

The Paleo Times

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President's corner

Happy New Year!

I want to send a big **THANK YOU** to Carl Campbell for throwing a great holiday party in his home. What a lovely collection he has in nice display cases! Also, **THANK YOU** to Rob Skaer for putting together the fossil trivia game. I especially liked the U-Haul truck questions.

2016 is my first year serving as president of the club. I hope to keep up the field trips and programs which Faye Whobrey and previous presidents worked hard to coordinate. I do have a few specific goals in mind for the upcoming year involving our education and outreach programs and educational field trips.

Steve receives many more requests for fossil talks and STEM night (science-technology- engineering-math focused) programs than we can fill. We have a fossil display box set and PowerPoint slide deck designed to make outreach easy- you don't have to be an expert! Please consider learning more about our outreach opportunities. I also plan to educate our newer members by planning a fossil preparation party in the warmer months.

As for field trips, our group has contacts to get behind the scenes tours of the Indianapolis Children's Museum prep lab, Burpee Museum of Natural History in Rockford, IL, and the River Bluff Cave center of Springfield, MO. All are excellent museums; additionally River Bluff Cave is run by a former club member who offered to combine a trip with a this past fall. Let's take a fun 3 day weekend with the group to explore an area in ~4-5 hour drive from St. Louis.

Abby

DUES are DUE

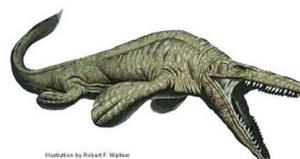
Dues are payable in January and are \$20.00 per household per year if receiving the newsletter by e-mail or \$25 for those receiving the newsletter by regular mail. See Rick at the January meeting or mail a check (payable to Eastern Missouri Society for Paleontology) to:

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

January Meeting

Our next meeting is **Friday, January 8, 2016** at 7:30 pm in the New Earth and Planetary Sciences building on the Washington University campus. Our speaker for the evening will be Dr. Bruce Stinchcomb who will talk about the Upper Cretaceous Owl Creek Formation exposed at his "Ardeola Site". Club members have had many successful visits to this site.

In Missouri, the Owl Creek formation represents the northern-most extent of the Mississippi Embayment, marking not only the end of the dinosaurs but the extinction of 80% of all land and marine life on Earth. An antiquated, but otherwise useful reference for the Owl Creek and its fossils is: "*Owl Creek (Upper Cretaceous) Fossils from Crowley's Ridge Southeastern Missouri.*", Geological Survey Prof. Paper 274-E. Just google this title and you can print it directly or save and print it.



Fossil of the Month



Beginning with this issue, we will feature a different bistate fossil each month. If you have a special fossil from Missouri or Illinois and would like it to appear here, forward a picture of it along with an identification, its age, geologic significance and where it was found to the newsletter editor. Mystery fossils are also welcome.

The fossil for this month is an unusual, Upper Cretaceous gastropod, *Lupira variabilis* (Wade) from the coquinite zone at the Golden Cat mine in Stoddard County. It is 4.5 cm. at its greatest dimension. It was found in August 2003 by Joe Bolser who prepared it and graciously donated it to the research team for study. This genus has not been previously documented from Missouri and is the only specimen found to date.

The "Kitty Litter" Site

In 1999, a Cretaceous-Tertiary boundary deposit of marine sediments was discovered at the Nestle-Purina Golden Cat open pit clay mine in Stoddard County. At this location, Paleocene Porter's Creek formation clay is mined to manufacture cat litter, thus the nickname "Kitty Litter Site" (KLS). The original pit (KLS-1) is now flooded and mining operations have moved to a new location (KLS-2) about 4 miles to the south.

Mining operations have exposed a fresh section of Upper Cretaceous Owl Creek and Lower Paleocene

Clayton formations composed of 185 cm of marine sediment, distributed in distinct zones. Evidence indicates that this section is most likely a tsunami deposit resulting from the Chiczulub impact event.

A fossil coquina at the base of the section is the key to understanding what forces were at work. The coquina contains a highly diverse concentration of Upper Cretaceous marine invertebrate fossils in an unsorted arrangement. A unique feature of the coquina is the presence of rip-up clasts containing both splashform and bubbly spherule microtektites. (Campbell, 2010) The two Stoddard County sites represent the only documented occurrence of these clasts in Missouri, however, they have been found at a few other sites around the Mississippi Embayment. The tektites are remnants of a Chiczulub ejecta blanket deposited over a wide area around the impact site. The fact that they are found within rip-up clasts but not in other parts of the section indicates they were picked up along with Upper Cretaceous Owl Creek fauna and transported within a suspension cloud to their present location.

Currently, fifty-eight different species of classic Upper Cretaceous Owl Creek invertebrates have been recovered at the mine, including twenty-seven bivalves, eighteen gastropods, five cephalopods, three echinoids, two bryozoans, one scaphapod, one chaetopod and one branching coral. Many of these are not previously known from Missouri. The preservation is excellent, making it possible to designate new Missouri paratypes based on well-defined detail rather than vague shape.

Upper Cretaceous Owl Creek formation fossils are found at a few other sites in SE Missouri, however, these poorly preserved specimens suffer from extensive weathering. It is probable that the thick beds of overlying Paleocene Porter's Creek and Clayton formations at the KLS sites insulated the coquina zone fossils from extensive leaching damage.

Calendar

Jan. 29-Feb. 14	Tucson Gem, Mineral & Fossil Show Multiple Venues, Tucson, Arizona
Feb. 19-21	Cabin Fever Show Kirkwood Community Center Kirkwood, Missouri
Feb. 19-21	GeoFest Indiana State Fairgrounds Indianapolis, Indiana
Mar. 11-13	Assoc. of Earth Science Clubs Show KCI Expo Center Kansas City, Missouri
Mar. 25-27	St. Louis Rock Hobby Club Show Machinist Hall Bridgeton, Missouri
Apr. 1-3	MAPS EXPO Sharpless Auction Facility Iowa City, Iowa
Apr. 9-10	S. Illinois Earth Science Show City Pavilion Marion, Illinois
May 28-29	40 th Annual Mineral & Fossil Show DuPage County Fairgrounds Wheaton, Illinois
August 7	Club picnic at Kirkwood Park

2016 Officers and Representatives

President: Abby (Lee) Fairbanks

Vice-President: Tom Lee

Secretary: Casey Thater

Treasurer: Rick Poropat

Newsletter Editor: Rick Poropat

Out Reach Facilitator: Steve Bynum

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Board Member at Large: Paul Thater

GSLAESC Club Representative: Faye Whobrey

GSLAESC Club Representative: Ruth Laverty

Show Committee Representative: Tom Lee

Show Committee Representative: Ruth Laverty



Rick's Ramblings

It's not too early to start planning fossil trips. At the top of my list is the annual trek to the MAPS Fossil Expo in Iowa. Next to collecting them yourself, this is the best place I know of to acquire nice specimens for your collection.

For those of you new to the hobby, the Expo is sponsored by the Mid America Paleontology Society (MAPS) and is probably the largest fossil-only show & sale in the world. Yeah, Yeah, Tucson is big too, but try finding something affordable there. A separate show is always held nearby during the week leading up to Expo. This year it is being held at the Clarion and features minerals and artifacts for sale as well as fossils. Think of it as a mini Tucson.

MAPS Expo is four hours north of St. Louis but is well worth the drive. Some of our members spend the entire weekend. In addition to thousands of fossils for sale or on display, there are interesting fossil programs given daily as well as a live auction of fossils and related items. This year, the keynote speaker is Phil Currie, former director of the Royal Tyrell Museum in Alberta, Canada. Informational cards (including a map) will be available at the January meeting. Be aware that the hotel show location has changed from the Travelodge to the Clarion on the other (north) side of the interchange (Exit 246), but was not corrected on the cards I have.

Field trips are always of interest to members. Our board does its best to provide them, weather permitting. This year will be no exception with planned visits to old favorites as well as new sites. Some will be day trips, others may involve out of town travel. All promise to reinforce your knowledge of fossils and paleontology. In this regard, EMSP is way ahead of the game compared to some larger clubs I belong to.

Finally, this club can only function well if its members participate. I encourage you to attend field trips, picnics, and other club sponsored activities. Volunteer when asked. Get involved! Your fossil knowledge will increase and EMSP will be stronger for it.

The Eastern Missouri Society for Paleontology (EMSP) is a Missouri registered 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 ancient 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 sites 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 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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