

The Paleo Times

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EMSP SOAPBOX

By David Lukens & Don Howell

Well, I am still here writing the newsletter so the response to last months was apparently not that bad. If you have any articles, comments, and need to communicate with me I can be reached through the following: dmslukens@yahoo.com (personal) or contact me. David L.

The first meeting of the year went great. I was glad to see so many of you there, especially the new members! I would like to mention that we will be forming committees at the February meeting and *stress* that being on a committee will require not more extra time than every second Friday of the month fifteen to twenty minutes before the meeting a few times a year. There has been discussion of the need for field trip, guest speaker/program, website, and PR/fund raising committees. We also will be organizing the fossils Abby brings back from Tuscon and watching a video on giant birds. don't forget to bring one, five or ten dollars to buy raffle tickets for the Venus Clam.

Don Howell III

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.

Thanks to all for the great attendance at the last meeting. The room was packed with barely an empty seat. Thanks to everyone who brought snacks.

Next meeting

Friday, February 8th at 7:30 pm in the New Earth and Planetary Sciences building at Washington University (see more details below). The presentation will be "Birdzilla", a Discovery Channel DVD on Terror Birds supplied by Clarence Zacher.

Come a little early to the February meeting if you want to talk about field trips - where to go, what to collect, and when to go so we can plan ahead. We are working on a list of possible sites and dates.

Possible Business for the next meeting:

- The venus clam raffle tickets for sale (donated by Dave Lukens). Drawing in March?
- Report on the Tucson Show
 - Discussion about field trips and speaker committees. Think of places you want to go.
- Planning for Feb 2008 and ideas for March 2008 field trip

Thanks

To Carl Campbell and Rick Poropat for their excellent talk on their marine site in SE Missouri and the Late Cretaceous Tsunami evidence at the last meeting. In addition, thanks for all the work that they have done over the years to identify fossils that are unknown or barely known in Missouri.

We also appreciate the grab bags that Rick brought to give away to the group.

Thanks to all the members that showed up at my house for the fossil board party on 1/19. We had 10 members including 2 new members come to help. We were able to put together between 30-35 fossil boards for sale a future shows. We appreciate all

the fossil donations and especially Jack standing outside in freezing weather to glue the labels to the boards.

Upcoming Events/ **Field Trips**

February Field Trip –The St. Louis Science Center Collections Center is unable to meet with us currently so this trip is off. They are looking for some volunteers if any club members are interested.

We will have a discussion at the meeting about some other possible field trip at the meeting. If one is arranged I will e-mail information out. For those without e-mail access, you can contact me, David Lukens, or another club officer. Another possibility is another get together (location undecided) to organize what is bought at the Tucson Show.

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.

Lee Creek Mine – Rick Poropat has applied for 5 slots for the lottery for access to the mine. Keep you fingers crossed that we get pulled this year. We missed out last season. Lee Creek is located at a phosphate mine in eastern N.C. and has an awesome array of marine fossils including shells, bones, small shark teeth, and Megalodon teeth (sometimes).

Paleo-shorts

-Original and summary articles provided by members of EMSP

ON THE ROAD

By: David Lukens
Mesalands Dinosaur Museum

For anyone traveling west on I-40 in New Mexico, a good place to stop is Tucumcari New Mexico. Tucumcari is located about 2 ½ hours (175 miles) east of Albuquerque N.M. Just off of the main street is the Mesalands Dinosaur Museum, which is associated by the Mesalands Community College. The museum is less than 10 years old and mainly has fossils from the New Mexico area. There biggest claim to fame are the skeleton of a

Torvosaurus (similar to a T. Rex) and the largest number of bronze dinosaur cast statues in the world. The main focus of the museum is fossils from Mesozoic though there are fossils from early life to recent fossils. The museum is smaller but well worth visiting and takes about 1 – 1 ½ hours to see. They were very helpful and willing to direct up to a road cut east of town with fossils. It is located south of city of San Jon. The site has marine fossils, mainly oysters and brachiopods, many of which have washed out of the rock and are lying next to the road.

BBC 9 January 2008, 11:24 GMT

A fossil unearthed in China has given scientists a rare glimpse of what dinosaurs were like in the flesh. A new Chinese fossil (*Psittacosaurus*) shows that some dinosaurs had a shark-like skin hidden under feathers or scales. Scientists think that the tough skin may have offered protection. The 100 million year old fossil was torn open and allowed a view inside when it fossilized. The *Psittacosaurus* (parrot lizard), which was about the size of a gazelle, has over 25 layers of collagen in its scaly skin. This is similar to reptiles and sharks. Because the skin was torn and folded back, it allowed paleontologists to see a cross section of the skin. The *Psittacosaurus* probably had a diet similar to a pig, eating plants and scavenging dead animals until it was scavenged and then quickly buried.

BBC 14 January 2008, Computer studies have shown that the strange British dinosaur *Baryonyx walkeri* was probably a fish eater instead of a meat-eater. The dinosaur from the early Cretaceous lived in an environment of warm shallow lagoons. The skull have similarities to that a crocodile including lengthened jaws, conical teeth, and a rounded front with teeth. The structure of the fossil skull was determined using a series of CT scans. Although this dinosaur and crocodiles evolved separately, they both developed slightly different skulls that perform in the same way.

BBC, 15 January 2008, Fossil evidence indicates that although dinosaurs are the ancestors of birds the reproduced young and grew fast similar to mammals. Fossils from two juvenile females showed “egg producing” tissue. The medullary bone (which is high in calcium) and used to make egg shells was discovered in the shin-bones of two

different dinosaurs: *Allosaurus* and *Tenontosaurus*. The growth rings on the bones indicated that were 8-10 years old. The life expectancy of these dinosaurs was around 30 years. Similar bone have been found in the past in a 18 year old female *Tyrannosaurus rex*. Finding these bones is unusual as the Medullary bone is only there for 3-4 weeks in reproducing females. The growth rings on the bones indicate that dinosaurs grew faster, probably so they could reach adulthood before they were killed. The *Tenontosaurus*, which was a North American plant-eater from the Early Cretaceous period, had to reproduce young for the species to survive. This discovery indicates that the dinosaurs were more similar to birds than reptiles and dates back as much as 200 million years. Also for them to grow this fast they have to have a metabolism more like a bird or mammal.

USA Today December 5, 2007

A mummified hadrosaur named Dakota is providing new insights to scientists of what dinosaurs were like. The hadrosaur, which is between 65-67 million years old, was fossilized in such detail the scientists are able to study details such as muscle structure, tendons, skin and other parts. Study of internal organs may be possible. The studies so far imply that the dinosaur is stronger and faster than previously thought and might have been able to outrun large predators. This hadrosaur is also large that they were previously thought, estimated in excess of 3 tons and also 40 feet long. Study indicates a striped pattern in the fossil skin. The fossil was discovered in North Dakota in 1999 and is being studied using the world's largest CAT scanner. The studies show that the vertebrae had spaces between them (possibly disks) which might add significant additional height to existing fossils in the museums. Estimates based on the muscles structure indicate the hadrosaur might have been able to run almost 30 miles per hour.

BBC 16 January 2008,

Remains of a giant rodent have been found in South American in Uruguay. Based on the size of the skull the animal would have been 10 feet long and weighed almost a ton, roughly the size of a cow. The 3 million years old fossil remains were found in formations in the Rio de La Plata River. The animal has been given the name *Josephoartigasia monesi* and is a new species. The creature had large

teeth and may have used them to cut down trees like some modern rodents. The animal is similar to another giant fossil rodent found in Venezuela named *Phoberomys pattersoni* that may have weighed 1500 lbs.

Tucson citizen (newspaper) November 2007

<http://www.tucsoncitizen.com/daily/local/70114.php>

A U.S. court has allowed the return of 4 tons of fossils (including 3 Argentinean dinosaur eggs) back to Argentina. The fossils were seized at the 2006 Tucson Gem, Mineral, and Fossil show from Argentina based Rhodo Co. Since 2003 Argentina has prohibited the exportation or sale of fossils from their country. A representative of Rhoda Co. stated that received them in barter from another dealer. But the neither had informed the Argentinean government that they had the fossils or that they were planned to export them. Among the fossils seized by the US government were boxes of fossil crabs wrapped in Argentinean newspapers and 4 eggs belonging to a titanosaurus.

Articles submitted by Clarence Zacher

Smithsonian Nov. 2007

Scientists from the Oregon State University have found a 100 million year old soldier beetle persevered in amber. The beetle was determined to have sacs of fluid, possibly defensive along its body.

Science News Sept. 2007

Astronomers believe that the asteroid that hit the earth 65 million years ago at the end of the age of the dinosaurs may have been due to an impact between 2 giant asteroids between Mars and Jupiter. Scientists studying two families (Flora and Baptistina) of asteroids believe that approximately 160 million years ago there was an impact that shattered a 170 KM wide asteroid. As a result, a large number of asteroids escaped the belt and have doubled the number of bodies hitting the earth since. Study of the remains from the Chicxulub crater (believed related to the dinosaur extinction) show that the impactor material is similar to those in the Baptistina group but dissimilar to the make up the asteroids in other possible groups.

Smithsonian May 2007

Study of a 160,000 year old jaw of a 7-year old show that growth marks on the enamel is similar to that in modern children. Indicating that childhood was prolonged in our ancestors.

National Geographic April 2006

A 55 million year old fossil has been found in Mongolia that has characteristics of both a rabbit and a squirrel. The Gomphos Elkema had a body and teeth similar to modern rabbits. But the cheek teeth were not similar, they were more like a squirrel. The ear bones are also similar to those of a rodent. All this point to a common ancestor between rodents and lagomorphs (rabbits, pikas, hares).

JOB OFFER

I have a unique part-time job opportunity that might interest some of your members. I wonder if you would be able to post this, include it in a list serve or newsletter, etc. **The application deadline is Feb. 8.** Please let me know if you might be able to do this, and if you have any questions. Many thanks, Rachel

Dinoroarus Education Interpreter – (Seasonal)

Responsibilities: Delivers a variety of informal educational opportunities for visitors at the Dinoroarus exhibit. The exhibit will feature approximately 20 life-sized animatronic dinosaurs and will replicate a paleontologist's dig site and explore various theories about the extinction of the dinosaurs. Provide interpretive opportunities and experiences for visitors that focus on the themes of the exhibit. Uses available props, costumes, and materials, in combination with interpretive training, to share Zoo messages with visitors in an engaging and accurate manner. Perfect for educators and performers alike.

Qualifications: High school diploma or equivalent required. Some college in science, education, or theater/performing arts preferred. Earth science/Paleontology background preferred. Good communication skills and customer service skills are a must. The job requires specific training, flexibility, and the

ability to work outdoors. Work schedule varies, and requires working evenings, weekends, and holidays.

Please visit

<http://www.stlzoo.org/contact/employment/currentjobopenings.htm> or more info.

Please visit

<https://careers.hiretrue.com/stlzoo> to apply

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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. My pick is <http://palaeo-electronica.org> It has a number of summary articles and book reviews. I have just looked at it a little but Vol. 10, issue 1 cover is cool as it shows a good image of crinoid and video of what it looked like moving.

Around Town

ST. Louis Community College – Florissant Valley – Lecture by Bruce Stinchcomb on “The World’s Oldest Fossils” with book signing.

February 27, 2008, 6:30 – 7:30 PM. The lecture is free and I believe that the book goes for around \$30.

At the St. Louis Science Center: “Sea Monsters – Prehistoric Adventure”

I believe that the Imax film is still running. See the Science Center Website for times.

Academy of Science – St. Louis – “Snapshot in Time – Secrets of the World’s Oldest Rainforest (Lecture), by: Scott D. Elrick and John Nelson, Geologists, Illinois State Geological Survey

A lecture on the discovery of a 300-million-year-old Carboniferous fossilized forest in a coalmine near Danville, Illinois. The forest covers more than 20

square km. Scheduled for **Wednesday, February 27, 2008; 7:30 - 9 p.m. at the Living World at the St. Louis Zoo. For more information call 314-768-5408**

Illinois State Museum Springfield, Il.

Carl Campbell reported that this museum has been redone and has a very good display of minerals and fossils associated with Illinois. So if you are passing through Springfield, stop by and let us know what you think.

Reports

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

Several field trips were already mentioned including Coon Creek in Tennessee. We would like to find out how many people would be interested in going on this trip. There is a cost to get into the site (it is run by Pink Palace museum in Memphis) in the past it around \$225. We are currently checking on current pricing. If you make a reservation, we are obligated to pay the total fee no matter how many show us. Approximate date is Mid-April. If you are willing to sign up, please e-mail me so we know if there is sufficient interest.

Coon Creek is located near Henderson TN (west central) about 4 ½ hours from STL. The site has over 600 fossil species (though many are rare). Common are bivalves and gastropods, crab claws and ghost shrimp burrows. Rare are ammonites, baculites, shark, turtle and mosasaur remains. Parsons quarry (nearby) is full of Devonian aged fossils, including crinoids, brachiopods, gastropods, bryozoans, etc.

If you have been to either site previously, please bring some examples of what you have found to the meeting so that newer people can see what has been found.

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.

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.