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.
NOTE: Hope that everyone had a good summer. My computer is working so newsletter is back to normal. Hope to see you at the picnic or at the next meeting.

Next meeting

Next meeting is **Friday, September 11th** at 7:30 pm in the New Earth and Planetary Sciences building at Washington University (see more details below).

PRESIDENT'S CORNER

Due to work and other issues Don was not able to get out the President's Corner this money. He hopes to see people at the picnic or at the September meeting. Your Pres, Don Howell III

Thanks / Congratulations

Thanks to everyone who came and supported the Machinist Hall Show. We had a great turnout with almost 30 members coming to help cover either our table, the swap table, or the admissions table. We deeply appreciate all the help and effort from everyone. We hope to get the same level of help for the Viking show in November.

Upcoming Events/ Field Trips

Club Picnic - Date is set for the **club picnic**; it will be August 30 2009 at Kirkwood Park at the New Pavilion. It is at the same location as previous but Pavilions were replaced. Located at the North West corner near the tennis courts. The club will supply hamburgers, hot dogs, buns, soda; we are looking for someone to bring a grill. We ask that everyone bring a dish or two to share with everyone else. People usually starting arriving around 10:30 am – 11:00 am and we eat between 12:00 and 1:00 and stay until whenever. As with previous years, if you want to bring fossils to swap or sell to club members, feel free to bring them with.

September 13, 2009 - 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 Sunday 9/13/09 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.

September 9/26-9/27 Field trip - There will be a second trip to the site (2 day trip) on 9/26/09-9/27/09 run by Bruce. He has several paleontologists from the American Museum of Natural History (NY) coming out to his site to dig. Club members are also welcome to come during this dig. Arrangements of how to get to the site for this dig will be arranged at the September meeting. Likely travel down will be on Saturday and a number of people will stay overnight at a hotel in the area to dig again on Sunday.

October Field Trip – This will be to a lake in October, date to be determined. (What about 10/10 - day after the meeting?). We will be meeting at the Indian Creek Marina at 10:00am with departure promptly at 10:30. We are usually out on the lake for at least 3-4 hours so you will need to bring lunch & drinks for yourself. Cost of the boat rentals will be split between the people taking the trip, typically the cost for the rental is between $10-15 per person. This is a great family trip. Again, we would like to know ahead of time how many people will be going so we know if we need to reserve 1 or 2 boats. **NOTE: We will confirm at the Sept meeting exact date.**

October or November – Fossil Board Put Together - Sometime in the fall we will need to get together to build up our supply of fossil boards that we have for sale for the show. Begin to think about a good date. We have between 17-19 left, some of which need repair.

November 27-29 - 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. As date gets closer we will be needing people to sign up for this show to help man the table. Holiday Inn, 10709 Watson Rd. (I-44 and Lindbergh Blvd.); Fri. 4-8, Sat. 10-7, Sun. 10-5; adults $2, students $1, children 12 and under and Scouts in uniform free; dealers

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.

The raffle for the composite Meg tooth has started The tooth will be on display at the August picnic and may be raffled at the picnic (depends on total tickets sold). (See Tom Lee) 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.

Current membership stands at approximately 45 e-mail + 19 letters.

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://news.bbc.co.uk/2/hi/uk_news/england/wiltshire/8208838.stm

A fossil squid has been found in England with its ink sac still preserved. The scientist's were able to use the 150 million year old ink to write its Latin name and sketch the creature. At the same area, thousands of fossils f soft body creatures were removed during the Victorian period. The site indicates that many animals were in the area prior to be poisoned with algae. Part of the ink has been sent to the US for chemical analysis.

http://news.bbc.co.uk/2/hi/technology/8184396.stm

Two 300 million year old fossils of spider link creatures have been scanned using 3-D images. The images of Cryptomartus *hindi* and *Eophrynus prestvicii*, show that hindi used its front legs to grab its victims while the other had spikes on its back. The 3D images show that *C. hindi* grasped at prey with its front legs and likely waited for its prey to get close and then ambushed it. *E. prestivicii* was found to have hard spikes on its back. These were probably used as defense against amphibian predators.

http://news.bbc.co.uk/2/hi/science/nature/8173117.stm

A fossil skeleton found in Russia in 1994 is believed to be the oldest tree dwelling creature. The animal, named *Suminia getmanovi* which is about 260 million years old (Permian period) was about 20 inches long and is the earliest animal with an "opposable thumb". The animal had long limbs and the hands and feet are half the length of the limbs and the ends of the fingers were shaped like claws. The paleontologists suspect they were covered with a

hard finger-nail like material. Previously, the oldest tree dwelling animals were only dated to 160 million years ago. It is believed that the tree climbing ability developed due to ground competition for food and to escape predators.

http://www.livescience.com/animals/090822-anthropods-shells.html

Borrowing shells is older than we think. Even though hermit crabs, which use salvaged shells for protection, go back 200 million years new evidence points to this going back 500 million years. Analysis of tracks from central Wisconsin on sand show tracks like modern hermit cracks including signs of a borrowed shell touching the ground (seen in occasional off center marks). But unlike modern crabs whose tales curve under, these curved up like a scorpion. Also the shells used were too small and may have only been used to keep the gills from drying out. There was no need to protect themselves from land predators as none existed.

http://www.livescience.com/animals/090818-pterosaur-runway.html

Take where pterosaurs landed have been found in France. The 140 million year old tracks are the first ever showing where the animals landed. The tracks show that the pterosaur had a 3 feet wing span and used its wings to stall during landing and then landed with its 2 inch feet at the same time. It then dragged its toes, took a small hop, and then set down it's from hands and walked away on all four limbs. These are the first tracks ever found, probably due to the fact that they were very light animals so the tracks would only preserve in very fine mud or clay. The ability to stall in flight indicates that the animals had advanced wing control.

http://www.livescience.com/animals/090818-primate-sloth-bones.html

Mammal bones and human artifacts dating to between 10,000-4,500 years ago have been found in a water filled cave in the Dominican Republic. The bones include Caribbean sloth and primate skulls. The artifacts were made from basalt and limestone. The primate skull is from a large extinct howler monkey. Other remains include parts from 6 sloths ranging from dog to bear size. These went extinct shortly after the arrival of humans.

http://www.livescience.com/history/090818-early-hunters.html

Study of animal remains in a cave in Israel dating between 400-200,000 years ago indicate that humans from the time were as good at hunting as later humans. Remains found in the Qesem Cave east of Tel Aviv include bones from horses, deer, wild ox, and others. Examination showed them to be capable of bringing down big game in the later Lower Paleolithic time (250,000 years ago) as remains from the upper Paleolithic (10-42,000 years ago). Examination of the cutting on the bones did show less efficient and less organized cutting on the older bones. The markings on the older bones also indicate that there appeared to be little social ritual or rules when removing the meat. Later bones indicate that the meat was removed by butchers and probably distributed rather than removed by each individual.

http://www.wired.com/wiredscience/2009/08/dinoauction/

A 40 feet x 15 feet skeleton of the T-Rex named Samson from South Dakota will be going up for auction soon. The skeleton contains 170 bones and is more than ½ of the complete skeleton. The 66 million year old skeleton is the 3rd most complete and has the best skull. The estimated sale price is 2-8 million but could go as high as 10 million. There are also over 50 other fossils for sale including a 25 feet shark (the largest fossil shark ever found) and a Megalodon jaw 8 feet tall and 10 feet wide. There is also a 17 feet long bony fish and a 12 foot tall mammoth. The T-rex skull was found intact and not broken into pieces like most skulls. The body also shows evidence of bite marks and damage from infection on the bones.

http://www.wired.com/wiredscience/2007/05/you_couldnt_out/

New evidence based on footprints indicates that T-rex could also swim or at least travel through the water (really short article).

http://www.livescience.com/animals/090727-first-life.html

New fossil evidence indicates that the first animals evolved in lakes and not in oceans as previously thought. The fossils come from South China's Doushantuo Formation which was formed in salty, alkaline lakes. It was determined that the environment was lakes due to the presence of smectite which is a clay mineral. One unusual

aspect of these 600 million year old fossils is that they are all small embryos, not adults have been found. It has been assumed that animals appeared first in oceans since they have consistent environments where has lakes can come and go. It is possible that older animal life existed but is in rocks that have not been found yet. It is believe that the appearance of animals is tied to the increase in oxygen in the air and it maybe that this benefited lakes more due to the smaller volume when compared to oceans.

http://www.sciencecentric.com/news/article.php?q=09071320-floral-changes-across-the-triassic-jurassic-boundary-linked-extensive-volcanism

The change in terrestrial plants 201.6 million years ago, at the mass extinction between the Triassic and Jurassic periods, may have been related to flood basalt volcanism. It has been believed that the extinction of much of the marine life was caused by the release of CO2 by the basalts. But now some scientists believe that the change from gymnosperm forests in NW Europe to by fern and fern-associated vegetation on a temporary basis could not been caused by global warming alone. But may have been caused by the release of gases such as sulphur dioxide and toxic compounds such as the polycyclic aromatic hydrocarbons.

http://www.sciencecentric.com/news/article.php?q=09072921-reexamination-t-rex-verifies-disputed-biochemical-remains

Additional analysis of the 68 million years old T-rex leg bones has confirmed that there were actual traces of proteins in the bone. The most likely source is blood, bone, tendons, or cartilage. The first analysis in 2007 found 7 different peptide fragments from collagen. The recent analysis confirmed the existence of materials found in collagens.

http://www.sciencecentric.com/news/article.php?q=09072848-extinct-rodent-species-discovered

Fossil remains of an extinct rodent have been found in Valencia Spain. The fossil remains were very limited, just the teeth. But this allowed it to be identified as Eomyops noeliae which is different from other specimens previously found in the genus. This animal was intermediate size where as all other types from the genus were small rodents except for one large type. These remains, which are 16 million years old, also are the oldest species in the world of this genus. The varied micro-mammals found in these deposits indicate that the climate was wet and heavily forested. Also remains have been found across the Iberian Peninsula and in several different layers spanning tens of thousands of years.

http://www.sciencecentric.com/news/article.php?q=09071614-fossilised-dung-balls-reveal-secret-ecology-lost-world

It may be poop but it's more important than your think. Paleontologists from Argentina have been discovered new information from 30-40 million year old dung balls made by dung beetles. Some of the balls are as big as tennis balls. The study of the dung is revealing new information about the Megafauna that such as giant ground sloths and giant hoofed animals that lived millions of years ago. Dung beetles, which were once worshipped by the Egyptians are important because the collect and bury the dung helping to fertilize the soil and also by sealing it which reduces the number of flies. The scientists are now studying the fossil bung balls to learn more about the ecology of the time but also are finding out about other animals that interacted with the balls. In addition to burrowing bees which dug cells where the balls were buried, others such as beetles, flies, and worms consumed the balls made by the dung beetles.

http://www.sciencenews.org/view/generic/id/45857/title/Fossil_shows_first_all-American_honeybee

A 14 million year old fossil proves that there were native honeybees in America. Previously, all fossil honeybees were only known in Asia and Europe. The species found in the US no longer exists but is closest to *A. armbrusteri* from Germany and has been named *Apis nearctic.* The partial remains were identified as a honeybee due to the distinctive pattern on the wings where the veins thicken toward the middle and the shape of the lower views which resemble a horses head. The fossil also showed it had hairy eyes and barbs on the stinger.

http://www.sciencenews.org/view/generic/id/45721/title/Diggin%E2%80%99_dinos

The strange structures found in Australia are now believed to be fossilized dinosaur burrows. If so, they are the oldest ones known and the only ones found outside the North American. The 106 million year old structures are located within 10 feet of each other and were located in sandy sediments along the edge of an ancient stream. The one mainly complete

structure is very similar to dinosaur burrows found in the US. The biggest is 7 feet long and appears complete. The bottom of the burrow is filled with large pebbles and the upper section with coarse grain sand indicating the burrow was flooded in two different events. Only the S-shaped necks of the other two remain (rest was recently eroded away) and are believed to represent the entrances. It is doubtful that the structures are random as they are close together and are of roughly the same orientation and size. No remains have been found in the burrows but close by evidence points to 40 pound, 3 ½ feet tall bipedal dinosaurs. The burrows could have been used to hide from predators but also for protection from the weather since at the time Australia was within the Antarctic Circle. The find is unusual since most dinosaur fossils in Australia are poorly preserved and broken up and the filled burrows may indicate that there are other things to find nearby.

http://www.sciencenews.org/view/generic/id/45126/title/Flexible_molars_made_chewing_champions_out_of_duck-billed_dinosaurs__

Small scratches on the teeth of Edmontosaurus indicate the jaw movements of the duck-billed dinosaurs may be more complex than previously thought. It may also indicate that they ate grass-like plants instead of trees. Understanding how and what they ate between 65=75 million years ago can help paleontologists to better understand them. Analysis of the microscopic scratches has been used to analyze the diets of mammals including humans but never dinosaurs. Plant eating animals such as humans and deer move their jaws front to back and side to side. But dinosaurs have a simple hinge on their jaw which paleontologists though would only allow them to bite but not chew. But based on the scratches is appears that the Edmontosaurs have hinged upper jaws which allowed them to push the upper teeth outward like a trap door as the animal closed its mouth causing the upper teeth to rub against the lower teeth breaking the food down and scratching the teeth. The diet of grass is believed to be indicated by abrasion noted that is similar to that in grazers (sheep & cows) which pick up grit when they eat grass. Animals that eat twigs and leaves have tiny pits and chips, something which the Edmontosaur teeth do not have.

http://www.paleontologynews.com/story.asp?ID=485941&Title=Ancient%20horse%20roamed%20Canada's%20North%20with%20mammoths,%20camels

Remains of a 26,000 year old ice age horse found by gold miners in 1993 have been put on display in Whitehorse, Yukon Territory, Canada. Found mummified in the permafrost it is one of the finest large extinct fossils ever found. The pony size light colored horse named equus lambei is largely intact including the foreleg, hide, mane, and tail. The remains have been put on display at the Yukon Beringia Interpretive Centre which details the ice-age grassland the existed until 10,000 years ago. When it was fist found by gold miners in 1993, based on the stink, they though that they had found a mule from the Klondike Gold Rush. But it was much older. Apparently it became stuck in the mud and was attacked by wolves either before or after it died as indicated by teeth marks on the corpse. Study of the body showed it to be similar to Przewalski's horse, an early horse that still exists in Mongolia.

http://www.paleontologynews.com/link.asp?ID=484373&Title=Fossilized%20footprints%20trace%20pre-historic%20sea%20scorpion

A recent addition to the Carnegie Museum of Natural History is 350 million year old footprints from a 7 feet long sea scorpion knows as an eurypterid. While the footprints of the animal with 6 pairs of legs, a pair of large claws, and a large tail were found, the exact species that left then is unknown. It can also not be determined if the environment was a river or a salt water bay. The footprints were found on an old overlooked piece of rock in the Museums archives. In addition to the prints, the tail also left its mark on the rock bisecting the tracks. Typically sea scorpions were 1’ long (not 7’ like this specimen) and ate snails, clams, and trilobites. The fossil tracks were found in 1948 during a hunting trip by a former museum employee and his brother.

http://www.foxnews.com/story/0,2933,529770,00.html?sPage=fnc/scitech/evolution

A new study based on fossils found in Burma indicates that the ancestor to humans, apes, and monkeys evolved in Asia and not in Europe as previously though. The fossils found by the Carnegie Museum are 38 million years old and include teeth and jawbones from a never before found primate. The fossils from 10-15 individuals have been named Ganlea megacanina and are from

the extinct Asian primate family Amphipithecidae. Analysis of the teeth indicates a monkey like animal that lived in trees and used their teeth to break open fruit to get to the pulp and seeds. The paleontologist who made the discovery have previously found fossilized foot bones dated to 40-45 million years ago to one of the worlds smallest primates, Eosimias. The discovery puts back into contention the issue or where our ancestors originated in Africa or in Asia.

http://www.timesonline.co.uk/tol/news/uk/science/article6505519.ece

Dredging in the North Sea has found part of a 60,000 year old Neanderthal skull in a area known to be a Stone Age Hunting ground that is now about 8 miles off the coast of Great Yarmouth, England. In 2008, 28 flint axes were found in the area known as the Zeeland Ridges. This fossil evidence indicates that Great Britain was recolonized by humans after a 100,000 year period when the island was uninhabited. At the time when the skull was deposited, the area was one of wide river valleys and floor plains and land bridges connected Britain with the continent. There were numerous herds of large mammals and evidenced by analysis of the skull indicating principally a meat diet. The skull was identified as a Neanderthal due to the strong brow ridge. The skull was found in a shipment of shellfish which landed in South Holland. Shelling in the North Sea has previously turned up bones from mammoths, horses, rhinos, and other animals.

Around Town

Upcoming Gem & Fossil shows

- Colorado Mineral & Fossil Show (Fall), September 16–20, 2009, Denver, CO. Colorado Fossil Expo, September 18–20, 2009, Denver, CO

- Arizona Mineral & Fossil Show, January 30–February 13, 2010, Tucson, AZ

MAPS 2010 – Western ILL University, Macomb IL March 26-28, 2010.

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 Buildingon 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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