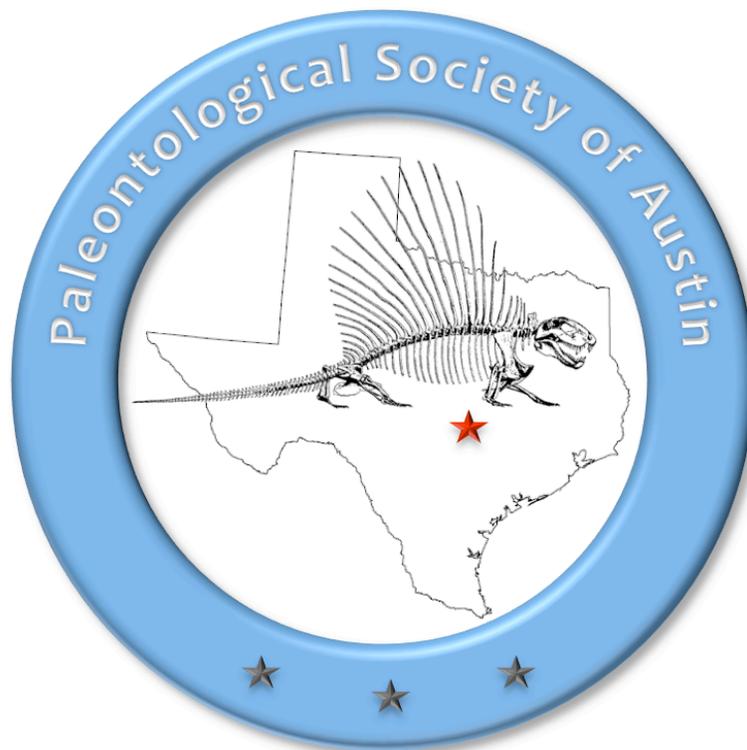


Paleo Footnotes

Newsletter of the
Paleontological Society of Austin

Austin and Central Texas



Volume 7, Number 9
September 2012

President's Note

Although I did not attend, I heard good times were had in Harker Heights and plenty of nice fossils were collected. Ed Elliot showed me a handful of well-preserved *Phymosoma texanum* he picked up that day. Nice! There were a few members who called me that morning hoping not to be left behind or unsure of directions. I was sitting at home with my wife, trying to enjoy a cup of coffee and *not* think about the fact that I *wasn't* going collecting! I didn't mind helping, but folks should be a little better prepared next time. In addition Ed (field trip leader) gave me a little feedback after the trip and it brought up a few things that everyone needs to remember. These are things that have come up over the years, we are not being critical of any member, new or old, they just need to be reiterated every so often. Let's call it:

GOOD FIELD TRIP ETIQUETTE

1. **Arrive on time or early.** At the prescribed meeting time (often 8AM) you should be out of your car standing with the FT leader, signed in and ready to hear the day's schedule, directions and helpful pointers.
2. **Do Your Homework.** Use one of the online mapping programs to determine travel time and directions from your home. Take the map with you and leave at least 15-30 minutes early. This is critical when we are going to quarries, private property or if the first stop is a meeting-point, not the collecting site. The field trip leader will not wait more than 15 minutes beyond the scheduled time.
3. **Make sure you have the Field Trip leader's phone number.** The number will appear in the field trip notice. Bring a copy of the notice from the newsletter or e-mail blast so you have the information. That is the best way to find the group if you do get delayed or lost. **BUT DO NOT COUNT ON IT.** Some of our remote sites have poor cell reception. We have no way to guarantee you will get there if you miss the meeting spot.
4. **The first stop is NOT breakfast.** Please do not expect the rest of the group to wait while you order food or take care of business. If you need to do that, arrive 30 minutes early and then be ready to go at 8:00AM sharp! You are holding everyone up beyond that point.
5. **The Field Trip Leader sets the schedule.** Gather near the leader at the beginning of every trip and listen carefully. The leader will describe where and when things will happen. That will include directions, plans for breaks and everything else you need to know about how the day will unfold. If you are not sure about directions or the schedule speak directly with the field trip leader. Do not count on hearsay.
6. **Do not ask the entire group to stop for unscheduled breaks.** If you need to take a break during the day, do it after you know where the collecting site is located. The field trip leader will usually schedule a break around lunch but not between every stop. Follow the group to the site and then circle back for food or facilities. This is why we suggest bringing your own food and beverages. Also being prepared with TP, or whatever else, for "emergencies".
7. **Sign in and don't forget to report to the leader when you leave.** This is not critical, but the FT leader will greatly appreciate those two things. Having everyone's name let's him know how well attended the trip was and we like to list everyone in the follow up reports. Secondly, getting a chance to hear and see what you found that day and being able to keep track of who is on site at the very end is just a good thing.
8. **Don't Crowd the Next Guy.** Please be courteous of your fellow collectors space. If someone says "Hey I found a good one!" don't come rushing, crowding into their collecting zone. Let them offer to share the space. You can ask them where they found it and then move off to one side or the other, but don't just plop down next to them.

I know some of our new members might feel like gee, everyone else knows what their doing and we will never figure this out. But we all started out feeling the same, so follow the suggestions above, pay attention and in no time you will be a seasoned collector, having a great time and showing others the ropes.

See you at the next meeting *and* future field trips. -- Erich

**Next Meeting
Tuesday September 18, 2012**

**7:00 p.m. at the Austin Gem and Mineral Society building
6719 Burnet Lane, Austin, TX**

Paleogeographic Reconstructions

By Lawrence A. Lawver
Senior Research Scientist Institute for Geophysics, Jackson School of Geoscience
Univ. of Texas at Austin

Larry's talk will focus on his research on paleogeographic reconstructions of [Gondwana](#), the Polar Regions, East Asia, and the Western Pacific, the development of paleo-seaways and their impact on climate, and the aerogeophysics of the Arctic region. He is particularly interested in two of the remaining problems in the study of plate tectonics: understanding the timing and process of the opening of the Canada Basin of the Arctic region, and the impact of plate tectonics on long-term climate change.

September Field Trip

Mineral Wells - Paleozoic of North Central Texas

**Saturday September 22, 2012
Meet at 8AM in Mineral Wells at the McDonalds on US 180 east of US 281**

Field trip to Mineral Wells, Texas for Pennsylvanian fossils. Most of what we collect will consist of small fossils, so plastic sectional boxes would be a plus. Collecting bags will be necessary as well, as some sites will have blocks with things in them. Dress for the weather predicted and bring lots of water, snacks, etc. We will probably be visiting the Fossil Park first. There are many sites available, so we will have to be selective. The collectors who show up will have a say in where we go after that.

Mineral Wells, TX is approximately 3 hours and 45 minutes north of Austin via US 183 N to Lampasas & then US 281 N. In Mineral Wells US 180 runs East-West through town. On the eastern side is a McDonalds, meet there at 8:00AM.

Contact Ed Elliot, Field Trip Leader (512-657-7581) with any questions.

Mineral Wells Fossil Park: <http://www.mineralwellsfossilpark.com/>

Finding a New Echinoid in the Glen Rose Formation

by Erich Rose

Earlier this summer I had the pleasure of being joined at a favorite site by a friend and fellow collector John Jackson. I know John through The Fossil Forum for which he is an administrator. So while we were looking for various known, but rare, echinoids at this Lower Glen Rose Formation site he pointed out some odd blade-like objects that had caught his eye and yet could not be easily attributed to any of the known fauna. I had also noticed these items but chalked them up to being fragments of oysters. John pointed out that they were fairly common, somewhat regular in shape and must be "something", probably not bivalve fragments. So I started picking them up. In fact I was kicking myself for not following one of my cardinal rules: if I cannot identify it, then it **MUST** be collected for further study. Of course the real rub was that I had been ignoring them in my quest for other rare sea urchins over many previous visits. Now along with these blades we were also finding another odd rectangular shape with a vague x-pattern that I had noticed before and collected, but not identified. I went home that day with a handful of the blades and a couple of the rectangles. John was right, these were worth collecting, and I was primed to figure them out.

That week I dove into identifying and cataloging finds from the site. But these odd bits were proving difficult. The rectangular shapes had popped up somewhere before but I could not find the reference. I was certain they were from an echinoderm, but was it an echinoid (sea urchin), a crinoid (sea lily) or an asteroid (starfish) I couldn't say. All three are known from the site. I decided to take the hunt to the Internet and posted pictures in the ID section of The Fossil Forum. Several folks chimed in and I had some good leads suggested but no one was certain. Then I got serious and started paging through the Treatise on Invertebrate Paleontology. I'm lucky enough to own a handful of volumes of the Treatise, including sections on Echinoderms. Eventually I came across a single image that appeared to contain the answer: the genus *Echinothuria*, of the Family Echinothuriidae, of the Order Echinothurioida looked pretty darn close. The species shown in the Treatise was from the Upper Cretaceous of England but in the scheme of things that was pretty darn close. My next step was to send some photos to one of the experts in the field: Prof. Andrew B. Smith of the British Natural History Museum. He has been doing work on echinoids and in particular the echinoids of the Glen Rose Formation. His paper with W. L. Rader (see below) has proven a very valuable resource. Prof. Smith is also known for helping amateurs like us with difficult identifications. He recently helped Bill Thompson identify another unknown Glen Rose echinoderm: *Pygorhynchus* sp. It turned out I also had a fragment of this echinoid that was not listed anywhere in the Texas literature.

I sent Prof. Smith an e-mail with a few photos and received the following reply:

"The plates are indeed echinoderm but very peculiar indeed. I think you are right that they are echinothurioid as they show imbricate plate edges, which is interesting. I cannot tell from your picture but are the tubercles perforated and crenulated? Unfortunately it is impossible to do much with isolated plates. But it does hold promise that there is more to be unearthed!"

At that point I was sharing all this with the instigator John Jackson. John then offered some improved photos. Bingo! The next e-mail from Prof. Smith:

"Definitely Echinothuriidae. Nice pictures!"

Yay! One of the most satisfying things an amateur collector can do is find something new. Well of course it's not really *new*, it's been sitting there in the earth for more than 100 million years and probably others before me looked at those odd bits and wondered what they were. And I have no doubt others have them in their collections.

On to the next item... Well despite my paging through all my books and papers I still could not find the image of that rectangular shape with the odd x-pattern. But John was much more persistent and found a couple of closely matching images on the Internet. In fact he found them on the excellent Echinoid-Directory web site that Professor Smith and the British Natural History Museum maintain. Turns out they are part of what is known as Aristotle's Lantern, what might be called the "jaws" of a sea urchin. In urchins the lantern is made up of multiple(50!) parts and this part is known as the rotula. And to make things even better there appears to be one of these shapes in a photo of *Echinothuria floris* Woodward, from the Late Cretaceous of England. Now without finding a complete specimen with the lantern in place it will be impossible to know that the two are from the same animal, but for now I feel safe in at least considering the possibility. And considering that most Echinothurioida are made up of flexible (not attached) plates this could be tough to solve. But specimens of associated plates have been found in the British Chalk so we can only hope one will show up here in Texas.

People are always asking me what my best fossil has been. Well I do have some really nice trilobites, echinoids and other quality pieces, but these weird little bits are now my favorite fossils. So remember that cardinal rule: If you cannot figure it out in the field, It's a Keeper. And special thanks to John Jackson (Granger, TX) who set this all in motion.



Photo on left (E. Rose) of typical blade-like plates & magnified shots (J. Jackson) showing details.



Specimens of rotulas collected by E Rose and plate/diagram from the Echinoid-Directory.

References:

The Echinoid Directory: <http://www.nhm.ac.uk/research-curation/research/projects/echinoid-directory/index.html>

Echinoid diversity, preservation potential and sequence stratigraphical cycles in the Glen Rose Formation (early Albian, Early Cretaceous), Texas, USA Andrew B. Smith & William L. Rader, 2009, *Palaeobio Palaeoenv* 89:7-52

Treatise on Invertebrate Paleontology, Part U Echinodermata 3, volume 1, edited by Raymond C. Moore, 1966

Robert Randell's British Chalk Fossils: <http://www.chalk.discoveringfossils.co.uk/Echinothuria%20floris.htm>

Field Trip Harker Heights August 2012

Meeting at the McDonalds has its benefits: it is easy to find, it has rest rooms and coffee available and some say food as well. On a Saturday morning it is crowded and hard to leave as a group. I guess the good outweighs the bad. We had sixteen members scattered around the parking lot: Frederick and Melinda Falk, Kathleen Howard, Sal Scibitty, Kevin Bills, Kasey, Liam, Simon, and Amira Lansangan, Mark Montgomery, Gary and Cathy Rylander, Karen, Jason, and Lexi Ikonmopoulos.

After several starts, we caravanned to the forty acres for some more Walnut Formation fun. All sites are Walnut Fm., Fredericksburg Group. A great number of steinkerns of many species were found, and many gastropods as well. Some horn corals, *Parasimilia austinensis* were found. Most of the members were looking for the echinoid *Phymosoma texanum*, and many were found. Other echinoids found at this site: *P. mexicanum*, *Heteraster texanus*, *Salenia mexicana*, and *Tetragramma taffi*. I believe that all but the *Tetragramma* were found on this trip. And I believe that one small *Engonoceras* ammonite was found by Frederick(?)

Retracing our route a few miles we came to our second site. There is a crystallization process going on that lends a great deal of detail to some of the fossils – most notably the gastropods and small bivalves, which can be very pretty. One of the items looked for by all are the *Salenia mexicana*. I only picked up a few this day, but Gary did his usual twenty. Once they knew what to look for, quite a few members were able to nab some. Kathleen managed to pick up a nice, hand sized *Oxytropidoceras sp.* ammonite. As usual with Walnut sites, pieces were ubiquitous. Kevin picked up a small *Engonoceras as well*. As with most *Salenia* sites, the horn corals were extremely plentiful and a few *Heterasters* could be found as well.

A lot of members headed for home for various reasons and only a handful of us took lunch and continued on to the third site. This site has produced thousands of *Phymosoma* over the years, sometimes hundreds in a day. I believe it is being hunted a lot as it has not produced that many the last few times I've been there. Still, I'm sure that twenty were found, along with the ever-present *Heteraster*. I was able to find several *Arrhoges sp. (?)* gastropods that, when cleaned had extensive lips. These almost always break off. I also found an unusual ammonite. *Oxytropidoceras texana*. Very different from what we usually find, and in older strata than they are normally found. Not complete, but still pretty cool. I think everyone had a good time and a lot of fossils were taken home. It didn't get hot until the afternoon, so that was a plus, all in all another good trip.

We had said last month that since we couldn't do a float trip on the Brazos, we'd try again this month but the last time I looked it was still too high (11+) to be any good. So it will be Mineral Wells. And something unexpected has happened, the Ash Grove Quarry manager has contacted me (finally!) and we can go at the end of October. We'll have to forgo Texoma, but we haven't been able to get into the quarry in many years. Take it when we can get it. ---Ed

FOSSIL FEST UPDATE

The 22nd Annual Fossil Fest is just around the corner - mark your calendars for December 1 - 2, 2012 (with set-up on Friday, November 30). The gift of your time by volunteering for the show is crucial to our continued success!

At this month's meeting, a **sign-up** will be available for our Paleontology Table at the **AGMS Gem Capers** show held **Friday, 10/19 through Sunday, 10/21** (with set-up on Thursday). This is our largest educational outreach of the year and opportunity to spread the word about our show. We especially need volunteers on Friday - for any amount of time you can spare. It's great fun and all volunteers will receive free admission! We have **two display cases** that need filling for the show as well. This provides a tremendous opportunity to practice for Fossil Fest! The SCFMS case competition is back this year if you're interested in entering your case into it. Rules may be found on the AGMS website - www.austingemandmineral.org/gemcapers. Details about an **online sign-up** for Gem Capers will be available after the meeting, so watch your email. Additionally, we will be handing out **Fossil Fest tear pads and flyers** for placement at specific locales around Austin, Cedar Park, Georgetown, Leander, Pflugerville and Round Rock. More details will be available at the meeting.

Next month, we will hold a **Pre-meeting Fossil Stuffing Party at 6pm on October 16**. This will support all the Fossil Fest flyers and fossil give-aways to the public at the AGMS Gem Capers show. Please bring your clean (no bigger than a sandwich sized ziploc bag) fossil donations to the meeting. We need at least 1500!

The following are other upcoming ways for members to help out with Fossil Fest!

FACEBOOK PAGE

Did you know?... We have a public Facebook page now! The FF show committee put this together as a way of increasing public awareness of the club in general and Fossil Fest in particular, with the hopes of getting good attendance at the show! It's for members too - so follow us at [facebook.com/austinpaleo!](https://www.facebook.com/austinpaleo/)

DISPLAY CASES

We encourage you to create a display case for Fossil Fest. Although many members signed up at the August meeting, we still have quite a few cases to fill! Additionally, there are some key TEKS concepts that we'd like to pass on to the kids at the show. In support of these concepts, please *consider* the following ideas or information to include in your displays:

A display of how fossils form with an example of each (permineralization, carbonization, etc)

Examples of changes to an organism over time

Collection of crinoids and their structures

Type fossils and why they're important to paleontology - to identify geological time / layers

Urchins - characteristics used to identify them with samples and diagrams

Display showing environment of the fossil while living - deep ocean, shallow ocean, temperature, etc

FOSSILS

We need lots and lots of CLEAN cast off **fossils** for the DIG PIT (very small for sand and small for gravel) and SPINNING WHEEL (think what you would want to take home). Keep this in mind when you're out collecting - if you come across an outcrop with a lot of a particular fossil, please pick up extras for the fest!

All members are welcome to attend the **Fossil Fest Show Committee** meetings. This is a fantastic way to shape Fossil Fest and make a difference on the show. Meetings are held on the 2nd Wednesday of each month at 7pm. Meeting locations will vary, so please check the calendar for more info.

Well, that's all we have for now, but please keep watching this space as the committee continues preparing for the show. We'll give you more updates and more calls for your assistance with this very important show!

Suzanne Galligher, Fossil Fest Show Chair

August 2012 Meeting Minutes

Minutes 8/21/2012

The meeting was called to order.

We had a little trouble with the projector so while it was being fixed (Thanks David L.!) we took care of some business.

Announcements:

Kathleen Howard invited everyone to the AGMS auction scheduled for that Thursday.

ID day at Texas Memorial was discussed and members invited.

Prof. Leon Long picked up a wide variety of ammonites that were donated for his classes. Thanks to all who donated.

Dr. Ann Molineux talked about her new project asking anyone who wants to help with tagging key words in some old papers.

The projector was brought up to speed...

Presentations:

Our presentation was done as a show and tell session by various members.

First up was Linda McCall who gave a preview of a paper she is co-writing on the micro fauna at Pilot Knob.

Dr. James Sprinkle then showed us the prize crinoid he found while in Oklahoma last June and explained how important a specimen it was.

Bill Thompson did a fun power point on the Glen Rose foram *Orbitolina texana*.

Dax Gonzalez presented his Green River fossil fish

collected on vacation from one of the pay to dig sites.

Melinda Falk showed us some great images of trilobite eyes and talked about their early evolution.

Bill ? showed us some corals and urchins.

Frederick(?) showed us some corals.

Erich Rose presented a variety of Glen Rose sea urchins collected over the last few years.

Break:

Business:

Prior minutes were approved.

Treasurers Report

Checking \$6,899.43

Savings \$17,891.21

Total \$24,790.70

Scholarship donations to-date is \$386.00 from 5 donations. The budget is \$500.00.

We need more donations to get up to \$500.

Treasurer's report was approved.

AGMS is still getting things sorted out after the theft of the trailer and its contents. We await their final report and will take action (\$ &/or labor) then.

Field trip -

The water levels on the Brazos were too high with more rain forecast so the trip was scratched. It was decided to move Harker Heights up to August from September and then see if the Brazos was possible in September. Time and directions were given for meeting in Harker Heights.

Door prizes were awarded.

Meeting was adjourned.

Places to Go...

September 29-30—MESQUITE, TEXAS: Annual show; Dallas Gem & Mineral Society; Mesquite Exhibition Hall; 1818 Rodeo Dr.; Sat. 10-6, Sun. 10-5; adults \$8; dealers, gems, minerals, fossils, demonstrations, kids' mine, fluorescent display, geode cracking, gold panning; contact Darrell Harrison, 1808 Tisinger, Dallas, TX 75228; e-mail: bravo1bravo@sbcglobal.net; Web site: dallasgemandmineral.org

October 6-7—ARLINGTON, TEXAS: 55th annual show; Arlington Gem & Mineral Club; shopping center behind Walgreens; 1010 N. Collins; Sat. 10-6, Sun. 10-5; adults \$6, seniors, students with ID, and children (6-12) \$3, Scouts in uniform and active military free; dealers, rocks, slabs, gems, jewelry, fossils, demonstrations, cabbing, faceting, silversmithing, flint knapping, displays, jewelry, minerals, silent auctions, grand prize drawing, raffle, gem identification, Rock Food Table, Kids' Korner, gold panning; contact Jack Spinks, 209 Overlook Dr., Midlothian, TX 76065, (214) 335-9452; e-mail: jlspinks@sbcglobal.net; Web site: agemclub.com

October 13-14—FORT WORTH, TEXAS: 3rd annual show; LMRA Rockhound Activity; Lockheed Martin Recreation Assn.; 3400 Bryant Irvin Rd.; Sat. 8-6, Sun. 8-6; free admission; dealers, rocks, slabs, jewelry, concurrent with Pottery in the Park; contact Donna Pelikan, 421 NW Douglas St., Burleson, TX 76028, (682) 970-8362; e-mail: liznmarie@yahoo.com

October 13-14—TEMPLE, TEXAS: Annual show; Tri-Cities Gem & Mineral Society; Mayborn Convention Center; 3303 N. 3rd St.; Sat. 9-5, Sun. 9-5; adults \$2; silent auction, demonstrations, kids' activities, rough, slabs, cabochons, faceted gems, beads, supplies, tools, jewelry; contact Chip Burnette, (254) 630-3573; e-mail: burnette@aceweb.com; Web site: www.tricitygemmineral.org

October 19-21—AUSTIN, TEXAS: Annual show; Austin Gem & Mineral Society; Palmer Events Center; 900 Barton Springs Rd.; Fri. 9-5, Sat. 10-6, Sun. 10-5; adults \$5, seniors \$4, students (13-18) \$1, children (12 and under) 50 cents; more than 30 vendors, jewelry, beads, gemstones, mineral specimens, crystal, fossils, spheres, lapidary equipment, kids' Wheel of Fortune, Gem Mine, jewelry making, Illumination Station (glowing rocks), displays, Rock Food Table, Touch Table, member collections, demonstrations, faceting, cabbing, polymer clay, Youth Education Day Fri., silent auctions, hourly door prizes, grand prize; contact Susan Postlethwait, 6719 Burnet Ln., Austin, TX 78757, (512) 458-9546; e-mail: showchariman@austingemandmineral.org; Web site: www.gemcapers.com

October 19-21—VICTORIA, TEXAS: Annual show; Victoria Gem & Mineral Society; Victoria Community Center; 2905 E. North St.; Fri. 9-6, Sat. 10-6, Sun. 10-4; adults \$5, children (under 12) free with adult; hourly door prizes, silent auction, Wheel of Fortune, touch table, lapidary demonstrations, member display cases, dealers, jewelry, gems, rocks, minerals, beads, fossils, lapidary supplies; contact Ken Lemke, PO Box 2804, Victoria, TX 77902, (361) 575-5350; e-mail: victoriagemandmineral@yahoo.com; Web site: www.victoriagemandmineral.com

October 20-21—DENISON, TEXAS: Annual show; Texoma Rockhounds; Senior Center; 531 W. Chestnut; Sat. 9-5, Sun. 10-4; free admission; dealers, jewelry, rough rock, jewelry making supplies; contact Rosemary Siems, 91 Country Hill Circle, Sherman, TX 75090, (903) 891-9702; e-mail: ramblingrosetoo@yahoo.com

The purpose of the **Paleontological Society of Austin**, a 501(c)(3) non-profit organization, is the scientific education of the public, the study and preservation of fossils and the fossil record and assistance to individual, groups and institutions interested in various aspects of paleontology.

Meetings of the **Paleontological Society of Austin** are held the third Tuesday* of each month, 7:00 p.m. at the Austin Gem and Mineral Society building, 6719 Burnet lane, Austin, TX. The public is cordially invited to attend. See web site for April & December dates.

Annual Dues: \$18/individual, \$24/family and \$12/associate (non-voting, receiving newsletter) Send to: Treasurer, Paleontological Society of Austin, PO Box 90791, Austin, TX 78749-0791

PSA Web Site: www.austinpaleo.org
Web master: Michael Smith: webmaster@austinpaleo.org

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Web master Mike Smith
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president@austinpaleo.org
vicepresident@austinpaleo.org
treasurer@austinpaleo.org
secretary@austinpaleo.org
fieldtripchair@austinpaleo.org
maustinsxsw@hotmail.com
editor@austinpaleo.org
webmaster@austinpaleo.org
vicepresident@austinpaleo.org

Science Advisors:

Ann M. Molineux, PhD. annm@mail.utexas.edu
Pamela R. Owen, PhD. powen@mail.utexas.edu
James T. Sprinkle, PhD. echino@mail.utexas.edu

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PALEONTOLOGICAL SOCIETY OF AUSTIN

Erich Rose, Editor
807 The Living End
Austin, TX 78746

DATED MATERIAL – MEETING NOTICE

FIRST CLASS MAIL