

The Paleo Times

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Rick Poropat, Editor

President's Corner

Please extend a warm welcome to Dr. James Schiffbauer, who will travel from Columbia to speak with our group at the May meeting. His talk sounds quite interesting and I regret that I will miss it. Vice-President Tom Lee will run the meeting.

Each year at the Greater St. Louis County Science Fair, EMSP awards up to 3 special awards for K-12 projects related to paleontology (free 1-year membership, fossil starter kit, and certificate). Please keep a look out for possible Science Fair special award winners, give them a big welcome to the May meeting and allow them time to show off their work.

In June we will forgo the normal meeting format in order to teach our newer members, and anyone else interested, the basics of fossil preparation. We plan to provide trim saws, dental picks, safety equipment, glue samples, various power tools, and hands on demonstrations! More details to follow, however, this event will most likely take place on the third Saturday of May, replacing the normal second Friday meeting. See calendar.

Abby

Congratulations!

Congratulations to Tim Poropat on his graduation from Truman State University with a degree in Biology and on landing a job at the Washington University School of Medicine! Way to go Tim! We're very proud of you!



May Meeting

Our next meeting is **Friday, May 13, 2016** at 7:30 pm in the new Earth and Planetary Sciences building on the Washington University campus. The program for the evening will be presented by Dr. James Schiffbauer from the University of Missouri.

His talk, titled "Writing the Record of Early Animal Life: Fossil Preservation across the Ediacaran–Cambrian transition", will focus on taphonomic pathways that give us our earliest snapshots of animals.

Specializing in taphonomy, biogeochemistry, and paleobiology of Konservat Lagerstätten, Dr. Schiffbauer studies pathways of exceptional preservation, largely focused at the Ediacaran–Cambrian transition during the dawn of animal life. He received his Honors BA in Biology from West Virginia University, dual MS degrees in Marine Biology and Coastal Ecosystems from Nova Southeastern University and a PhD in Geobiology from Virginia Tech.

Following a two-year post-doctoral position in the Virginia Tech Department of Geosciences, he spent a year as an assistant research professor at the Virginia Tech Institute for Critical Technology and Applied Science Nanoscale Characterization and Fabrication Laboratory and an adjunct professor in the Virginia Tech Department of Geosciences, studying advanced microbeam analytical methods in geosciences.

Dr. Schiffbauer joined the Mizzou Department of Geological Sciences in 2012. He is broadly interested in the evolution and ecology of our earliest animal ancestors, and the geobiological and environmental factors that influence soft-tissue fossil preservation.

At present, he has 46 published articles, and focuses his research on the preservation of some of the Earth's earliest animals in the Ediacaran and Cambrian Periods.

Please join us for an exciting and informative presentation.

Fossil of the Month



The May fossil of the month is the Mississippian (Kinderhookian) ammonite *Prodrumites gorbyi* from the Chouteau Limestone of Central Missouri. This rare ammonite measures 3 3/4 inches across and was collected from a working quarry in Saline county. The site is now closed to collecting.

The Chouteau Limestone

The Chouteau Limestone is named from exposures at Chouteau Springs in Cooper County, Missouri. It has been classified both as a formation and as a group. Outcrops extend across the state from northeast to southwest, curving around the central area of the Ozark Uplift. The Chouteau can be very fossiliferous locally and contains many types of cephalopods, brachiopods, corals, gastropods, blastoids and crinoids. Widely known for fine specimens of rare Mississippian trilobites, the Chouteau contains six genera within three distinct zones and represents one of the most diverse Carboniferous trilobite faunas in North America.

Wanted: Display Fossils

Carl is looking for donations of good quality, local fossils for a display at Meramec College. Please contact him at CECampbell@stlcc.edu if you would like to make a donation.

Treasurer's Report

A detailed treasurer's report is available by request from the treasurer at every monthly meeting.

May Field Trip

NOTE: This trip was announced at the April meeting and was limited to 20 participants (members only). The sign-up sheet filled quickly, however, due to cancellations there are currently 2 slots open. Contact Rick by email to be put on the list. Those not on the May trip list will be given priority for our next trip to this quarry.

A field trip to Vulcan Quarry near Parsons, Tennessee is scheduled for Saturday, May 14, 2016. The trip leaders will be John and Dorothy Stade. Vulcan Quarry is located on the east side of Hwy 69, approximately two miles north of Parsons. We will meet in the quarry office parking lot at **8:00 am SHARP**, to sign release forms from the quarry and from EMSP. A quarry employee will lead us to the collecting area and give us the ground rules for the day. We will be collecting from 8:00 am to 12 noon, when the quarry closes for the day. For those who don't have to head back home, the remainder of the day will be spent at a Silurian glade locality where John & Dorothy have had some lucky finds in the past.

At Parsons we will be collecting in the Devonian Birdsong Shale member of the Ross formation. The quarry mines the very massive Silurian Dixon formation and removes the overlying Birdsong Shale as waste rock. In the time allotted, we should be able to find many brachiopod specimens of about a dozen different species, *Dalmanites* tails and heads, *Favosites* and other Devonian corals, gastropods, bivalves, bryozoans, crinoid stems (some very large) and a crinoid head, float or even a blastoid if you are very lucky.

Book Review

The book of the month is actually a set of volumes called the ***Treatise on Invertebrate Paleontology***. Published by the Geological Society of America and the University of Kansas Press, this 50+ volume set represents the most comprehensive and up-to-date reference for invertebrate fossils throughout the world. Since its inception in the late 1940s, the aim of the *Treatise on Invertebrate Paleontology* has been to present a comprehensive and authoritative yet compact statement of knowledge concerning groups of invertebrate fossils. Professor Raymond C. Moore, the project's founder, envisaged the *Treatise* as ultimately comprising three hefty volumes with a total of some 3,000 pages. The *Treatise*, expanding in

fifty years beyond Moore's wildest dream, now comprises 51 volumes and involves the work of more than 300 authors worldwide with another dozen or so volumes in various stages of preparation.

In addition to hardcopy publications, *the Treatise* can be purchased and downloaded as individual volumes or chapters in PDF format. A drawback to this is a huge storage capacity requirement for your computer. All volumes in print can also be purchased on DVD or CD. The publications are not for the financially squeamish, however. A complete set of DVDs will cost \$1,670.00 and a CD set \$1,720.00. Hardcopy sets are even more pricey. For example, the Brachiopod volumes cost \$100.00-\$150.00 each and the entire 5-volume set is \$500.00. This works out to more than \$7,000.00 for the entire *Treatise* collection.

Outdated printed copies of sought-after volumes can sometimes be purchased at MAPS Expo or on line at reasonable prices. This is probably the best way to spend your money since updated editions, with the exception of the Brachiopods and Crinoids, don't contain a lot of revisions.

Rick's Ramblings

I am happy to report that the MAPS Fossil EXPO was a huge success again this year. Attendance continues to climb and there seemed to be more tables of reasonably-priced fossils for sale. The Friday night keynote address by world-renown paleontologist Phil Currie drew more than 450 people to the main ballroom at the Clarion hotel. The daily fossil talks, the silent auction and Saturday night's live auction were also popular. I especially enjoyed the display case filled with authentic props from the Jurassic Park movies.

A number of new specimens found their way into the Poropat collection, including a cycad frond and some petrified wood from Alaska, a variety of Pennsylvanian gastropods from Texas (Lake Bridgeport) & Illinois, a Pennsylvanian shrimp in a concretion from Indiana, (not Mazon Creek) a complete *Zeacrinites* crown from the Mississippian of southern Indiana, a small Ankylosaur tooth from Montana and a slab containing an odd Pennsylvanian algal mat from Oklahoma.

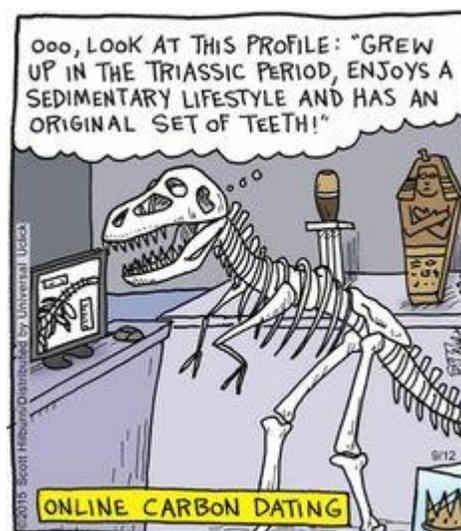
The club was not forgotten. At the hotel show I purchased wholesale-priced flats of Silurian fossils (mostly crinoid cups, corals and large brachiopods)

Ordovician brachiopods from southern Indiana, misc. fossils from the Devonian Silica Shale of northern Ohio, Silurian corals from Iowa and *Archimedes* screws from Alabama, all the club will use on fossil boards or at the sales booth.

It grieves me to report that I will not be making the annual pilgrimage to Montana this summer. While the rest of Carl's crew is happily searching for dinosaurs and petrified wood, I will be knee-deep in remodeling work at home. As I am often reminded, however, there is always next year.

Calendar

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| May 28-29 | 40 th Annual Mineral & Fossil Show
DuPage County Fairgrounds
Wheaton, Illinois |
| June 3-5 | FOSSIL Mini Conference
Cincinnati Museum Center |
| June 10-12 | Missouri Mines Rock Swap
MO. Mines State Historic Site
Park Hills, Missouri |
| June 18 | Fossil Prep Event
(location to be announced) |
| June 24-26 | Bedford Indiana Rock Swap
Lawrence County Fairgrounds
South of Bedford, Indiana |
| July 1-28 | Paleotrek
Jordan, Montana |
| August 7 | Club picnic at Kirkwood Park |
| August 19-21 | Greater St. Louis Association Show
Machinist Hall, Bridgeton, Missouri |
| Nov. 18-20 | Mineral, Gem & Fossil Show & Sale
Afton White Rogers Com. Center |



Death of Discovery by Glade Gunther. Continued from April newsletter.

One might ask, while this is all nice and good, what does this have to do with anything that I should care about today? On March 30th of 2009, President Barak Obama signed the Omnibus Public Land Management Act. Buried within this new law was Subsection D, called the Paleontological Resource Preservation Act or PRPA for further reference. This act was largely the objective of Federal Land agencies and vertebrate paleontologists to ensure that the rules that they had been held to for years were also projected across the aisle to all “fossil resources”. It also strengthens laws regarding selling of fossil resources to ensure that the criminal aspects of collecting and selling fossils are consistent across agencies.

If you have not already, I encourage each of you to look up this Act and study it. Without an understanding of it, you might find yourself at odds with an army of federal agents one of these days.

For thoroughness, I thought it wise to include some of the details that are most pertinent to the avocational collector. For a commercial or professional academic paleontologist, I pity you if you ever touch a fossil on public lands without a permit.

HIGHLIGHTS OF THE LAW

Definitions:

Casual Collecting: *The term ‘casual collecting’ means the collecting of a reasonable amount of common invertebrate and plant paleontological resources for non-commercial personal use, either by surface collection or the use of non-powered hand tools, resulting in only negligible disturbance to the Earth’s surface and other resources. As used in this paragraph, the terms ‘reasonable amount’, ‘common invertebrate and plant paleontological resources’ and ‘negligible disturbance’ shall be determined by the Secretary.*

As indicated in the text above, it would seem that a ‘casual collector’ shouldn’t have much to worry about as long as he or she was only collecting ‘common invertebrate and plant fossils. However, the next sentence is where things get complicated. By law, the secretary must determine what is a reasonable amount, what is common and what is a negligible disturbance. More on this later.

Management:

In general, the Secretary shall manage and protect paleontological resources of federal land using scientific principles and expertise. The Secretary shall develop appropriate plans for inventory, monitoring and the scientific and educational use of paleontological resources, in accordance with applicable agency laws, regulations and policies. These plans shall emphasize interagency coordination and collaborative efforts where possible with non-federal partners, the scientific community and the general public. Coordination-To the extent possible, the Secretary of the Interior and the Secretary of Agriculture shall coordinate in the implementation of the subtitle.

There are two points here worth consideration. First, the protection plan for fossil resources shall emphasize coordination among agencies, non-federal partners, scientists and the general public. Second, to the extent possible, the agencies that write the rules and enforce them shall coordinate.

COLLECTION OF PALEONTOLOGICAL RESOURCES

Permit Requirement

In general, Except as [provided in this subtitle, a paleontological resource may not be collected from federal land without a permit issued under this subtitle by the Secretary.

CASUAL COLLECTING EXCEPTION-*The Secretary shall allow casual collecting without a permit on federal land controlled or administered by the Bureau of Land Management (BLM), the Bureau of Reclamation and the Forest Service, where such collection is consistent with the laws governing the management of those federal lands and this subtitle.*

If you want to collect any fossils on any federal land, you must have a permit. That is, unless you are a ‘casual collector’. Except, what is a casual collector?

Prohibited Acts; Criminal Penalties:

In general, A person may not-

- (1) Excavate, remove, damage or otherwise alter or deface or attempt to excavate, remove, damage or otherwise alter or deface any paleontological resource located on federal land unless such activity is conducted in accordance with this subtitle.*
- (2) Exchange, transport, export, receive, or offer to exchange, transport, export or receive any paleontological resource if the person knew or should have known such resource to have been excavated or removed from federal land in violation of any provision, rule, regulation, law, ordinance or permit in effect under federal law, including this subtitle.*
- (3) Sell or purchase or offer to sell or purchase any paleontological resource if the person knew of should have known such resource to have been excavated, removes, sold, purchased, exchanged, transported or received from federal land.*

If you are not a casual collector, you can't touch a fossil from federal land in any way. If you are a 'casual collector' you can touch and exchange, but not sell, common invertebrate and plant fossils. But then again, what is a 'casual collector' and who decides what is common?

REWARDS AND FORFEITURE

Rewards-*The Secretary may pay, from penalties collected under Section 6306 or 6307 or from appropriated funds;*

- (1) Consistent with amounts established in regulations by the Secretary, or*
- (2) If no such regulation exists, an amount up to ½ of the penalties, to any person who furnishes information which leads to the finding of a civil violation, or the conviction of criminal violation, with respect to which the penalty was Paid. If several persons provided the information, the amount shall be divided among the persons...*

If a federal agent decides that you are not a 'casual collector', even if you think you are, or that you collected something that does not meet their personal description of 'common', you might get turned in for a reward. This is tough because a lot of us trade fossils with friends. It is how we learn about new specimens and localities. It is part of our culture as fossil collectors.

Confidentiality-*Information concerning the nature and specific location of a paleontological resource shall be exempt from disclosure under Section 552 of Title 5, United States Code, and any other law.*

From now on, no fossil localities will be included in scientific publications unless the governing agency wants to disclose the site. So much for including the public. This is worrisome as now science is required to hide information from the public.

SAVINGS PROVISIONS

Nothing in this subtitle shall be construed to;

- (1) Invalidate, modify or impose any additional restrictions or permitting requirements on any activities permitted at any time under general mining laws, the mineral or geothermal leasing laws, laws providing for mineral disposal or laws providing for the management or regulation of the activities authorized by the aforementioned laws...*
- (2) Invalidate, modify or impose any additional restrictions or permitting requirements on any activities permitted at any time under existing laws and authorities relating to reclamation and multiple uses of federal land.*

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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