

Texas Master Naturalists ROLLING PLAINS CHAPTER

NEWSLETTER

Vol. 6, No. 6

<http://txmn.org/rollingplains>

June 2014

On the Bobcat Trail

*Researchers are Studying Wildcats in the Fort Worth Area
by TPWD Staff*

A new study will help us better understand how bobcats live with humans in highly urbanized landscapes.

Researchers, wildlife managers and government officials from the Texas Parks and Wildlife Department, Utah State University, Welder Wildlife Foundation and the U.S. Department of Agriculture's National Wildlife Research Center are collaborating on a study on the ecology of bobcats in the Dallas-Fort Worth area.

"Bobcats have learned to thrive in urban areas



Utah State graduate student Julie Golla examines one of 10 bobcats trapped and equipped with GPS collars for an urban bobcat study.

and will always be a part of our urban wildlife community," says Derek Broman, TPWD urban wildlife biologist in Dallas. "The goal of this research effort is to answer important questions about urban wildlife to help DFW-area cities and counties improve communication to their residents about how wildlife and people can coexist."

Bobcats are the most common wildcat in North America. Not to be confused with the much larger mountain lion, bobcats typically weigh between 11 and 30 pounds and have short tails, long legs and large feet. Though reclusive and mostly active at night, bobcats frequently leave cover to hunt before sundown and can be seen in a variety of habitats
continued on page 2

LOCALS

JUNE 3: Rolling Plains Chapter monthly meeting is at River Bend Nature Center. **Location:** 2200 3rd Street, Wichita Falls, Texas. **Time:** 7:00 p.m. **Program:** Ben Jacobi will speak on storm chasing.

JUNE 7: National Trail Day at Lake Arrowhead State Park. We will help with a hike on the Onion Creek Trail. Due to the low water level, the Mark Howell memorial Kid Fishing Day will not take place. **Location:** Lake Arrowhead State Park Wildlife Refuge **Time:** 10 a.m. **VOLUNTEER OPPORTUNITY**

Webinar-June12 2-4 pm

Webinar--Fading Forests: Protecting America's Trees from Non-Native Pests and Diseases
Americans count on trees and forests to provide shade and shelter, jobs and products, and clean air and water, both today and for generations to come. However, non-native insects and diseases are destroying trees and forests. Join a webinar sponsored by the Environmental Law Institute, co-sponsored by the National Invasive Species Council on June 12 from 2-4 pm EDT. Learn more and **RSVP at the Environmental Law Institute.**

throughout Texas. In recent years, bobcat sightings have increased in the Metroplex.

The study area includes approximately 49,000 acres bordered by Texas Highway 183 to the north, Texas Highway 161 to the east, Texas Highway 180 to the south and Interstate 820 to the west. The area includes parts of Fort Worth, Hurst and Arlington. Ten to 15 bobcats will be captured and fitted with Global Positioning System collars so researchers can follow their movements and activities for one year.

Before being released, each bobcat is photographed and tagged to provide a catalog of images for future identification. Blood, hair, scat and parasite samples are collected from the animals for analysis on genetics, diet and pathogens.

In addition to learning more about the life of bobcats in urban areas, researchers will also work with Texas Master Naturalist chapters to investigate the role that citizen science groups can play in complementing, supplementing or replacing field-based scientific investigations.

Master Naturalist members will be trained in the identification of bobcat signs. Location data on bobcat sightings from Master Naturalists and other public resources, such as iNaturalist.org and the DFW Wildlife Hotline, will be compared to the GPS collar data to identify correlations and determine whether citizen science programs can provide a long-term, cost-effective method for urban bobcat monitoring in the Metroplex.

Chapter Activities and Observations During May 2014



During the chapter sponsored Wildflower Walk, May 10 at Lake Arrowhead State Park, Nila Dowlearn from Wichita Valley Nursery helped the group identify flowers found inside the state park including: prairie larkspur, wine cup, spiderwort, yarrow- achiliila millefolium, night shade, indian blanket, ratany, shaggy portulaca, prairie agalinis, mock bishop weed, Texas star, plains coreopsis, wild onion, white primrose, indian paintbrush, englemen daisy, great flowered milkweed, antelope horn, black-eyed susan, prickly poppy, Texas vervane, fleabane daisy, basket flower, sensitive briar, mimosa glandulosa- mesquite blooms, prosopis glanulosa, fragrant gallardia.



While watching the storm clouds forming about 7:00 p.m., May 7, I took this photo of an unusual cloud coloration. The coloration is on the edge of a Pileus (or mushroom cap) cloud forming above cumulus clouds. Warm moist air in the cumulus rises and the clouds tower upwards. Sometimes their vertical growth pushes up a layer of moist air above them. The air layer is forced up into lower pressure surroundings and cools. The water vapor in it condenses forming a misty veil-like layer of droplets above the cumulus-pileus cloud that is ideal for iridescence. The colorization only lasted 5 minutes as the sun briefly poked out of the storm clouds brewing. The pink on the back edge of the pileus was much brighter than the photo shows and the green was absolutely luminous. I was glad I had my camera handy as I have never seen this before. Nature is amazing!

-Terry McKee



Ancient ‘Fish Lizard’ Graveyard Discovered Beneath Melting Glacier

By Tanya Lewis, Staff Writer, LiveScience.com

Dozens of nearly complete skeletons of prehistoric marine reptiles have been uncovered near a melting glacier in southern Chile.

Scientists found 46 specimens from four different species of extinct ichthyosaurs. These creatures, whose Greek name means “fish lizards,” were a group of large, fast-swimming marine reptiles that lived during the Mesozoic Era, about 245 million to 90 million years ago.

The newly discovered skeletons are from both embryos and adults. The creatures, likely killed during a series of catastrophic mud slides, were preserved in deep-sea sediments that were later exposed by the melting glacier, the researchers said in the study, published May 22 in the journal *Geological Society of America Bulletin*.

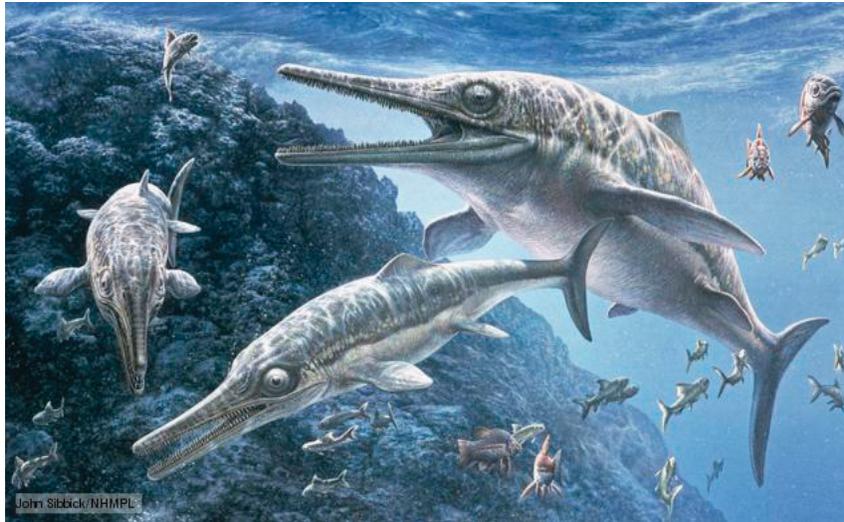
Ichthyosaurs had torpedo-shaped bodies with vertical flippers, and long snouts with teeth.

“They look a lot like dolphins today,” said Wolfgang Stinnesbeck, a paleontologist at the University of Heidelberg in Germany and the leader of the study.

Stinnesbeck and his team found the Early Cretaceous (150 million to 100 million years old) specimens near the Tyndall Glacier in the Torres del Paine National Park in Chile. As the glacier melted, the rock containing the fossils became exposed, Stinnesbeck told Live Science.

Very few of the ancient reptiles have been found in South America before; only a few remnants of rib cages and vertebrae had been found.

The largest ichthyosaur skeleton unearthed in Chile measures more than 16 feet (5 meters) long. The skeletons were extremely well preserved — some even retained soft tissues. The researchers also found fossil embryos inside a female specimen. They assigned the fossils to the family Ophthalmosauridae.



These “fish lizards” probably hunted in an underwater canyon near the coastline, pursuing a diet of squid like animals and fish, the researchers said. Occasionally, there would have been mud flows that cascaded into the water like an avalanche, and the researchers think these mud flows killed the ichthyosaurs. The animals likely became disoriented and drowned, getting sucked into the deep sea, where their bodies were entombed in the sediment, the researchers said.

Ichthyosaurs swam the seas at the same time as dinosaurs roamed the Earth and pterosaurs reigned the skies, but they may have died out before their land- and air-dwelling brethren, Stinnesbeck said. A global depletion of oxygen in the oceans, possibly due to volcanism, may have caused the extinction of these seagoing reptiles, he said.

The discovery of these creatures establishes the Chilean glacier as one of the prime sites for Early Cretaceous marine reptiles worldwide, the researchers said. But getting to the fossil site is half the battle. To reach it, the team had to drive for five hours, hike for 10 to 12 hours to camp and then hike another two hours, sometimes in heavy rain, hail or snow.

“This has been one of the toughest field camps I ever had,” Stinnesbeck said.

Follow Tanya Lewis on Twitter and Google+. Follow us @livescience, Facebook & Google+. Original article on Live Science.



One gene has been found to control butterfly patterns. Some butterflies use the patterns on their wings to mimic toxic species that predators avoid, improving their chances of living longer. The harmless common Mormon butterfly has four forms and can mimic the poisonous common rose. Mutations on a single gene, and changes in the protein it produces, alter the form of the butterfly.

Fleas are small red-brown wingless insects that feed on the blood of mammals and birds. They are compressed side to side so that they can move through fur and feathers easily and have long legs that let them jump 100 times their height. They



can survive for months without food.



The rabbit's long ears serve two main functions. The first is so that they can catch sound coming from any direction. Rabbits can move their ears independently so they can hear in two directions at once. The second is that they give off heat from their body through a vast network of blood vessels to keep the rabbit cool, since they can't sweat or pant.

Invasive Spotlight: Common Water Hyacinth (*Eichhornia crassipes*)



Common water hyacinth is a free-floating, aquatic invasive

species native to South America. It has stalks of showy blue-violet flowers. Plant height may vary from a few centimeters to more than a meter tall.

Leaves are broad and leathery and are held above the water by a swollen, spongy leaf base that forms a mat with the ability to float.

Fibrous roots dangle in the water from the underside of the mat.

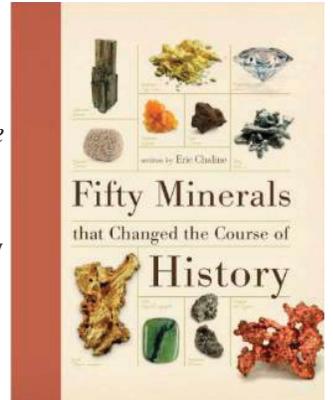
Originally introduced as a water-garden plant in the late 1800s, it has since spread to more than 30 states. It rapidly spreads vegetatively, but also can produce seed in favorable conditions.

Dense mats harm native vegetation and fish communities by lowering light penetration and using up dissolved oxygen. They can also impede recreation, boat traffic on waterways and clog irrigation canals and intake pumps.

RESOURCE CORNER

Fifty Minerals that Changed the Course of History
by Eric Chaline
Hardback: 224 pages
ISBN-10: 1554079845
Price: \$18.31

Fifty Minerals that Changed the Course of History is a beautifully presented guide to the minerals that



have had the greatest impact on human civilization. These are the materials used from the Stone Age to the First and Second Industrial Revolutions to the Nuclear Age and include metals, ores, alloys, salts, rocks, sodium, mercury, steel and uranium. The book also includes minerals used as currency, as jewelry and as lay and religious ornamentation when combined with gem minerals like diamonds, amber, coral, and jade.

Entries are organized by name and considered for their influence in four categories: Industrial, Cultural, Commercial and Scientific. More than 200 elegant drawings, photographs, paintings and excerpts from literature highlight the concise text.

Ubiquitous or rare, the minerals described in *Fifty Minerals that Changed the Course of History* have been fundamental to human progress, for good or evil. This attractive reference gives us fascinating insight into our undeniable dependence on minerals.

Chapter Contacts:

Jim Hensley, President 569-4713; Rebecca Herd, Vice President 232-5607; Cynthia Archibald, Secretary 704-8474; Larry Snyder, Treasurer 569-4534

Committees Chairperson:

Leslie Fernandez, RiverBend Liaison 767-0843; Paula Savage, Newsletter Editor and Designer 691-0231, pasavage@sbcglobal.net; Tami Davis, Website Manager 224-0131; Activities Chair: Terry McKee 766-4097; Dian Hoehne, Communication Chair 692-7234

Advisor: Robert Mauk, TPWD Advisor 766-2383