

The Paleo Times

Volume 6 Number 6

June 2007

The Official Publication of the Eastern Missouri Society For Paleontology

EMSP SOAPBOX

By Abby Lee

The weather has been fairly great lately. I just got back from digging quartz and looking for diamonds in Arkansas. I also stopped by the awesome swamp near Bixley where the Ivory Bill Woodpecker may yet exist. I highly recommend the outdoor activities that the state just below us has to offer. The locals were very nice and many of them have been to the Tucson show. One rock shop had hadrosaur vertebrae resembling the ones Mike Fix excavated in southern Missouri.

May Meeting Minutes

A big thank you to Janis Tregworthy for giving her presentation and updates about her Mammoth excavation at Principia College in Alton, IL. For those of you that have missed her talks, Professor Tregworthy leads an ongoing excavation of a mammoth discovered on the college campus a few years ago. She started a class to teach archaeological/paleontological techniques to students. A preparation lab allows the public to see the specimen and the ongoing reconstruction of the animal.

Upcoming Events

June Meeting: Room 203 at WashU, details below

TBA, if no speaker we'll watch videos, please consider bringing some refreshments and fossils. Also, please bring some videos. This meeting will be a chance to pin down some field trips. The winners of the Science Fair will present their work and receive awards from the club.

Mastodon State Historic Site, June 9th. Free. 1050 Museum Drive (In Imperial off I-55).

www.mostateparks.com

They are requesting our help again this year. The Stades plan to attend. Please consider attending. Please contact Mastadon State Park (636-464-2976) and let them know you are coming ASAP.

Exhibits on Missouri fossils and free admission to the historic site's museum will be featured. Bring the entire family to hunt through fossil-bearing gravel piles donated by Martin Marietta Aggregates. Members of the Eastern Missouri Society for Paleontology will display a variety of fossils spanning the geologic history of Missouri. Tours to the former excavation site will be offered. Our club is often asked to volunteer at this event.

10th Annual Missouri Mines Rock-swap

Event Dates: 06/08/2007 - 06/10/2007

Rock hobbyists from all over the United States will swap and sell rock and mineral specimens, fossils, rock jewelry and other rock-related items. The historic site's museum will be open free of charge during scheduled hours throughout the event. The historic site co-hosts the rock swap with the Mineral Area Gem and Mineral Society and the Greater St. Louis Association of Earth Science Clubs.

75 Highway 32; Park Hills, MO; 573-431-6226

<http://www.mostateparks.com>

Summer Picnic. Rich Poropat has reserved the Kirkwood park pavilion for **July 29th** for our annual summer picnic. The club buys the drinks and grills the meat. Members bring side dishes and dessert.

Fossils show and tell, swapping, and a bit of selling usually occurs as well.

Field Trips

The Mildstadt trip was canceled due to lack of trip leader. For those interested let's figure out a weekend to make this work.

Kansas River – Canoeing for bones is postponed until lower water level.

DUES ARE DUE

Our treasurer, Pete Smith will accept dues payment for a full year. Dues are \$15.00 per household per year and are payable on the anniversary date printed on your newsletter address label. See Pete at the next meeting or mail a check (payable to Eastern Missouri Society for Paleontology) to:

EMSP
P.O. Box 220273
St. Louis, MO. 63122

Raffle

A new raffle item was donated by Dave Lukens. It is a Venus Clam from Rock Pit, FL thought to be 1 million years old. The clams are fossilized with nacre intact and beautiful crystals inside. The clams hit the market only recently. The sell for over \$100.00 on line and at shows. More about this at up-coming meetings.

Distribution of the Newsletter by email

We keep adding to the list of club members who have elected to receive the newsletter by email. Many will go out by email this month. This is a cost savings measure for the club. Each newsletter currently costs 39 cents to mail. This is over \$4.00 per person each year for postage alone. A sign-up list will be available at meetings, or email Tom Lee (motirek@gmail.com) to begin to receive the newsletter electronically.

Paleo-shorts

(articles provided by Clarence Zacher)

Smithsonian Dec. 2006 p.14

Mammal species dominance and extinct patterns fit a regular pattern of 2.5 million years. A study by Utrecht University in the Netherlands thinks the Earth's orbit patterns can explain this. 22 million

year old rodent fossils from Spain were analyzed. Extinctions in the fossil record of this region coincided with shifts in the Earth's tilt (every 1 million years), or a rounding of the Earth's orbit (2.5 million years). These orbit patterns cool the Northern Hemisphere. A round phase orbit is in process now; however, it is important to note that extinctions could take 10,000+ years into the orbit change to drastically change the climate.

Outfoxed by Climate Change

Both below from Smithsonian June 2007 p.14

Stockholm University and other institutions compared DNA from modern foxes in Scandinavia with DNA from the remains of arctic foxes of varying latitudes 12,000-19,000 years ago. Their findings suggest that present foxes are descended from the northernmost arctic foxes. They hypothesize that foxes of lower latitudes were wiped out at the end of the ice age 10,000 years ago- reducing the territory for cold adapted foxes. Thus, the colder climate ones persisted until enough generations could adapt and move south again.

A Dinosaur's Own Digs

The first definitive dinosaur burrow has been located in the 95-million year old deposits in southwestern Montana. The burrow contained one adult and two juveniles- dubbed *Oryctodromeus subicularis*. The adult was seven feet long. It had digging features including a shovel-like snout and specialized shoulders. The den was likely to protect the young. This adds evidence to the parental care of some dinosaur species.

Asian Trek: Fossil puts ancient humans in Far East

Science News: This Week

April 7, 2007

A 40,000 year old early human skeleton has been excavated on a tree farm of a northern Chinese cave. The features of the skeleton are a testament to the diversity of humans that migrated out of Africa beginning around 60,000 years ago. The skeleton contains a mix of "archaic" features- adding to the debate of whether ancient human populations, especially the Neanderthals, interbred.

The finds include limb bones, a lower jaw, and teeth of one individual. No material culture artifacts were found in association with the remains.

The excavators from the Chinese Academy of Sciences in Beijing, led by Hong Shang believe that the skeleton represents mingling between early human populations. The limb bone and jaw are most similar to a modern human; while the teeth and hand bones resemble those of Neandertals. Neandertals lived in Europe and western Asia from 130,000-30,000 years ago.

Erik Trinkaus of Washington University in St. Louis coauthored the study and states “As early modern humans spread out of eastern Africa, they interbred with other [Homo] populations [to different degrees].”

There is only one other modern- human skeleton from eastern Asian known to the scientific community from the time of the Chinese remains. A skull found in Borneo in 1958 dates between 45,000-39,000 years ago. Graeme Barker from the University of Cambridge in England and his colleagues wrote of this skeleton in the March issue of the Journal of Human Evolution.

Anthropologist Katerina Harvati of the Max Planck Institute for Evolutionary Anthropology believes modern humans of eastern Africa could have had some archaic-looking traits without interbreeding with Neandertals. Later generations of modern humans could have gradually lost these features. With any hypothesis concerning the interbreeding issues, there is simply too little fossil data to form a conclusion. With this in mind, anthropologist Chris Stringer of the Natural History Museum in London remarks “I will keep an open mind on the extent of hypothesized [interbreeding].” He suspects little did occur.

On a side note, the Chinese skeleton has evidence of regular use of footwear. The strong legs are in contrast with a delicate toe that was likely protected from the stress of barefoot walking, according to Trinkaus.

Announcements

All:

I am heading to Florida from 7/5 - 7/15. I know of some fossils sites which I will be going to - Peace River, Rucks Pit (Okeechobee, Fl) for clams w calcite, Honeymoon beach state park (Corals, shells), and mouth of the Withlacoochee River near Yankeetown.

I am looking for suggestions for other publicly accessible fossil collecting sites that people are willing to direct me to as I have another day or two that will be free to hit other places. Any information would be appreciated.

David Lukens

dmslukens@yahoo.com

Especially with extra room this month (sorry I've been out of town for many reasons), Dave asked for a place for announcements. Feel free to send in requests for future newsletters.



The next meeting of the Eastern Missouri Society for Paleontology will be on Friday, June 8th, 2007 at 7:30 pm in room 203 of the new Earth & Planetary Sciences Building on the campus of Washington University. The Earth & Planetary Sciences building is on the southwest corner of Hoyt Drive and Forest Park Pkwy. There is a large parking lot just across the street. Please see the map below for more information.

What is EMSP?

The Eastern Missouri Society for Paleontology (EMSP) is a not-for-profit organization Dedicated to promoting the enjoyment of fossil collecting. It is open to all individuals interested in learning about the history of life on earth. The club membership includes professional paleontologists as well as amateur hobbyists. The EMSP provides an open forum for the exchange of information and access to expertise on collecting, identifying, preparing and displaying fossils.

EMSP meetings are held on the second Friday of every month (except July, August and December) at 7:30pm in the Earth and Planetary Sciences Building on the campus of Washington University. Each meeting includes an informal exchange of information and speakers on a variety of fossil-related topics.

Weather permitting, field trips to fossil collection localities around the St. Louis area are held each month. Led by experienced collectors, these trips are a fun way to augment discussions at the monthly meetings. The club participates in joint field trips with other paleo clubs, visiting fossil sites throughout the United States. EMSP is also a proud to be involved in partnerships with the St. Louis Science Center and the Greater St. Louis Association of Earth Science Clubs, Inc.

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