

The Paleo Times

Volume 7 Number 5

MAY 2008

The Official Publication of the Eastern Missouri Society For Paleontology

EMSP SOAPBOX

By David Lukens & Don Howell

If you have any articles, comments, or need to communicate with me I can be reached through the following: dmslukens@yahoo.com (personal) or contact me at 636-751-8746 (cell).

REMINDER: I-40/64 will be closed between I-270 & I-170, if you use this route to get to the meeting, remember that you will need to take a different route.

President's Corner

I was sorry to have missed the April meeting; I heard it was great. I would like to say thanks to Brian for filling in for me at the meeting. Thanks also need to go out to Stephanie Novak and Carl Campbell for prepping members, who will be going to Montana, in what the expectations will be this year. Thank you Matt Forir for the fascinating presentation on the work you are doing in Riverbluff Cave near Springfield Missouri. The April Field trip was great despite the drizzle in the morning. As far as I remember everyone found something to get excited about.

I would like to send special thanks to the members who shared their memories of Joe Bolser in the last "Paleo Times". I had a hard time coming up with just one memory, all of which also included Addie. There were the times in the field where some one would tell Joe that nothing was left to find in a spot and then 5-10 minutes later he would find something, Addie sitting in the shade watching. Another favorite was breakfast at the Hill Top

Cafe. I had the privilege to pick Joe's brain about fossils and hear their stories while eating at a table with just Joe and Addie. I enjoyed watching the friendship they had and I hope my wife and I can be as great of friends as they were when we have been together another twenty or more years.

I look forward to seeing everyone at the May meeting!

Don Howell III

Next meeting

Friday, May 9th at 7:30 pm in the New Earth and Planetary Sciences building at Washington University (see more details below).

Business for the next meeting:

- Planning for an May field trip
- Coon Creek trip is canceled (not enough signups – will be rescheduled for March 2009)
- Discussion of possible road trips to either Burpee Museum (northern ILL) to see their T-Rex or a trip to River Bluff Cave.

CARD FROM ADDIE

Addie sent us the following thank-you card.

“Dear Friends

Thank you all for the beautiful arrangement of plants, your cards, and remembrances. Joe loved fossil hunting and the adventures we had on our many trips. He wanted to be well enough to join the dinosaur dig once again... it was not to be. Thank you again for your thoughtfulness.

Your friend

Addie.

Thanks / Congratulations

Thanks to Don Howell for leading the field trip to the Route 21 and Highway M area. Six of us showed up to collect. While the day was cloudy and cool, we did not get much rain. We had a good time collecting from the Decora and Kimmswick formations.

Thanks to Stephanie Novack (**and congratulations on the wedding**) for the update on the planning for Paleotrek in Jordan Montana this summer. We all enjoyed her overview of the findings on the geological survey that she, Jamie, and Carl are working on. In addition, example forms were passed out for recording our findings this summer.

Thanks to Betsy Slinker who is a 4th grade science teacher from Green Tree Elementary School in Wentzville MO. She was partially funded by the club last year for Teacher Trek to Montana. She gave an excellent presentation on how she has used the information from the dinosaur / fossil hunting and combined with the history of Lewis and Clark and uses it in her classroom.

Thanks to all the EMSP members for voting to support Teacher Trek with \$500 in funding again this coming summer.

Thanks to Matt Forir for his update on River Bluff Cave. A lot appears to have gone on at the cave since his last presentation about 2 years ago. A lot of new fossils have been discovered including parts from an armadillo (3'-4' long), microfossils, rodents, amphibians, a hellbender salamander, and a worm (1st in the worm). It was an interesting presentation, especially for those who were not there for the previously presentation.

Upcoming Events/ **Field Trips**

Lee Creek Mine (Eastern N.C.) – The 5 slots for the spring trip have been filled.

Illinois State Geological Survey is running a field trip on May 31, 2008 (not sure if it is filled already). Additional information can be obtained on the

website at <http://www.isgs.uiuc.edu/education/field-trips/intro.shtml>

Annual EMSP Picnic – Reservations have been made for the shelter at Kirkwood Park for Sunday July 27th, 2008. Details will follow, as the date gets closer. It is a great opportunity to meet, talk, and have fun with other club members. We will also have a fossil swap for anyone who is interested.

We will have a booth Nov 7-9 at the Stratford Inn Rock & Fossil show (Fenton). We will have 2 - 8ft long tables costing us \$130 to rent. This will give us plenty of time to make our displays and price the fossils. So look through your stuff for items to donate or if you are out collecting this summer, pick up a few more for the club.

Paleo-shorts

-Original and summary articles provided by members of EMSP. Where possible, I have tried to add in website where you can read more.

From David Lukens

<http://semissourian.com/apps/pbcs.dll/article?AID=2008563555273>

A replica of the Missouri state dinosaur was been opened at the Bollinger County Museum (<http://www.bcmnh.org/>). This is the first permanent exhibit of the *Hypsibema missouriense*, which is a 30 feet long hadrosaur. The exhibit was built by Guy Darrough (who is the museum's curator and co-founder) and Lost World Studios. (DLL - The opening of the exhibit was attended by several members of EMSP including Mike Fix and Bruce Stinchcomb who both helped cut the ribbon and by Marie Shoemaker who provided the information on the article to me (thanks)).

<http://news.bbc.co.uk/2/hi/science/nature/7329505.stm>

Thursday, 3 April 2008

Fossil human coprolites have been found in cave in Oregon. The feces date to 14,000 years ago, which is prior to the Clovis culture, in addition to animal bones, and artifacts. Analysis of the feces confirmed that they are human and indicated that the cave dwellers are related to groups from Siberia. Which location will depend on the water levels. More details will be forthcoming. If you want to go you will need to sign up or contact me ahead of

time (dmslukens@yahoo.com). We also need to know who among club members can provide canoes (and lifejackets) for the trip. We need to make sure there are enough canoes for everyone.

September Field Trip – Possibly Mark Twain lake, will work out details as we get closer.

November Field Trip – maybe Millstadt Illinois if we can get access to the property.

We will have a booth **Nov 7-9 at the Stratford Inn Rock & Fossil show (Fenton)**. We will have 2 - 8ft long tables costing us \$130 to rent. This will give us plenty of time to make our displays and price the fossils. So look through your stuff for items to donate or if you are out collecting this summer, pick up a few more for the club.

Notes from the May Meeting

During the June meeting, Glori L'Ecuyer will be awarding prizes for the Science Fair awards for the related to paleontology. This year there are 3 winners. Each will receive a fossil board and a years membership in the club.

In addition, 2 committees were formed. The guest speaker committee is headed by Carl Campbell with Bruce Stinchcomb assisting. I am heading the Field Trip committee and am looking for others to help. If you have suggestions of places to go, please let me know. We will be looking to form some other committees in the future if we can get volunteers.

Addie has informed the club that she will be donating the "sale" fossils that she and Joe had to the club. Anyone who has been to the Rock and Fossil shows and seen the collection of items that they had know that this is a great gift to the club. It was motioned and passed that the money from the sale of these fossils will be used to establish the "Joe Bolser Memorial Fund". This money will be used either to fund scholarships or possibly to help fund a teacher for TeacherTrek in Montana.

We are also hoping that members of EMSP will also be willing to donate money to the fund to help jump start the fund. If you would like to donate to the fund, please send the money to the club post

office box (see address at end of newsletter) with a note that it is for the Memorial Fund.

In early June, Addie will be coming up to Jordan Montana and some of Joe's ashes will be scattered at one of his favorite places.

Paleo-shorts

-Original and summary articles provided by members of EMSP. Where possible, I have tried to add in website where you can read more.

From David Lukens

<http://semissourian.com/apps/pbcs.dll/article?AID=2008563555273>

A replica of the Missouri state dinosaur was been opened at the Bollinger County Museum (<http://www.bcmnh.org/>). This is the first permanent exhibit of the Hypsibema missouriense, which is a 30 feet long hadrosaur. The exhibit was built by Guy Darrough (who is the museum's curator and co-founder) and Lost World Studios. (DLL - The opening of the exhibit was attended by several members of EMSP including Mike Fix and Bruce Stinchcomb who both helped cut the ribbon and by Marie Shoemaker who provided the information on the article to me (thanks)).

<http://news.bbc.co.uk/2/hi/science/nature/7329505.stm>

Thursday, 3 April 2008

Fossil human coprolites have been found in cave in Oregon. The feces date to 14,000 years ago, which is prior to the Clovis culture, in addition to animal bones, and artifacts. Analysis of the feces confirmed that they are human and indicated that the cave dwellers are related to groups from Siberia and Eastern Asia. This, along with other evidence indicates that migration to North American was likely from Siberia.

<http://news.bbc.co.uk/2/hi/science/nature/7339508.stm>

10 April 2008 BBC

A 92 million year old fossil from Lebanon, is unusual, it is a snake with two rear legs. Scientists in France used intense X-rays to prove that the 3 feet long animal, known as *Eupodophis descouensi*, had one visible leg but also another leg buried under the rock surface. The legs are at the far end of the

body and the rock containing the fossil is broken into two pieces. In addition some body parts are either missing or have been moved during preservation. The leg bones are clear but are very short and would have been useless in life. The machinery used to examine the fossil can also produce a 3-D model of the fossil based on hundreds of scans of the remains.

BBC 15 April 2008

<http://news.bbc.co.uk/2/hi/science/nature/7347284.stm>

Studies of 37 million year old fossil teeth from Northern Egypt indicate that the ancestors of elephants likely led a life like hippos. They probably lived on plants in rivers and swamps. DNA evidence indicates that elephants are related to manatees, dugongs, and the rabbit like hyrax. Scientists used the different patterns of atoms in the teeth of the *Barytherium* and *Moeritherium* to determine their lifestyle and diet. The atoms and isotopes in the teeth are similar to those found in semi-aquatic animals. It is unsure why these animals left the water and eventually became land dwelling elephants.

<http://www.paleontologynews.com/story.asp?ID=279038&Title=Triceratops%20set%20for%20roaring%20success%20at%20Paris%20auction>

An auction in Paris is hoping to set a world record for the sale of a triceratops skeleton. The asking price is \$800,000 though the sale price is expected to be more. The skeleton is from the badlands of North Dakota and was found in 2004. The skeleton is 70% complete with only a few major bones reconstructed. The dinosaur is one of several owned by a private collector who previously had them on display at their chateau. There are number of other fossils for sale at the same auction including a saber tooth cat skull (\$60,000) or an edmontosaurus skull for \$120,000.

<http://www.signonsandiego.com/news/northcounty/20080414-9999-1m14sloth.html>

Paleontologists working on a ranch site near San Diego that is being converted to home have found the skeleton of a *Nothrotheriops shastensis* (a giant ground sloth). The sloths which were 9 feet tall and weighed a quarter ton lived between 100,000-120,000 years ago. Paleontologists previously recovered tusks and jawbones from a mastodon from the same site. So far, parts of the pelvis, ribs, vertebrae, and legs of the sloth have been found.

Giant ground sloth fossils have been found in the San Diego area previously but they are not common.

<http://www.paleontologynews.com/link.asp?ID=277975&Title=Teeth%20of%20saber%20tooth%20tiger%20scanned>

In New York, CT scans are being made on the fossilized teeth of saber tooth cats to learn more about them. The 30,000-year-old teeth are being studied to determine how fast the teeth grew. Due to the size of the teeth, the scanning may take several hours. The teeth were recovered from the La Brea Tar Pits in Los Angeles. It is hoped that information on the growth rate of the teeth can be used for other animals such as mastodon and dire wolves. It may also provide more data on their diet, life cycle, and other information.

<http://www.cnn.com/2008/TECH/science/04/16/neanderthal.sound/index.html>

A scientist in Florida has reconstructed what a Neanderthal's voice would sound like. The sounds were based on a model of the larynx made in the 1970's. The sounds are unlike those that modern humans use to make language. There are strange and sound like a cross between a croaking frog and burp.

BBC 4/24/08

<http://news.bbc.co.uk/2/hi/science/nature/7358868.stm>

New information indicates that about 150,000 years ago, humans began to split into 2 species before coming back together. It is believed that this separate was caused by arid conditions in Africa that separated the populations. At the time of the split, Homo Sapiens only existed in Africa. These conclusions are based on analysis of DNA in modern humans in Africa. The evaluation of the mitochondrial DNA (which is passed down by the mother) shows two major groups: one in east and West Africa and the rest of the world and the other from the Khoi and San people (Bushman) of southern Africa. The suspected cause of the separate is massive droughts in Africa between 90-135,000 years ago.

<http://www.newsobserver.com/news/story/1048580.html>

New evidence has been found that the T-Rex is related to modern birds including the chicken. This is based on studies by paleontologists including

Mary Schweitzer who previously recovered DNA from a T-rex leg bone. Analysis of the protein fragments showed similarities on the molecular level. This new testing methods provides a tool to use for tracing molecular evolution.

<http://www.sciencedaily.com/releases/2008/04/080422171449.htm>

While waiting at a museum in Mexico, an American paleontologist made an important find about clam crushing crabs (say 3 times fast). While at the museum he noticed the 68 million year old fossil of a crab, which had different size claws. These types of crabs had previously only been traced to 48 million years ago. In addition to being larger than most late Cretaceous crabs it had a curved tooth on the large claw, one which scientists believe is used for peeling shells open. After discussions, the Mexican paleontologists were able to show another similar fossil. Based on the unique features, the new species has been named *Megaxanthozogou*.

<http://www.sciencedaily.com/releases/2008/04/080423185112.htm>

New information is pointing to what caused the breakup of the supercontinent Gondwana 180 million years ago. Computer studies in Germany point to the continent breaking itself into 2 large pieces. Magnetic and gravity anomaly data indicate that the break up began 183 million years ago and it split into eastern and western sections. About 30 million years later, these plates split apart from the continents similar to today.

<http://www.nytimes.com/2008/04/22/opinion/22tue4.html>

Results are in from the triceratops auction in Paris, the skeleton sold for \$942, 797. The 65 million year old skeleton was found in N. Dakota in 2004. The buyer was anonymous as is the destination.

<http://www.paleontologynews.com/link.asp?ID=280422&Title=Badlands%20South%20Unit%20could%20return%20to%20Sioux>

(note – this is a very long article so I only briefly summarized it – DLL)

Discussions are currently ongoing between the National Park Service and the Oglala Sioux tribe of the Pine Ridge Indian Reservation about future management of the southern unit of Badlands N.P.

Items under consideration include increased participation in management by the tribe or complete control of the unit. While the northern part of the park (which is owned by the U.S. government) is the most visited, the southern part, which is in a more natural state, is owned by the Oglala Sioux tribe. Even though a decision has not been made, it is believed that a greater tribal control is very likely. The tribe is currently negotiating to buy several resorts or campgrounds east of the park. Much of the original south unit was taken from the native owners in the 1940's for use as bombing range. The southern unit also has an interesting history. Some of the last Ghost Dances in the late 1800's were held in this area. What would be done with the southern unit is unknown. Grazing and farming might be increased and there are also mining possibilities in the area. It is also unknown what if any paleontological work, if any, would be allowed.

<http://www.paleontologynews.com/link.asp?ID=280643&Title=Quincy%20man%20sinks%20his%20teeth%20into%20the%20quest%20to%20date%20a%20fossil>

Work is currently ongoing by the ISGS (Illinois State Geological Survey) to try to date parts of a fossil mastodon found in Lima, Illinois in 1957. The tooth was found by a farmer while walking around the bed of Lima Lake. It will be attempted to date the tooth using radiocarbon dating.

Articles submitted by Clarence Zacher

<http://news.nationalgeographic.com/news/2007/12/071213-fungus-carnivore.html>

Fossilized fungus found in 145 million year old amber is providing new information on carnivorous fungus. The fossil amber from France also contained nematodes caught in sticky loops on the fungus. While these loops and sticky rings are found on some modern fungi, scientists were unsure when these characteristics first appeared. The amber also contained bugs and other items indicating that the fungi lived on the ground.

<http://www.sciencenewsmagazine.org/articles/20070414/fob7.asp>

New studies point to the fact that *Australopithecus afarensis* may not be a direct ancestor for humans.

Examinations of the 3.2 million skeleton Lucy points to the fact that it may represent a side branch of evolution. The information is based on the study of the ramus, which is a bone, which connects the upper and lower jaw. This bone from the *afarensis* has common points with those from *Australopithecus robustus* and gorillas. But humans, their ancestors, and chimps have a different bone arrangement. Approximately 150 jaws were examined for the study.

<http://www.sciencenewsmagazine.org/articles/20071103/bob9.asp>

Recent fossils finds are stirring debates about the evolution and their ancestors (this is a brief summary of a fairly long article. Among these finds are some teeth from Africa, which are 10 million years old. The scientists who found them believe them to be either from gorillas or their ancestors indicating at they split from human ancestors over 10 million years ago. The teeth are from an ape named *Chororapithecus abyssinicus*. The teeth have some characteristics of gorilla teeth including the type of enamel and crests on the teeth. If true this would move the human divergence from large apes farther back several million years.

Other finding from skull and jaws are believed to indication that two human species lived in Africa between 1.4-1.9 million years ago but one eventually died out. While *H. habilis* was thought to have evolved into *H. erectus*, some are now arguing that they evolved independently of each other and that they lived at the same time in Africa for ½ a million years. The fossil evidence comes from jaws and teeth in volcanic deposits between 1.44 and 1.55 million years.

In another case, researchers believe that fossil teeth indicate that human ancestors left Africa over 2 million years ago, spread to Asia, and then back to Europe. The fossils studied included 400,000-year-old Spanish Neanderthal fossils and 1.8 million years old home fossils from central Asia. Some scientists argue that the studies pointing to a west to east movement of humans rather than the opposite way.

http://www.scienceagogo.com/news/20070318222048data_trunc_sys.shtml

Scientists in Germany report that a type of mite has changed from asexual reproduction back to sexual reproduction. It is thought that the genetic change

which allowed them to turn on previously dormant genes may be related to a change from being on the ground to living in trees and rocks.

<http://www.sciencenews.org/articles/20071103/fob2.asp>

Genetic studies indicate that a rare flying mammal from Southeast Asia is the closest cousin to primates. The animals, known as colugos, live in trees and glide using membrane between their limbs. Scientists have connected the species by looking errors or glitches in the genes. They found 7 glitches (known as indels) in common between the two species. This is compared with only 1 indel shared between tree shrews and primates

<http://www.sciencedaily.com/releases/2008/02/080207135801.htm>

A new fossil from 445 million year old rocks in Manitoba Canada have moved the age of horseshoe crabs back over 100 million years. The new species known as *Lunataspis aurora*, are more primitive than other horseshoe crab fossils but are visually very similar. The long history the horse crabs indicate that they have been very successful at adapting to change, many of which resulted in mass extinctions.

http://www.dallasnews.com/sharedcontent/dws/new/localnews/stories/DN-auction_16met.ART.State.Edition1.3733e8b.html

A west Texas creationist museum in Mt. Blanco has put up its mastodon skull for sale. The skull is unusual because it has all 4 tusks. While the 4 tusks are normal, most skulls are found with only two. It was hoped that the skull would sell for \$120,000 (actual sell was \$191,000). The skull was originally found in a gravel pit near Austin. Other items up for sale at the auction included a 26 pound gold nugget names the Boot of Cortez found in Mexico by a man using a metal detector bought at Radio Shack. Another fossil for sale is a 30 million year old lizard preserved in amber and a pallasite meteorite from China.

Websites

Have you spotted a website about fossils for paleontology that peaked your interest. Thought that others might like it. If so, send me a note along

with the website address and a brief summary of what is there.

Around Town

St. Louis Zoo – Dinoroarus
An animatronic exhibit of 17 life-sized dinosaurs has opened at the Zoo through September 1. Admission is \$3, \$5 if you want to see the 5 minute movie Dino Island 2.

Upcoming Rock / Gem / Fossil shows
(<http://www.rockngem.com/showdates.asp>)

MAY 2008:

9-11--COLUMBIA, MISSOURI: Rock swap; Central Missouri Rock & Lapidary Club; Boone County Fairgrounds, Hwy. 63 N. and Oakland Gravel Rd.; Fri. 8-5, Sat. 8-5, Sun. 8-3; free admission;

JUNE 2008:

13-15--PARK HILLS, MISSOURI: 11th annual swap and sale; Mineral Area Gem & Mineral Society, Greater St. Louis Association of Earth Science Clubs; Missouri Mines State Historic Site, Hwy. 32; Fri. 9-6, Sat. 9-6, Sun. 9-5; free admission; rocks, minerals, fossils, lapidary;

21-22--OZARK, MISSOURI: Show, "Gem Fair 2008"; Ozark Mountain Gem & Mineral Society; Finley River Park, 205 N. First St., by the Bull Ring; Sat. 9-6, Sun. 10-4; free admission;

27-29--BLOOMINGTON, INDIANA: 43rd annual show/swap; Lawrence County Rock Club; Monroe County 4-H Fairgrounds, Airport Rd.; Fri. 10-6:30, Sat. 9-6:30, Sun. 10-4; gems, minerals, jewelry, fossils, rocks, lapidary equipment, rockhound and prospecting supplies, 4-H and ect science project material; contact Dave Treffinger, 13101 E 250 N, Loogootee, IN 47553, (812) 295-3463; Web site: www.rockngem.com.

JUNE 2008:

13-15--PARK HILLS, MISSOURI: 11th annual swap and sale; Mineral Area Gem & Mineral Society, Greater St. Louis Association of Earth Science Clubs; Missouri Mines State Historic Site, Hwy. 32; Fri. 9-6, Sat. 9-6, Sun. 9-5; free admission; rocks, minerals, fossils, lapidary;

Reports

If you have suggestions for field trip locations, please e-mail them to me and I will begin putting together a list.

NEEDED

We are still looking for more donations of small fossils (quarter size or smaller) for the fossil boards. We are especially in need of small trilobites (the Utah ones are best) were also looking for horn corals, other corals, gastropods, bryozoans, and other donations. So keep an eye out as summer gets here.

CONTACTS

Do you need to find out something about the next meeting or have questions on the next field trip? If so, please talk to or contact one of the EMSP officers.

President – Don Howell

(donhowelliii@sbcglobal.net, cel 314-954-6922)

Vice-President: Bruce Stinchcomb

Treasurer: Pete Smith

Secretaries: David Lukens

(dmslukens@yahoo.com, cel 636-751-8746) and Abby Lee

DUES ARE DUE

Our treasurer, Pete Smith will accept dues payment for a full year. **Dues are \$15.00 per household per year-payable in January.** If you join in the middle of the year the amount will be prorated. 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

Distribution of the Newsletter by email

Can't find your newsletter, just when you need it for a trip? Then sign up for the e-mail version. This also saves the club money so we can bring in speakers (once we pick some...) E-mail requests to dmslukens@yahoo.com, motirek@gmail.com or abfactor@gmail.com



Meetings are held the 2nd Friday of every month (except July, August, and December) 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.

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.

Eastern Missouri Society For Paleontology
(EMSP)
P.O. Box 220273
St. Louis, MO. 63122

FIRST CLASS MAIL

