

Creepy, Crawley... COOL!

'Tarantulas: Alive & Up Close' at Sternberg Museum through Sept. 4

The secrets of the tarantula's world are on full display in *Tarantulas: Alive and Up Close*. With a fearsome reputation and looks to match, there is much to learn about these gentle giants of the spider world.

Tarantulas: Alive and Up Close takes the visitor on a journey of scientific discovery, presenting tarantulas in a new light. Focusing on the diverse and natural beauty of these incredible animals, the exhibit provides an engaging educational experience.

There are more than 900 known species of tarantulas, which live all over the globe. They can be found living anywhere from the tallest rainforest treetops to deep underground in the most arid deserts.

Tarantulas: Alive and Up Close features a unique array of live tarantulas, which showcases their varied life habits and habitats.

Tarantulas have a reputation that precedes them - a reputation of being the biggest, the baddest, and most fearsome of all spiders. Hairy, fast, scary - sure, there's some truth behind the rumors. But would you ever guess that these supposedly fierce giants of the spider world would much rather run and hide than stay fight?

Species on display include a Goliath Bird Eating tarantula (the largest of all tarantulas), the rare Green Bottle Blue tarantula, and the Indian Ornamental tarantula, a species troubled by loss of habitat in the wild. In all, 20 live tarantulas are on display and each have a unique story to tell.

The exhibit focuses on the diverse and natural beauty of tarantulas, and provides uniquely engaging educational experiences. Special features of the exhibit include interactive components such as "Tarantulas of the World" interactive world map; "Name That Tarantula" identification activity, "The Legend of the Tarantella" and more.

Kids will enjoy the climbable "Tarantula Burrow", which provides more opportunity for learning through the Trip Line interactive experience. This piece also serves as a photo opportunity for visitors of all ages.



SPECIAL FEATURES OF THE EXHIBIT

- Diverse collection of live tarantulas serving as living illustrations to the exhibit topics.
- Interactive components illustrating unique attributes of tarantulas.
- Giant Anatomy Flip Book.
- "Tarantula Town" kids' area, with a stylized tarantula burrow that doubles as a photo opportunity.



“Sternberg is the champion for the under-appreciated animals such as rattlesnakes and tarantulas. We’re here to give people a safe place to view these wonders of nature.”

DR. REESE BARRICK
DIRECTOR, STERNBERG MUSEUM



Pictured here are just some of the display booths that are part of the summer exhibit that runs through Labor Day.

The booths contain 20 live species of tarantulas for visitors to see. In addition, the exhibit includes interactive components along with other information about tarantulas and the world in which they live.

Above left is a “tarantula’s burrow” that provides a good photo opportunity for the kids.





Scientists, students and faculty members from throughout the United States visited Sternberg on May 25 to tour and discuss the museum's extensive collections.

SCIENTIFIC RESEARCH

National science group tours Sternberg collections

Sternberg Museum's extensive zoological and paleontology collections prompted a May 25 visit from a group of 26 scientists, students and faculty members from throughout the United States.

Spending the day touring the collections and discussing their observations were people representing 13 universities, the Kansas Geological Survey, and the Museum of Natural History of Los Angeles.

PURPOSE OF GROUP

Dr. Catherine Badgley, a professor at the University of Michigan, said this area has a fantastic fossil record of mammals, dating back five million to almost 40 million years.

"Our group specifically has an interest in how mountain building affects mammal evolution," Badgley said. "And the reason we've come to the Great Plains is because this area represents a contrast in environments and environmental history to the mountains. Because the plains are adjacent to the mountains, they have a lot of species in common, so we're very interested in

understanding what controls the diversity of mammals on the Great Plains today and in the past."

PROGRAM BEGINNINGS

Badgley said the group is funded by a National Science Foundation grant, which specifically supports highly interdisciplinary research. The original plan for the group was to have a series of field trips, the first of which took place in western Nevada and California in 2019.

However, COVID brought a halt to the trips until this year, when it was decided to focus on

the Great Plains. Next year, the group will start at the western edge of the Great Plains and go into the Rocky Mountains.

"After that, we'll try to bring everything together we've learned from these areas," Badgley said. "During COVID we did have some online discussions, but that was definitely second best to these meetings in person."



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The diverse group of professionals who visited Sternberg included geologists, paleontologists and ecologists. Group members expressed their appreciation to Fort Hays State University for continuing to value the collections housed at Sternberg.



GROUP DIVERSITY BENEFICIAL

Badgley said the overall group dynamic is enhanced because it has many kinds of expertise represented.

“We have geologists, paleontologists, ecologists – all the people who study the genetic diversity and genetic evolution of mammals,” she said. “All of us have kind of an overlapping interest, but because we have so many different kinds of expertise, lots of people have things to contribute that others may not know.”

Members of the group expressed their appreciation to Fort Hays State and to Sternberg for their efforts in maintaining the research collections.

“We definitely want to say a big thank you to the Fort Hays network for continuing to value these collections,” said Dr. Brett Riddle, professor emeritus from the University of Nevada, Las Vegas. For Riddle, the visit also served as a bit of homecoming as he graduated from FHSU in 1980 and remembered the days when the museum was part of McCartney Hall.

“I’m definitely familiar with many of these collec-

tions,” he said.

Dr. David Fox from the University of Minnesota also expressed his gratitude to Fort Hays State.

“Fort Hays is a repository of research materials that are awaiting new questions and new techniques beyond what we can do today,” he said. “And if these things go away, there is a whole slew of basic science question that we won’t be able to address because we won’t have the resources. The collection here provides those resources.”

Badgley said the Sternberg collections are like precious libraries.

“They are helping us understand and appreciate what’s so interesting about this place and the kind of species that lived

here,” she said. “The fossil collections of this museum allows us to see how different the ecosystems were in the very recent geological past, while the exhibit museum shows us what it was like when it was an ocean here. Sternberg provides us a wonderful window into Earth’s history.”

“These collections are like precious libraries....Sternberg provides us a wonderful window into Earth’s history”

**DR. CATHERINE BADGLEY
UNIVERSITY OF MICHIGAN**

SUMMER OF DISCOVERY

Science camps provide excellent educational opportunities



An excellent educational opportunity for young people rolls around each summer as Sternberg Museum kicks off a series of science camps for elementary, middle and high school students.

According to camp director David Levering, Sternberg will be operating a total of nine camps in Kansas, Utah, South Dakota and Oregon. Approximately 70 students from 24 states, along with one student from China and another from Germany, have registered for the camps, which get underway June 19 and conclude at the end of July.

“We’ve got another great group of students this year,” Levering said. “We had 60 last year, so our numbers are trending in the right direction.”

PROGRAM BEGINNINGS

Levering initiated the non-profit program in 2014 and saw the numbers grow as many as 90 participants. However, the COVID outbreak in 2020 resulted in reduced participation as it was only offered virtually for the next two years.

In the weeks ahead, the staff of professional scientists and science educators, graduate students, undergrad-

uates, and select program alumni will be leading one elementary camp, three middle school camps and five high school camps. Elementary camps are open to students ages 6-10 and focus on building excitement for natural sciences.

More advanced skills are taught to middle schoolers, who range in age from 11-13, while high school science camps are built to inspire, engage and challenge 14-18-year-olds with hands-on and group learning activities.

“We pride ourselves on having small groups of around 10, each led by several instructors,” Levering said. “This provides every student focused, individualized instruction.”

As the camps gear up for this summer, Levering said the program continues to be built around a core philosophy of student development and advancement. Students are trained through dedicated lessons, which provide new tools and knowledge to use as they pursue the goals.

“We pride ourselves on having small groups of around 10, each led by several instructors.”

DAVID LEVERING • CAMP DIRECTOR

CORE PHILOSOPHY

As part of its core philosophy, the program offers a supportive peer community in which the staff endeavors to foster safe, supportive, and inclusive learning communities where students are provided active hands-on learning opportunities.

“We introduce our students to foundational concepts in earth and life sciences to start out our programs,” Levering said. “From the Law of Superposition to the

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Camps help build core set of useful skills

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population basis for evolution by natural selection, students are set up to learn content quickly as we build understanding through observations and focused discussions.”

And while science can be challenging and a lot of hard work, Levering said it’s important that students have fun.

“We strive to keep the work of field, lab, and classroom science balanced with a healthy dose of laughter,” he said.

SKILL BUILDING

The camps also focus on building a core set of useful skills that students can use to advance their opportunities in the natural sciences.

Conversely, students are empowered to think about science beyond raw facts and figures. For example, participants are taught to safely and responsibly carry out field tasks in a variety of favorable and adverse conditions. This helps students recognize their own strengths and weaknesses while fostering an atmosphere of collaboration.

“The staff implements engaging learning games and

problem-solving challenges, guiding our students as they learn to consider and connect their knowledge in a comprehensive fashion,” Levering said. “We use active teaching methods to help students learn how to skillfully use knowledge they acquire in lessons and discussions. Our learning activities, be they in the lab, classroom, field, or in a virtual world, focus on student collaboration and developing critical thinking, all while keeping things fun and interactive.”



Congratulations Graduates



Kaiden O'Dell works on a fossil mammoth leg bone in the fossil prep lab.

Fort Hays State University students play a huge role in the paleontology department at the Sternberg Museum.

Undergraduate and graduate students work tireless hours in the paleontology collections and fossil prep lab, where they help preserve irreplaceable specimens and data.

Often, this work is as a volunteer because they are passionate about museums and know they are building professional skills.

In May, six paleontology students graduated from FHSU. Shyla Davison and Chris Kingwill were Geosciences graduate students who worked in the fossil collection and prep lab during their two-year program.

Davison is now working for iDigBio, a digital museum database that incorporates data from around the country, while Kingwill will begin a internship in geographic information systems (GIS) this summer.

Undergraduate students include Kaiden O'Dell, Audrey Nightingale, Brynn Wooten and Zach Zahner, who all dedicated hours of their time to various paleontology projects over the course of their degree programs. These students are moving on to internships, graduate school and jobs.

Congratulations to all the graduates. We will miss you but are excited for where the future will take you.



Shyla Davison provides a scale for a fossil mastodon jaw in the paleontology collection.



Museum hosts 800 students from 28 schools



SPRING SCHOOL TOURS

When May rolls around each year, the happy sound of children's voices is generally associated with the end of school and the beginning of a long vacation.

Spring also is a time when schools take a break from the rigors of classroom instruction and venture out on educational field trips.

One of the most popular trips is Sternberg Museum of Natural History. Each year, the museum hosts hundreds of students from throughout Kansas and Nebraska. This year was no different as April and May saw more than 800 students from 28 schools visit the facility.

Sternberg offers different options, depending on what the school is seeking. For example, some schools are only interested in what is known as the Live Animal Experience in which students are given the opportunity to handle a variety of creatures.

Most groups, however, enjoy a complete tour that not only features the Live Animal Experience, but also guided instruction from museum staff members.

