

The Paleo Times

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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).

PRESIDENT'S CORNER

Hello all, I hope everyone had a great April. If anyone went to hunt geodes on the 2nd, I hope they bring them to show us at the May meeting. Thanks to Carl and all who took us to the Speed field trip and the MAPS show through their presentations and pictures at the April meeting. Again, let me stress how wonderful it has been to have so many new members and visitors at our meetings. Our May meeting will feature Carl and Gary showing us how not to put a plaster jacket on a dinosaur bone. This promises to be an entertaining program. I can't wait to see you all there! Your Pres, Don Howell III

Next meeting

Next meeting is **Friday, May 8th** at 7:30 pm in the New Earth and Planetary Sciences building at Washington University (see more details below).

May presentation – See note above.

Thanks / Congratulations

Thanks to Abby Lee for the great notes from the last meeting (again) since I was not able to be there. Hopefully I will be there in May.

Thanks to Carl, Rick, and Bruce for their presentations at the last meeting.

Upcoming Events/ Field Trips

May 16, 2009 – May Field Trip – Will be to Bruce's site in southern MO. This site has turned out some really great fossils so far. Trip will be on Saturday 5/16/09 leaving at 9:00 am. Departure site will be the commuter parking lot located at the south-west corner of I-55 and Richardson Road. From there we will carpool down to Bruce's site. It is about a 2 ½ hour drive. You will need to bring your tools, water, and lunch. This is out in the country so there are no bathrooms. Also, there is lots of poison ivy so long sleeve pants and shirts are recommended. Also bring shovels and pickaxes if you have them and paper to wrap your finds in as they are fragile. Buckets are also recommended.

Jan 17-May 3, 2009 – Tusks – An exhibit at the Center for History in South Bend Indiana which features displays of over 80 bones, tusks, and skulls from Mammoths and Mastodons. More information at <http://www.centerforhistory.org/>

Carl Campbell is providing an opportunity for travel and collecting this summer (separate from Paleotrek). "Geologic Field Experiences in North America" will run from Jun 8 – June 21. He needs 18 participants at a minimum and sign up is by March 26th. The cost is \$1,400 (pretty much all inclusive – hotel and most meals). Brief itinerary is travel to Grand Tetons, Yellowstone, and then digging in Jordan Montana.

We are planning on having a table with items for sale at the Mastodon State Park Fossil Days on June 13th. We will need volunteers to answer questions and staff the tables for sales. Please let someone know if you can be there to help staff the table.

August 14-16 is another gem/mineral/rock show at the Machinists Hall on Old St. Charles Rock Road. We will have a table to sell and demonstrate. We will need volunteers as we get closer to this date. Also, when you are out collecting this summer, pick up something for the club. We are now up to 3 venues to sell/fundraise per year. The club agreed that this was a nice number to maintain.

Date is set for the club picnic, it will be August 30, 2009 at Kirkwood park at the New Pavilion. Put it on your calendar. More details to follow.

Date has been set for the next Viking show. Location will be the same as last year. Dates will be November 27-29, 2009. The price will be \$75/table. We will be getting 2 or 3 tables.

At the next meeting Bruce will hopefully have his newest book for sale. It is suppose to come in soon. This one will cover the Mesozoic time.

Remember that annual dues were due starting in January. If you have not paid, please get your money in. If it is not paid by March 1st, you newsletters will stop.

Notes from the Meeting

Collections are still ongoing for the Joe Bolser Scholarship Fund. . If you want to donate please bring your donations to the next meeting or put them in the mail.

Reminder the new club membership rolls are being updated. The April mailing will be based on this new membership list and who has paid dues. If there are problems or concerns after the April mailing please contact me (dmslukens@yahoo.com) or Peg Cole

The raffle for the composite Meg tooth has started (tickets were not on sale last month as Tom & Keri were out of town). The tooth will be on display at the April meeting and will likely be at future ones also (See Tom) we are selling raffle tickets for a 4" Megalodon tooth from Florida. This tooth was originally broken and has been restored, estimated value is \$30-\$50. Tickets will be \$1 each or 6 for \$5. The drawing will probably be during the August

Picnic meeting. You will not need to be present to win.

Last meeting was well attended with the room being almost full. We had a new family joining the club. Abby Lee will be updating the club members list and it will hopefully be available at the next meeting. If you are not getting the newsletter by e-mail and want to please contact me at and let me know.

Current membership stands at 45 e-mail + 19 letters. I will be sorting through the e-mail list this month and weeding though those who are not current members. If you have not renewed for this year, please send in your money as soon as possible.

Carl presented pictures and spoke about the recent trip to a quarry in Speed, Indiana and the Falls of the Ohio state historic site. He included details about the geology of the area and the fossils found there. He also discussed MAPS. The pictures were nice and gave a good overview of the show. Rick showed nice pictures of the Tucson, AZ. Bruce also showed some slides of his recent fossil acquisitions from MAPS and others from his collection and trips over the years.

Items for the May meeting:

- Continue the Meg tooth raffle
- Possible update on the Mastodon Park Show
Do we need to have a get together to make more fossil boards and arrange what we have?
- May field trip to Bruce's site

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.

http://www.sciencenews.org/view/generic/id/42862/title/An_earlier_appearance_for_the_first_land_plants

Recent finds of fossil pollen in Saudi Arabia have pushed the existence of vascular land plants from 444 to 450 million years ago. This may indicate that vascular plants may not have spread as quickly as previously thought.

http://www.sciencenews.org/view/generic/id/42853/title/Antarctic_ecosystem_holds_unusual_microbes

Ancient microbes have been found hidden in Antarctica. The microbes were found in super-salty pools rich in sulfates buried below over 1000 feet of ice and have been buried for between 1.5-2 million years. The microbes have been found because on occasions the water seeps from beneath the glacier forming a rust colored waterfall. The microbes apparently get their energy from transferring electrons from the sulfates in the water into the iron coming from the rocks. Apparently these microbes are unique because they can not transform the sulfates to sulfides as some known microbes can.

<http://www.smithsonianmag.com/science-nature/The-Dino-Wars.html>

There is an excellent article in this month's Smithsonian related to the new "Dino-Wars" This talks about the battles over the collection of vertebrate fossils by both professional and amateur paleontologists. One of the focuses is the battle over a juvenile T-Rex skeleton found by a Texas dinosaur prospector in South Dakota and his battle with the local county.

<http://www.sciencecentric.com/news/article.php?q=09041818-fossils-suggest-earlier-land-water-transition-tetrapod>

New fossils are challenging the idea of which tetrapod (4 limbed animal with toes not fins) was the first to move to land. The two species, Ichthyostega and Acanthostega, lived around 360-370 million years ago in what is now Greenland. New evidence indicates Ichthyostega may be the earliest though Acanthostega's ancestors may have lived on land before going back to the water. To study the Ichthyostega fossils, they were removed from the rock matrix and then passed through a CT scanner to get an image of the animals which turned out to be the first juveniles ever found. Based on the studies it appears that they may have lived in the water when young and only moved onto land when fully adult. This is based on differences in the skeletons between the youths and adults. In comparison, Acanthostega shows very little change and more adapted to water environments.

<http://www.sciencecentric.com/news/article.php?q=09032567-the-earliest-known-well-preserved-bony-fish-found-china>

An almost complete fossil of a primitive jawed fish (gnathostome) has been found in China. This fossil

from the Ludlow Epoch of the Silurian period is now the oldest primitive bony fish found. Previously only fossil fragments of these have been found.

<http://www.sciencecentric.com/news/article.php?q=09032198-young-dinosaurs-roamed-together-died-together>

Remains of a herd of young dinosaurs have been found in the Gobi Desert of Mongolia. The bird-like animals died at the muddy limits of a lake around 90 million years ago. They apparently were trapped as a group in the mud. The ornithomimid dinosaur (*Sinornithomimus dongi*) were all from the same species indicating that juveniles were left to travel by themselves as groups away from the adults. Two of the animals were prepared at Paul Sereno's lab in Chicago before being shipped back to China. The well-preserved fossils still have the stomach stones and the last meal intact. The fossils were first spotted in 1978 but it was over 20 years before the first remains were excavated. Sereno and others began excavating extending back into the hill and eventually recovered over 25 individuals between 1 to 7 years old. A detailed study of the matrix and fossils indicate that almost all were pointed in the same direction and were preserved in the same way indicating they died at about the same time. One set was on top of each other and all had their back legs stuck in the mud. The thighbones were missing indicating that a predator did not let the bodies go to waste. Even plunging and scratch marks were found in the mud indicating the fight to escape. In addition the quantity, even the smallest bones were preserved allowing rare details such as the size of the eyeballs to be determined.

<http://www.sciencecentric.com/news/article.php?q=09032160-mini-dinosaurs-prowled-north-america>

While various large predatory dinosaurs roamed North America 75 million years ago paleontologists from Canada have discovered that small meat eaters also roamed the continent. The small dinosaur currently known is *Hesperonyx* but it is suspected that smaller ones likely existed. A recently discovered one is *Hesperonyx elizabethae*, which was half the size of a housecat, looked like a velociraptor and weighed less than 5 pounds. It stood on two legs, had sharp claws and a sickle like claw on the second toe for slashing and helping to hold prey down. It likely had a diet of insects and small mammals and dinosaurs. The fossils were

found in 1982 in Canada but remained unstudied until 2007. Previous to this find, the smallest meat eating dinosaurs were the size of wolves. The previously smallest dinosaur in N.A. was the chicken sized *Albertonykus borealis*, which ate insects. Previously similar dinosaurs have been found in China but they date from 45 million years earlier (120 MYA).

<http://www.sciencecentric.com/news/article.php?q=09041611-prehistoric-turtle-goes-hospital-ct-scan-search-skull-eggs-embryos>

The CT scanner at Bozeman Deaconess recently had an unusual patient, a 75 million year old turtle. The rarity is that it is only the second found worldwide with eggs inside. The *Adocus* turtle came from a National Monument in southern Utah. The turtle is about 12" in diameter and weighed 40 pounds. The advantage over human patients is no complaints and no worries. This turtle is one of 10 different fossil species found in southern Utah. This fossil was determined to contain eggs while the shell was being prepared. This type of turtle laid eggs similar to modern one and was probably a week away from laying when it died.

<http://www.sciencecentric.com/news/article.php?q=09041539-study-confirms-3-neanderthal-sub-groups>

While Neanderthals lived over huge area from Europe to Asia to the Middle East, it was previously thought that they were all one group. But recent studies of the remains, dating between 30-100,000 years ago indicate that they were actually divided into 3 sub-groups. This is based on the morphology of the skeletons examined and indicate the 3 groups were divided into Western Europe, Southern Europe, and the Levant (not sure where this is?). This information is also based on the study of DNA from 12 different individuals. The study also suggests that there may have been a 4th group in western Asia.

<http://www.sciencecentric.com/news/article.php?q=09040249-study-unravels-why-certain-fishes-went-extinct-65-million-years-ago>

Studies indicate that big size and fast bites may have been death sentences for bony fishes during the mass extinction 65 million years ago. These characteristics are seen in modern fishes such as tuna and sword fishes which are predatory and are currently in decline. Studies show that the large fish prey on large animals, have slow reproduction rates, and are adapted to hunting agile fishes. The asteroid

impact likely reduce sunlight and caused the food chain to crash, putting these larger fishes at the top of the food chain in jeopardy.

To perform the study, paleontologist traveled the world measuring body and jaw sizes from almost 250 different fish genres. Unlike many other vertebrates, fish are often well preserved. Even though the extinct fish and modern predatory fish are not related, they may be headed to the same destination.

<http://www.sciencecentric.com/news/article.php?q=09033017-new-theory-on-largest-known-mass-extinction-the-history-the-earth>

A new theory is being reported for the Permian / Triassic extinction, which occurred 250 million years ago. The newest theory, from Russia, is that giant salt lake released halogenated gases, which damaged the vegetation. Study of small modern lakes in Russia and South Africa showed that under the right conditions these salt lakes will emit gases such as chloroform, trichloroethene, and tetrachloroethene. In the Permian time, a salt lake existed in Central Europe which cover an area the size of France. Emissions from a lake this size would have been in the range of 4 million tons/ year. In addition to being damaging to plants, some of these gases can also damage the ozone layer. This combined with the climatic changes at the time might have been enough to bring about the biggest known extinction in the history of Earth when 90% of all life died.

<http://www.livescience.com/history/090420-neanderthal-birth.html>

Recent CT studies indicate that while Neanderthal women had different birth canals, the birth was as difficult as with modern humans. This is based on studies of fragments of fossil pelvis' found. Neanderthals existed between 130-300,000 years ago, and existed at the same time as our ancestors before going extinct. The fossil studied was found in Israel. The design of the modern birth canal forces babies to turn but the Neanderthal's did not. Size indicates that both babies were probably similar in size. The reason for the difference is still unknown.

http://www.usatoday.com/tech/science/2009-04-20-baby-mammoth_N.htm

A 40,000 year old baby mammoth from Russia now has her own T.V. special. The 1-month old mammoth named Lyuba was found in 2007 was was

very well preserved. The 3 foot high animal died trapped in the mud with her skin and internal organs intact and even milk in her stomach. The clay and silt that surrounded her preserved her scientists say. Scientists hope that finding her indicate that there may be more specimens out there to be found.

http://www.mercurynews.com/ci_12165962?IADID=Search-www.mercurynews.com-www.mercurynews.com

A construction crew in California has discovered the remains of a 5 million year old extinct whale. The fossils, located in Santa Cruz county, are from the Miocene Epoch and indicate a 15-20 whale. Excavation is still in progress.

<http://www.missoulian.com/articles/2009/04/14/bnews/br59.txt>

In Montana, Nate Murphy has plead guilty to federal charges of removing more than a dozen fossil dinosaur bones from BLM land near Malta without a permit. He previously pled guilty to other charges in state court. He admitted in court that he knew he needed to map the exact fossil locations and did not do this on two occasions.

Around Town 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 always 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. Please bring to the next meeting so we can meet later and work on putting more fossil boards together for the upcoming show.

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

Vice-President: Bruce Stinchcomb

Treasurer: Pete Smith

Secretaries: David Lukens

dmslukens@yahoo.com and Peggy Cole

DUES ARE DUE

Our treasurer, Pete Smith will accept dues payment for a full year. **Dues are \$20.00 per household per year-payable in January if receiving the newsletter by e-mail. The dues are \$25 for those receiving the newsletter by regular mail.** 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.

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