike Lubbock, there were hills and forests in Norman. It seemed true at the time. Perhaps after Lubbock Mt. Williams looked like the Alps!

The Stovall Museum was a dusty substandard museum with the worst buildings I had encountered anywhere in the world. It included barns, stables, abandoned WWII military barracks, a wooden gun shed, and basements and attics across campus. The fire marshal said it would burn down in seven minutes. What a mess! There were no curators paid by the museum and collection care ranged from spotty to none. The museum sat in the middle of Tornado Alley, where violent thunderstorms were common. How had it not burned down or blown away? The museum's collections were remarkable and rich, but even the show-stopper collection, the enormous fossil dinosaurs, had not had an active curator in a half century and specimens were wrapped in plaster and newspapers just as when they had been collected in the Great Depression. Neglect was everywhere.

As curator of mammals my job was to build, research and develop the mammal collection, and I set about doing that. I met with director Dr. Bruce Bell shortly after I arrived. He said that he wanted someone independent, a person who did not need handholding or that had to see him all the time. I replied that if I didn't see him again that would be fine with me. Whoa, he said, I don't know if I want someone that independent! Conducting international field research forces someone to be independent and make major decisions on the spot, for there is no one to ask.



Above, from left: Michael Mares with Mary Jane Noble, Oklahoma philanthropist and widow of the late Samuel Russell Noble; OU President David L. Boren; Campaign Council Chair W.R. Howell, Sen. Cal Hobson and Rep. Carolyn Taylor at the ribbon cutting for the museum in 2000; Mares with the late Bob Barry and OU head football coach Bob Stoops in 2003; and Mares in the field in Arizona in 1980

Bruce Bell left the Stovall after two years and Dr. Gary Schnell became interim director. Dr. Ken Hoving, dean of the Graduate School and vice provost for research, asked if I would be interim director after Gary. I said no, I wasn't going to be interim anything, and for good measure I did not want to be director. He said that he would offer me the director title for only two years and I could go back to doing my research. Being the only Ph.D.-level staff member, I felt I had to say yes; after all, it was only for two years—two years that became 30.

The story of the development of the Sam Noble Museum has been told many times. Suffice to say that it was a shock to me that not many people really wanted a new museum, including some top administrators at OU. As Gomer Pyle would say, "Surprise, surprise, surprise." Field biologists are tenacious, however, and I resolved that I was going to work to get us out of the horrendous facility we were in and into a new, decent museum. I had no idea what the cost of those dreams would be.

OU had remarkable instability in administrators. Since my arrival, and until David Boren's tenure began, there had been nine different presidents and interim presidents, a small army of provosts, deans and minor administrators. Some knew nothing of museums; some thought the museum should go away since it was not an academic department; others supported the idea of a new natural history museum. No one knew how to make the dream a reality.

Without significant university support, I took the case for a new museum to the people and their elected representatives, who were enthusiastic about a major natural history museum in Norman. Supporters included private foundations, state politicians, Norman business people and many others. Donations from foundations permitted making illustrations to show what a new museum might look like. These funds also supported publication of a book I wrote, *Heritage at Risk*, detailing the beauty and the potential catastrophic loss of the irreplaceable collections that were hidden away in stables.

I was selling a dream, and people responded to it. The City of Norman passed a bond issue of \$5 million to get the project underway, then it was matched by \$15 million from the State of Oklahoma. After that, the university became more supportive of the project. OU Development got involved and soon raised another \$17.5 million, with a \$10 million donation by the family and companies of Sam Noble providing a cornerstone donation to complete the goal.

Right: Michael Mares with family members of Dorothy C. Higginbotham at the ribbon cutting of the Higginbotham Special Exhibition Gallery



Below: Museum Board members with Michael Mares at the unveiling of the inflatable spider. From left: Reggie Whitten, Michael Mares, Charles Hollingsworth, Laura Ogle, Roy Williams, Sen. Cal Hobson and Kevin Easley. From left sitting: Mary Beth Babcock and Rep. Carolyn Taylor

David Boren arrived in 1994, and he put his full support behind this project. Without his help, and the continuing help of Rep. Carolyn Thompson (Taylor) and Sen. Cal Hobson, as well as many other legislators and local supporters, and the generosity of major donors such as the family of Sam Noble, the museum as we know it today would not have happened. We opened to great acclaim in 2000, a new museum for a new millennium. We became the “Little Engine That Could” story among museums worldwide. We had been unstoppable.

As I retire as director, the museum has attracted more than 2.7 million visitors who have learned the fascinating Oklahoma story of people and nature through time. It has served millions of people throughout the world with information on science, Oklahoma natural and cultural history, and many museum topics. The collections have provided baseline data on specimens for thousands of scientific articles published around the world. Our curators have done cutting-edge global research on topics related to the collections and have helped train a new generation of research scientists in museum topics. The museum has won national medals and awards for collection preservation, public outreach and education, and received international recognition for its outstanding educational programs by being invited to join the exclusive Club of Excellence of the European Heritage Association, a membership shared with some of the greatest museums in the world. The little Stovall Museum is now playing in the big leagues.



If a museum is like a ship, then I was asked to take the helm during a particularly dangerous storm. There is no real operating manual to tell you what to do in that situation. By trying to expand the museum and its role on campus, we were exposing it to great risk or even elimination. Yet I felt we had no choice. My work steering the museum during this period involved reacting to challenges and existential threats, while keeping the long-term goal in mind. Admiral “Amazing Grace” Hopper said: “A ship in port is safe, but that’s not what ships are built for.” The museum was built to influence and serve the people of Oklahoma and the world and to protect Oklahoma’s invaluable collections. It could not do that sitting in buildings that were a gust of wind away from destruction. It might survive, but that was not sufficient. Hopper also said, “It is often easier to ask for forgiveness than to ask for permission.” This was actually a modus operandi during my tenure. Finally, Hopper noted, “You don’t manage people, you manage things. You lead people.” I hope that as I leave the directorship I will be seen to have led a remarkable group of highly skilled and dedicated people who are the ones who really made the museum project a success and who continue to move the museum forward each day.

We came through the storm, but there will always be storms and challenges, and I am convinced that the Sam Noble Museum will be up to those. Dr. Dan Swan, the interim director, is a long-time museum educator and researcher. He will do a great job with the museum until a permanent director can be hired. And of course, the first-rate and dedicated staff and volunteers are there to help the museum meet its obligations to its audiences in Oklahoma and the world.

M. Mares
Michael A. Mares Ph.D.
Director

Top from left: Michael Mares with Paul Sereno and presenting at the Best in Heritage conference in Dubrovnik. Bottom from left: Mares with a model for the Sam Noble Oklahoma Museum of Natural History and at the arrival of a live mount of Bom Bom, a Western Lowland Gorilla that lived at the Oklahoma City Zoo from 2002 until his death in 2012



“Fluent Generations: The Art of Anita, Tom and Yatika Fields”



A family of accomplished Native artists showcased their works of photography, ceramics and paintings, celebrating the vitality of Indigenous cultures.

In this exhibit, Anita Fields (Osage), her husband, Tom Fields (Muscogee, Cherokee), and son Yatika Starr Fields (Osage, Muscogee, Cherokee), came together for the first time ever to illustrate their creativity and passion in a single exhibition, with works that brought their cultural heritage to life in the Fred and Enid Brown Gallery.

Featuring over 60 works of art by the Stillwater-based family, the exhibit included loans from the Fred Jones Jr. Museum of Art, Oklahoma State University Museum of Art, the Arkansas Heritage Museum, the J.W. Wiggins Museum of Contemporary Native American Art and private collections, including those of the artists.

Members of the Fields family have previously presented their artwork in national and international venues, but never together in one gallery. On display were Anita Fields' works of clay and textile that reflect the worldview of her Osage culture and represent the disruption of balance found on Earth and in our lives, and more broadly, early Osage notions of duality, such as earth and sky, male and female.

Tom Fields, who recently retired after 32 years as a photojournalist, videographer and website developer for the Oklahoma Department of Career and Technical Education, focuses his camera lens on what's close to him, physically and spiritually. Yatika Starr Fields, a successful street and gallery artist, finds his guiding motivation is the search for freedom.

Museum visitors had the opportunity to not only develop a keen appreciation for the work of the Fields family, but a deeper appreciation for the impact of family—a building block of all cultures and communities around the world, said Dan Swan, curator of ethnology at the Sam Noble Museum.

“Celestial Siblings: Parallel Landscapes of Earth and Mars”

Internationally known astronomer and fine art photographer Stephen Strom's photographs, which were displayed in the exhibit “Celestial Siblings: Parallel Landscapes of Earth and Mars,” transported visitors across the galaxy. The exhibit showed visitors the surprising similarities between Earth and our planetary neighbor.

The images in this intriguing exhibit reveal hauntingly similar patterns on Earth and Mars: at once simple and profoundly beautiful forms that result from the action of universal physical processes on vastly different spatial scales and terrestrial surfaces.

“I have spent most of my professional life as an astronomer, searching out patterns encoded in the light from distant stars in the hope of understanding how our sun and solar system came to be,” Strom said. “Over the past four decades, I have spent countless hours perched on remote mountaintops, looking upward mostly, but also contemplating the desert below.”

The exhibit was arranged in segments that reflect the roles of each of the Aristotelian elements in shaping the surfaces of Earth and Mars: air, earth, fire and water. Terrestrial images drawn from Strom's landscape interpretations were paired with Martian photographs selected from long strip maps taken by NASA's Mars Reconnaissance Orbiter.

The diptychs invited the viewer to contemplate the role of aeolian, fluvial and volcanic activity from the epoch of planetary formation 4 billion years ago to the present day.

Strom looks at our planet with a unique vision. He received his master's and doctorate degrees in astronomy from Harvard University, and enjoyed a long and prestigious career beginning as a lecturer in astronomy at Harvard and astrophysicist at the Smithsonian Astrophysical Observatory, and continuing on as chairman of the Five College Astronomy Department at University of Massachusetts in Amherst, Massachusetts.

In 1998, Strom moved to Tucson as a member of the scientific staff at the National Optical Astronomy Observatory, where he carried out research directed at understanding the formation of stars and planetary systems. Strom began studying photography in 1978 and has been exhibited widely as well as published in numerous publications.



Live Paint Q&A with Yatika Fields

This spring, Yatika Fields live-painted a mural on an 18' x 10' canvas over the span of two weeks in the Fred and Enid Brown Gallery. Museum visitors were invited to watch, ask questions and be part of the experience.

Fields is a Stillwater-based street artist and muralist and the son of Tom and Antia Fields. His work was featured with his parents' in "Fluent Generations: The Art of Anita, Tom and Yatika Fields."

"Often when you visit a museum, you're left with a sense of wonder and awe about the works that you see," Fields said. "This unique opportunity allowed museum visitors a chance to see the work being created and the many elements, materials and structures used to paint a mural."

A guiding motivation in Yatika Fields' work is the search for freedom, he said.

"The objects and forms (in my work) represent the past and present from my perspective as a member of the Osage, Cherokee and Creek Nations of Oklahoma, surrounded by beautiful colors and patterns joined by rhythm and dance from tradition," he said. "Fast-paced cities and humble highways of the plains are defined by a historical layering of cultures, art and creativity that I seek to portray."

Hannah Pike, PR and marketing assistant at the Sam Noble Oklahoma Museum of Natural History, interviewed Yatika Fields about the mural and his art. Here are his answers, in which he reflects on his inspiration, childhood and what it feels like to paint live:

What was the inspiration for this mural, and why the horses?

Any time I start a large-scale painting or mural, I usually let the atmosphere of the area where it will be dictate the

painting as a whole. Therefore, it works with the area and is organic and unique to that place. If I were to start with a sketch, I wouldn't be giving the mural the justice and potential it has to be born. Before starting this mural, I stood back, and I looked at the huge canvas, just like I would with a wall before painting it.. I have a visual conversation with it, and in turn, it speaks with me as well. After these forms are put down, all else falls naturally and organically—it's an unknown puzzle being dictated by the day and mood of the exhibition space. My conversations with museum visitors also changed the tides of the painting daily.

The horse appeared to me to be present—at the time I didn't question the vision but rather let it elaborate itself. Only after a few days did I start thinking about why the horses. I've come to the conclusion that the horses appeared because of my knowledge of classical and renaissance art where horses are prevalent and abundant in large-scale paintings. They are used as symbols and metaphors of strength, resilience, power and courage. All these symbols are also told in my creation at the Sam Noble Museum.

What was it like growing up with accomplished artists as parents?

I didn't know any different, really. I knew my parents had a cool hobby and job—creating just came as a way of living. When you're young, you don't fully understand the dynamics of 'accomplished.' You can appreciate their drive and productivity for sure. It was cool, though, because I got to travel with them to art shows and exhibitions. My only concern when younger was what kind of free food they offered at the openings—that shows you my interest when younger—but even then, I knew gallery etiquette. It wasn't until I was older that I fully appreciated the scope of their distinguished paths.

How does Native American culture influence your art?

Both influence each other. Living in contemporary America is reflected with an undertone of beauty that connects the fabrics and structure of my work related to my connection



"Fluent Generations," the 18' x 10' mural, was completed by Yatika Fields April 8, 2018. Photo by Hannah Pike

to my culture. In my work, I would say the influence is emotion and beautiful movements—that is my culture. All else is the world and influences we live in now. I've been able to travel the world with my art since I was 19. I have a worldly influence that sustains itself by the yearly renewal of ceremonies I attend to—this connection allows something unique and different that is a force like no other or follows a path set anew continuously.

What does seeing your work next to your parents' feel like?

It feels very special and humbling. Some things cannot be described in words, and this is one of those moments. I can say I look at it from afar and understand the importance of it, the significance of it all. I am grateful to have an experience like that while we are all here and living. It will forever be cherished. I'm proud.

What role does color play in your works?

Color plays the most important role—this alone carries feeling and emotions. Color is a science, a mystery and a medicine. With it, you are able to be a conductor of feelings—color illuminates most of my paintings as a way to express feeling and convey emotions. I could absolutely write a whole book on this question, but a short answer is that it plays a

significant role in allowing the viewers options and paths to navigate the works with heart rather than eye. Color is magic.

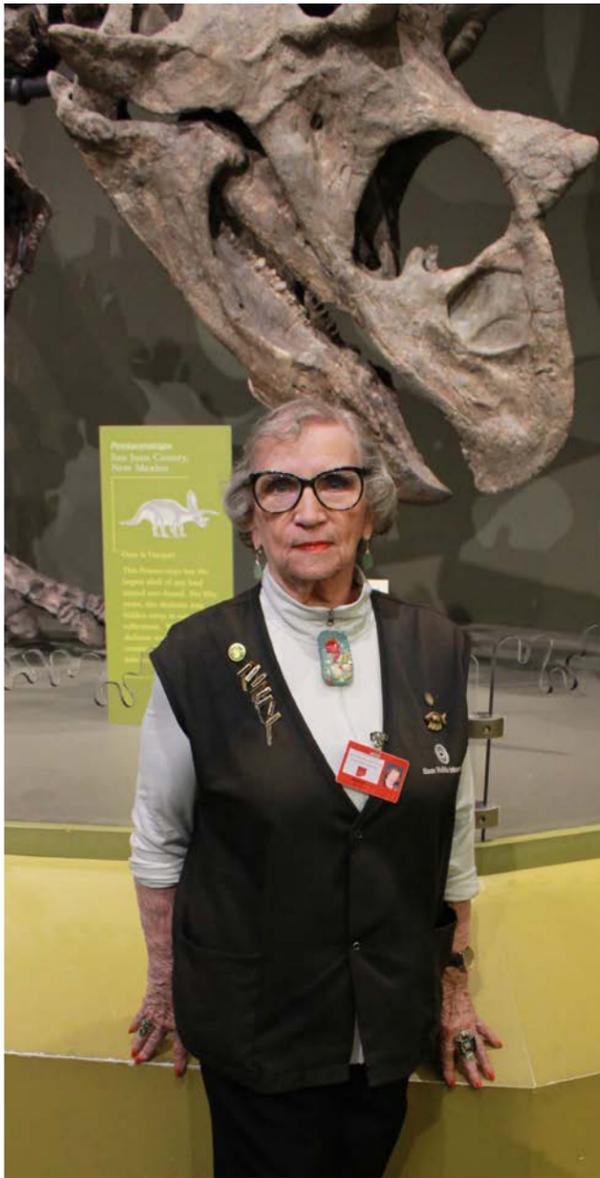
How is the experience of painting with onlookers—including children—different from painting alone?

It's just that, an experience. Painting in front of people is a performance I've learned from my years as a live painter. You paint knowing eyes are watching. Children are fun; they will say anything at any moment. I choose to engage with them and even let them change the direction of the painting. All of the above directly affects the painting—it's public. Painting alone in the studio, you are able to work slower, talk to yourself if you like, be comfortable and dive deeper into full concentration—it's just you and the work slowly dancing. With the audience watching, it's a huge square dance—we are all partaking.

What is your favorite music to listen to while painting?

I love music, and my taste expands the sea of eras—it is an eclectic taste. It really depends on how I'm feeling that day. Of course, when you're painting in front of parents and children, it won't be explicit music. I usually listen to KEXP Radio live streaming! It's a Seattle radio station—check it out!

2018 Volunteer of the Year: Nance North Ross



Nance North Ross, 2018 Volunteer of the Year, in the Hall of Ancient Life. Photo by Hannah Pike

Nance North Ross, of Newalla, Oklahoma, was honored as the 2018 Tom Siegenthaler Volunteer of the Year at the museum's Volunteer Appreciation Banquet held on April 19.

Originally from New York, Ross spent 50 years in California before moving to Oklahoma. Her love of animals led her to volunteer at a zoo in California and then to volunteer in the museum's Hall of Natural Wonders and Hall of Ancient Life.

After learning about volunteer possibilities at the museum from other volunteers, Nance started volunteering in 2009 and has now donated almost 5,000 hours of her time as a docent.

Two hundred and twenty-five volunteers donate their time to the museum. In 2017, volunteers logged 18,437 hours working with the public in galleries, in collections and in offices. The museum celebrated Nance, along with all of the museum's dedicated volunteers, at the banquet.

"We appreciate our volunteers so much," said Lindsey Kaib, the museum's volunteer coordinator. "Each makes a difference in the museum. It is important to acknowledge them and the Volunteer of the Year award is part of that acknowledgement."

Museum director Michael Mares agreed, stating that volunteers are responsible for setting and maintaining a remarkable standard of excellence in every department of the museum.

Research Doubles Native Mammal Species in Hawaii

For years, researchers have debated whether two species of bat could be considered native mammals of Hawaii, which is composed of islands ranging from 300,000 to 65 million years old and is so isolated that no other mammals could make the trek on their own.

However, findings recently published in the scientific journal *PLOS ONE* by a team including Janet Braun, Ph.D., head curator at the Sam Noble Museum, point to not one, but two distinct species of native Hawaiian bats: the North American (*Aeorestes cinereus*) and Hawaiian (*A. semotus*) hoary bats.

"When we looked at the genetics of both of the bats on Hawaii, we found that one of them is a good species, separate from the other, and that it arrived 1.3 million years ago," said Michael Mares, Ph.D., director of the Sam Noble Oklahoma Museum of Natural History. "It was the first mammal to colonize Hawaii when the Hawaiian Islands were forming. So, we doubled the number of species of mammals in Hawaii - from one to two."

The second species of hoary bat arrived no more than 10,000 years ago. The research is laid out in the paper, "Nuclear and mtDNA phylogenetic analyses clarify the evolutionary history of two species of native Hawaiian bats and the taxonomy of Lasiurini (Mammalia: Chiroptera)". Amy B. Baird, Ph.D., assistant professor of biology at the University of Houston Downtown, led the research team of nine scientists.

Researchers first published a paper stating similar findings in the *Journal of Mammalogy* in 2014. But not long after, the study was scrutinized by researchers who



Hawaiian hoary bat Lasiurus cinereus semotus

said the bat species Baird's team posited was a separate species was not separate at all, and that it arrived in Hawaii just 10,000 to 20,000 years ago.

Mares said researchers from the one-species camp raised questions about methods and the kind of genes used in the team's genetic studies. Before publishing the second paper, Baird's team expanded the number of genes, using genes from other researchers as well.

"We went back in and looked at more genes and extended the analysis," he said. "And what we had found years before was still correct. In the second paper, we pretty well laid out the case for there being two species of mammals on Hawaii - two bats. They're the same genus, but one arrived a million years before the other one."

Mares said the report, published by *PLOS ONE*, presents all the data from the research.

Lizards of the West Pacific Islands

When Cameron Siler, Ph.D., assistant herpetology curator at the Sam Noble Oklahoma Museum of Natural History, and other researchers began studying scaly-toed geckos on the island arcs of the West Pacific, they had no idea that they would be investigating an intertwined system of multiple distinct, previously unknown groups of geckos.



Left: A bright orange species of gecko (genus *Lepidodactylus*) from Mount Huraw, Samar Island, eastern Philippines

Below: A recently discovered species of False Gecko from the Philippines, *Pseudogekko ditoy*, described by Siler and colleagues in 2014

Photos by Cameron Siler

The researchers, who have all spent their careers studying biodiversity in the Pacific Islands, the Philippines or other parts of Southeast Asia, came together with decades of samples to broadly study a unique group of geckos in the region and write a paper about their findings.

While they initially set out to learn more about the evolutionary history of geckos in the genus *Lepidodactylus*, which are commonly referred to as spiny-toed or scaly-toed geckos and look like house geckos, they realized the story had just as much to do with species of other genera found throughout the islands too, specifically *Luperosaurus* and *Pseudogekko*.

“We were surprised to see that there’s just a unique evolutionary history to how these species have diversified across this vast landscape, and included in this diversity are completely different-looking geckos that you wouldn’t expect to be related to the spiny- or scaly-toed geckos we were focusing on,” said Siler, who is also an assistant professor of biology at the University of Oklahoma.

A recently discovered species of False Gecko from the Philippines, *Pseudogekko chavacano*, described by Siler and colleagues in 2014

The geckos within the genus *Luperosaurus* are referred to commonly as camouflage or fringed geckos because of their extra webbing and skin flaps that allow them to hide the outlines of their bodies against the environment and, for some species, actually glide from tree to tree. In contrast, Siler said False Geckos in the genus *Pseudogekko* are “bizarre, slender-looking (and) totally different.”

“There’s no species of *Pseudogekko* known from anywhere else but the Philippines, and strangely enough, the entire genus is nested within the diversity of our focal group, the scaly-toed geckos,” he said.

Researchers used a variety of methods to reconstruct the relationships among the various species and to estimate the timing of when major groups diversified in the past.

Their results suggest early diversification of the three gecko groups happened 30 to 50 million years ago, which Siler said astonished the researchers because most of the islands of the Philippines and the Pacific as we know them today formed in the much more recent past.



“At the time these (geckos) were diversifying, these island chains were still forming, and many of the island arcs were being pushed together by plate tectonic movements and volcanic activity,” he said. “So it has been exciting to see signals of significantly older diversification, and gain a better understanding of the important processes that drove this.”

Their evidence both supported and contradicted the model of the taxon cycle, which is an important concept in biogeography.

“A common pattern that we’ve observed more than anything is that the story is often way more complex than we expect when getting into each study in Southeast Asia,” Siler said. “You can’t assume that these modern processes were the driving force behind today’s distribution of life on the planet.”

Unfortunately, the study of many of these species is timely, as habitat destruction has taken a significant toll on these unique island species over the past half century alone. Now, researchers are lucky if they see just one of these lizards during an expedition, Siler said.

“We fear we are getting just a glimpse of some of the remaining populations for these enigmatic species, some of which are isolated to a single limestone cave system only,” he said.

According to National Geographic, multiple times throughout the history of our planet, mass extinctions have driven 50 to 90 percent of Earth’s species extinct in “a geological blink of the eye.” Siler said that studies have now shown that as a planet, we are currently experiencing the sixth mass extinction event.

“Faced with the possibility that we may experience significant losses of our planet’s biodiversity, it has never been more critical that we push to better understand and protect relictual species, but also to reach broader audiences through science education,” Siler said.





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*Megalodon: The Largest Shark
that Ever Lived!*

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