

THE Pteranodon

Highlights from the
Sternberg Museum of Natural History

No. 27

Fall 2003

African safari inspires exhibit

Last July, nineteen supporters of the Sternberg Museum joined museum director Jerry Choate and his wife, Fi, on a photo safari in South Africa.

What follows is an account of the trip by Choate:

“Travel to South Africa is an experience in itself. Most of us met at the Kansas City International Airport on July 18, 2003. We flew from Kansas City to Atlanta. Two participants flew separately from Wichita to Atlanta and met us at our airport hotel. One participant lives in a suburb of Atlanta and joined our party after her mother (who lives in Hays) arrived.

Our flight to Johannesburg, South Africa, departed from Atlanta at 10:30 a.m. on July 19. After brief stops in the Cape Verde Islands and at Capetown, our flight landed in Johannesburg at 12:30 p.m. on July 20. The time in Johannesburg is 7 hours later than it is in Atlanta; therefore, our flight to South Africa lasted 19 hours. Worse, we were too excited to sleep during the flight. After we passed through customs, we met our guides, exchanged some money, and boarded two small Mercedes buses. We were finally in South Africa and ready to experience life on a new (to most of us) continent.

South Africa is a big country (it is much larger than Texas but smaller than Alaska). Therefore, everywhere we went was a long drive. We spent our first night at a very nice place named Badplaas (pronounced



Photo safari participants saw many examples of African megafauna like this elephant.

Bad Place). The next morning, we drove to the sleepy little coastal village of St. Lucia, which is the gateway to the St. Lucia Estuary and Wetlands Park, a World Heritage Site and one of the biggest wetlands in Africa. We stayed at St. Lucia until the morning of July 24. During our stay, we toured the wetlands, went whale watching in the Indian Ocean, and had our first dramatic exposure to the mammalian megafauna in the Umfolozi/Hluhluwe Game Reserve. We all agreed, however, that the highlight of St. Lucia was having several hippopotamuses feeding in the back yard of our lodging.

From St. Lucia, we made the long drive

to Kruger National Park, where we checked into a “rest camp” known as Lower Sabi. Rest camps are human refuges surrounded by tall, electric fences to keep out dangerous predators. They feature lodging, a restaurant, a filling station and store, and other amenities. We used Lower Sabi as our base of operations until July 26, when we moved to a similar rest camp named Letaba.

Kruger is amazing! The diversity of mammals and birds we saw there was incredible, and the great herds of wildlife and their predators were phenomenal. It is hard to believe that North America once was inhabited by a megafauna comparable to that which still occurs in Africa. After you see Kruger National Park, your vision of what Kansas was like a few thousand years ago will never be

the same!

From Kruger, we made the long drive back to Pretoria on July 30. We spent the night there, visited one additional wildlife preserve within the city limits of Pretoria, and reluctantly drove to the airport in Johannesburg for the flight home. We must have been exhausted, because most of us had no trouble sleeping on the return flight.”

The Sternberg Museum will open an exhibition on Nov. 22 of photographs, personal reflections, and souvenirs from this African experience. Come share in this once-in-a-lifetime trip!

Frog songs monitored

Kansas is home to 22 kinds of frogs, treefrogs, spadefoots, and toads (known collectively to science as anurans), and we don't know nearly enough about them—where they live, how many there are, and whether they are doing well, or poorly.

But they are important animals in the natural ecosystem of our state, and their well-being is a compelling indicator of the health of their environment.

The Kansas Department of Wildlife and Parks, in cooperation with the

Sternberg Museum and The Center for North American Herpetology (CNAH), has launched the Kansas Anuran Monitoring Program (KAMP) web site, www.cnah.org/kamp.

KAMP was established in 1998 by the Kansas Department of Wildlife & Parks (KDWP) through a grant from their Chickadee Checkoff funds to Joseph T. Collins, Adjunct Curator of Herpetology

at Sternberg Museum and Director of CNAH.

Collins organized and operated a volunteer effort of 50-75 individuals who monitored the choruses of Kansas frogs, treefrogs, spadefoots, and toads over 45-50 routes across Kansas each spring and

summer from 1998 through 2002. The extensive data accumulated during those five years is posted on the KAMP web site.

In addition to graphs showing chorusing strength and annual time span for singing activity for all 22 species, the web site features color images by noted wildlife



A pair of Cope's gray treefrogs (*Hyla chrysoscelis*) mate in a Kansas pond.

photographer Suzanne L. Collins, call recordings compliments of Keith Coleman (Lawrence, Kansas) and a map for species at each site monitored, as well as access to information about routes and the volunteers that ran them.

The web site is designed and maintained by Travis Taggart, Associate Curator of Herpetology.

The project will continue in 2004, and volunteers are needed. Volunteers spend one night a month driving along their assigned route and listen for calling anurans. Anurans call during their breeding season to attract a mate, and each species' call is unique.

Volunteers are given a tape of calls from which they can learn to identify the choruses. With just a little practice, anyone can pick out the calls of each species. Volunteers then enter their observations directly into the KAMP web site. Thus, these volunteers are playing an important role in the collection of basic data on the health and distribution of anuran species.

Anyone interested in joining the KAMP effort should contact the museum for more information. See related story on page 4.

Choate's Notes




Dr. J. R. Choate
Director

I continue to hear local citizens (who should know better!) misrepresent the Sternberg as a "fossil museum" or, worse, a "dinosaur museum." Admittedly, the current permanent exhibits of the museum focus on paleontology, and the museum's dioramas include robotic dinosaurs. However, the temporary exhibitions hosted by the Sternberg relate to natural history in a broader sense, including both living and extinct animals and plants. Moreover, the museum's outstanding educational programs deal with topics ranging from spiders to bats and everything in between. I hope this newsletter clears up the widespread misconception of what the Sternberg Museum of Natural History is all about.

Articles in this newsletter explain some of the current non-paleontological programs at the Sternberg. These programs pertain to exploring Africa, monitoring populations of frogs in Kansas, better understanding our nation's only president whose avocation was science, conducting conservation research on herptiles in Kansas, and developing an insect garden at the museum. All these programs fall within the mission of the museum, which does not limit us to endeavors related to paleontology.

Come visit the museum's Discovery Room and experience natural history in the broad sense. Enjoy the "Museum Memories" exhibition again and again (this is your limited opportunity to see the collections of guns, photographs, and other materials that eventually will be put back in storage). In short, become more familiar with your internationally known museum of natural history.



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Thomas Jefferson to visit museum

Thomas Jefferson is scheduled to make an appearance at the Sternberg Museum in February, 2004. Several additional historic figures will visit as well.

Actually, Jefferson, and the other historic figures, will be portrayed by nationally-renowned humanities scholar Clay Jenkinson.

Jenkinson hosts "The Thomas Jefferson Hour," a nationally syndicated radio program produced by High Plains Public Radio in Garden City. The radio program looks at modern and historic topics from a Jeffersonian perspective. Jenkinson has immersed himself in the writings and opinions of Jefferson, and he attempts to express Jefferson's opinions and attitudes.

Jenkinson has presented his Jeffersonian perspective for 22 years. He has presented first-person portrayals in over 1000 presentations to audience, including Justices of the Supreme Court, members of the Cabinet, state legislatures, scores of Jeffersonian scholars, and hundreds of audiences in over 45 states.

In 1989, Jenkinson was one of the first

winners of the Charles Frankel Prize, the National Endowment for the Humanities' highest award, which was presented by George W. Bush.

In 1994, Jenkinson was the first public humanities scholar to present a program at a White House-sponsored event when he presented Thomas Jefferson for a gathering hosted by President and Mrs. Clinton.

Jenkinson was the chief on-air and historical consultant for Ken Burns' documentary on Thomas Jefferson, a film that won rave reviews by both scholars and audiences after its presentation on PBS.

Jefferson is a particularly interesting character to have at the Sternberg Museum. Jefferson, while best known for his political achievements like the drafting of the Declaration of Independence, is also known as a man of science.

In fact, Jefferson was the only president of the United States to be an amateur paleontologist.

Jefferson was particularly interested in the mammoth, giant ground sloth, and mastodon—fossils of which were found around Virginia.

Jefferson did not believe that a species, once existing in the "chain of being," could be removed from that chain. Each species must be linked together, the reasoning went, and removal of even one link would destroy the system. Thus, the mammoth, among the other great beasts found as fossils in the east, must be roaming the vastness of the west.

Among Jefferson's many commands to Lewis and Clark on their famous



Clay Jenkinson, humanities scholar, portrays many historic figures. Jenkinson will be in Hays in February, 2004.

exploration of the Louisiana Purchase was to find and document the mammoth and giant ground sloth.

In addition to Jefferson, Jenkinson will portray several other historic figures while he is in Hays. Programs are planned with Jenkinson as Meriwether Lewis, Robert Oppenheimer, and Jonathon Swift.

The programs will be presented on both the main campus of Fort Hays State University and at the Sternberg Museum. A total of four programs, featuring four different historic figures, will be offered. The full schedule of programs will be published as details are firmed up.

Sponsors of this program to date include the Vagabond Motel in Hays, Midwest Energy, the Kansas Geographic Alliance, and High Plains Public Television. Additional Sponsors are being sought. To find out how your group can participate, contact High Plains Public Radio by phone at 800-678-7444.

Calendar of Events

**Museum Memories:
A Centennial Exhibition**
No closing date set

Members' preview of Journey to South Africa
Friday, Nov. 21, 5–7 p.m.

Journey to South Africa: An Exhibit Experience
Opening Saturday, Nov. 22, 2003

Teacher Inservice workshops
Fossils in the classroom
Saturday, Feb. 21, 2004—Grades 5-8
Saturday, Feb. 28, 2004—Grades K-4

**Burgess Shale:
Evolution's Big Bang**
March 27, 2004 – October 3, 2004

Herp survey to be done by museum

There is a lot of meaning in the word “biodiversity.” Most simply, it describes the great diversity of living organisms.

Understanding the Earth’s biodiversity is a challenging task. Systematic biology is the branch of biology that works toward the naming, documenting, and classifying the vast array of life.

Biodiversity is not just something that exists in remote regions of the world; indeed it is all around us. We hear in the popular media about the destruction of habitats in far-off places, and that is of great concern, but loss of biodiversity is occurring even in Kansas, and there is still much to learn about it.

The Sternberg Museum recently was awarded a grant from the United States

Fish and Wildlife Service (USFWS) and the Kansas Department of Wildlife and Parks (KDWP) for a two-year study on some of Kansas’ biodiversity, in particular the amphibians, reptiles, and turtles (herpetofauna, or “herps” for short). The total project is valued at \$391,290.

Travis Taggart, Associate Curator of Herpetology, Curtis Schmidt, Research Associate in Herpetology, and Joe Collins, Adjunct Curator of Herpetology, spearheaded the project, along with Jerry Choate, Director, and Greg Liggett, Assistant Director. Taggart will serve as the project’s principal investigator.

The project will involve a state-wide survey of the herpetofauna, focusing on species that are of special concern

because of their population size or habitat loss.

Thirty species of herps will be targeted for study because they are either endangered, threatened, or in need of conservation. Additionally, at least eighteen additional species of herps may be present state, but have not previously been documented, so every effort will be made to locate them.

Much of their time over the next two years will be devoted to traveling the state, capturing and identifying animals, and learning basic information about those animals’ distributions and potential threats to their continued survival.

“This sort of basic research is lacking for many animal groups in Kansas. We don’t really have a firm idea of the number of herp species and their distributions, and that is the most basic kind of question that a biologist might ask,” explained Taggart.

Museum researchers will report back to the USFWS and KDWP on the status, distribution, population estimates, and habitat preferences of the herp species of the state. Additionally, an on-line database will be developed to record the study’s results and make the information more widely available.

Right now, roughly 1.5 million species of living organisms (plants and animals) are known to science. However, even after over two hundred years of looking and cataloging the life on Earth, we have only scratched the surface in understanding life’s diversity.

Various researchers estimate that, worldwide, from 8 to 80 million more species are yet to be described. The fact that we can only guess at the numbers of unknown species, and that our guess is only within an order of magnitude (multiple of ten), gives some hint of the task still before those who study biological systems.

Museums, and university museums in particular, are integral to the study of systematic biology. Museums are the databases where information about the living world is stored and cataloged for research. Museums employ the specialists working to unravel the complexity of the living world, and university museums have the advantage of tapping into experts in



Travis Taggart, Associate Curator of Herpetology, checks traps in Marais des Cygnes River. Taggart will be heading up a state-wide survey of amphibians, reptiles, and turtles.

wide-ranging fields for collaborative research endeavors.

Scientists consider it a race to document and understand the diversity of life before species are lost to an elevated level of habitat loss and subsequent extinction. In the day of Thomas Jefferson (see related story on page 3), many learned people thought that extinction was impossible. They viewed the interconnection between all species as so strong and unyielding that it was inconceivable for something to become extinct. The concept was called the “chain of being,” with every species linked together in a strong, interconnected chain. Removal of only one link, it was thought, was enough to cause the chain to fall apart and the system to collapse.

We now know that the system as a whole is more robust than that. Paleontology shows us that there have been repeated mass extinctions in the history of life; and life, so far, always bounces back—but it is always profoundly altered.

In historic times, we have seen the loss of many species, from the dodo bird and passenger pigeons, to the Tasmanian wolf, to the black-footed ferret right here in Kansas. We know that the loss of biodiversity worldwide is proceeding at an unprecedented rate, but we can only guess at what is being lost. By the



Curtis Schmidt, Research Associate in Herpetology, examines recently collected specimens. Schmidt will assist in the state-wide herpetology study.

end of this century, 30-65 percent of all species could be lost forever.

Basic research, such as this project on the herpetofauna of Kansas, is essential to better understand the life around us.

But why should we care about biodiversity?

All of the resources that make human life possible come from the Earth and its living inhabitants. Plants and animals provide raw materials for food, medicine, and industrial resources. From a utilitarian stand point, maintaining all of the living diversity maximizes the range of materials that we have to draw from.

For example, who knows what pharmaceuticals are waiting to be found in exotic plants from the tropics, drugs that might cure devastating human diseases?

There are also arguments for preserving biodiversity from moral, ethical, and esthetic grounds. All are important, but perhaps in a culture of “what’s in it for me,” the most compelling reason could be that we depend upon the environment around us, just as a fish depends on the quality of water in its fish tank. The system will allow us to muddy the waters only so far, and at some point there is no return.

Pure research such as this project, identifying the types of animals living in an ecosystem, better understanding their distributions and interactions, as well as research directed towards understanding the wide range of adaptations, not only help us better understand our interaction with the environment, but it leads us to as-yet-unimagined applied research to improve our way of life.

The Sternberg Museum is proud to be a part of this undertaking, and although the task is daunting, progress is being made.



An Italian wall lizard (*Podarcis sicula*) peeks out from its hiding place in Shawnee County, Kansas. This lizard is a non-native species that has been introduced into Kansas, where it is only found within the city limits of Topeka.

Insect garden started at museum

Visitors to the Sternberg Museum may notice a small, attractive patch of colorful plants as they drive into the museum's parking lot. But you will not see museum personnel spraying pesticides to kill the insects feeding on the plants. This is the museum's new insect garden!

"Right from the beginning, we wanted a garden to attract insects, to show people their life cycles, and to have specimens for

Manager and a Master Gardener herself, approached the group about the project, and they voted to take it on.

Terry Mannell, Ellis County Extension Horticulture Assistant, who heads up the Master Gardener program, thought the museum project sounded like a good one for the group.

"All of our projects must be educational," Mannell said, "and the

the Sternberg project so far and will continue to work on the garden next year.

"This year we planted mostly annuals to get started. Over the winter we will work on signage, while Thea decides which perennials to plant there in the future," Mannell explained.

Anyone interested in learning more about the Master Gardeners program can contact Terry Mannell at the Ellis County



The Sternberg Museum's insect garden is designed to attract interesting insects to be used in Discovery Room education. The garden is made possible with help from the Ellis County Master Gardeners.

the Discovery Room," explained Cameron Liggett, Museum Educator.

The garden became a reality this year with the help of the Ellis County Master Gardeners. The Master Gardener program began in the 1980s and has been in Ellis County for about 7 years.

Thea Haugen, Discovery Room

Sternberg project would be highly visible, more bang for the buck."

The plants for the museum's garden are selected specifically to attract insects, especially butterflies. Some of the plants produce flowers whose nectar insects are known to like, or the plant is a food source for the larval forms.

To become a Master Gardener, participants attend an intensive, 40-hour training on everything from basic botany, ornamental lawn plantings, and fruits and vegetables. Participants agree to donate at least 40 hours back to the county after their training.

Past group projects have included booths at the Ellis County Fair and the Lawn and Garden Show, an outdoor learning site at Roosevelt Elementary School, and an heirloom garden for Old Fort Hays.

There are currently 16 active Master Gardeners. All of them have helped with

Extension Office at 785-628-9430 or by email at tmannell@oznet.ksu.edu.



A black swallowtail butterfly caterpillar eats parsley leaves at the Sternberg Museum's insect garden.

Plants for caterpillar food in the insect garden:

- Snapdragons—buckeye butterflies
- Parsley—black swallowtails
- Milkweed—monarchs
- Black-eyed Susans—silvery checkerspot butterflies
- Stinging nettles—question mark, red admiral, hoary comma, eastern comma butterflies

Charitable giving to Sternberg Museum

Are you a member of the Sternberg Museum Association? Did you know that some or all of your membership counts as a charitable contribution and is tax deductible?

If you are interested in joining the museum, simply fill out the form below and begin to enjoy all the great benefits, including continued subscription to The Pteranodon newsletter, discounts in the Museum Store, free or reduced admission to more than 200 ASTC member museums all around the country, free admission to the museum, free or reduced admission to

museum-sponsored programs, and much more!

Already a member? Good for you. Don't keep the secret to yourself. Encourage your friends to join as well.

Have you considered an additional tax-deductible gift to the museum? All monetary gifts received in 2003 are tax-deductible for this year to the full extent allowed by law.

Are you looking to reduce your current tax burden? Contact the Sternberg Museum to find out how, through charitable giving, estate planning, and

other vehicles, you could possibly reduce your taxable income while maintaining your present income.

Every gift to the museum, no matter how large or small, is gratefully received. All donations help support the educational mission of the museum through research and programming.

Contact the museum if you have any questions. We would be happy to visit with you.

The Sternberg Museum of Natural History wishes everyone a joyful and happy holiday season.

Sternberg Museum Store Sales!

Where can you find the most unique and educational gifts this holiday season? At the Sternberg Museum Store, of course.

During this holiday season, the store will feature several sales events especially designed to make your holiday shopping easy, affordable, and fun. Come see for yourself.

Starting right after Thanksgiving, the store will begin its Community Appreciation Sales Event.

From November 28 through December 14, all shoppers will get 10% off all store merchandise.

Members will receive an additional 10%, for a total of 20% off on all store

purchases!

The second annual Frost Fest will be the weekend of December 6 and 7 this year. The first 100 shoppers in the museum store will receive a free gift, and the 10% off sale will be going on that weekend as well.



Sternberg Museum Associates

Enclosed is my check made payable to Sternberg Museum of Natural History, or charge to my:

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Mail to: Sternberg Museum of Natural History, 3000 Sternberg Drive, Hays, KS 67601-2006

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No. 27



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*— Charles F. Sternberg
The Life of a Fossil Hunter*

"I have no record of the thousands of fossil leaves I have collected from the sandstone of central Kansas. I have never kept a single specimen for myself, although I love them dearly, and it has often been hard to give them up. They had to go, and they went, often for less than they cost me in labor and expense, into the hands of those who could give authoritative knowledge of them to the world, and preserve them in great museums for the benefit of all."

