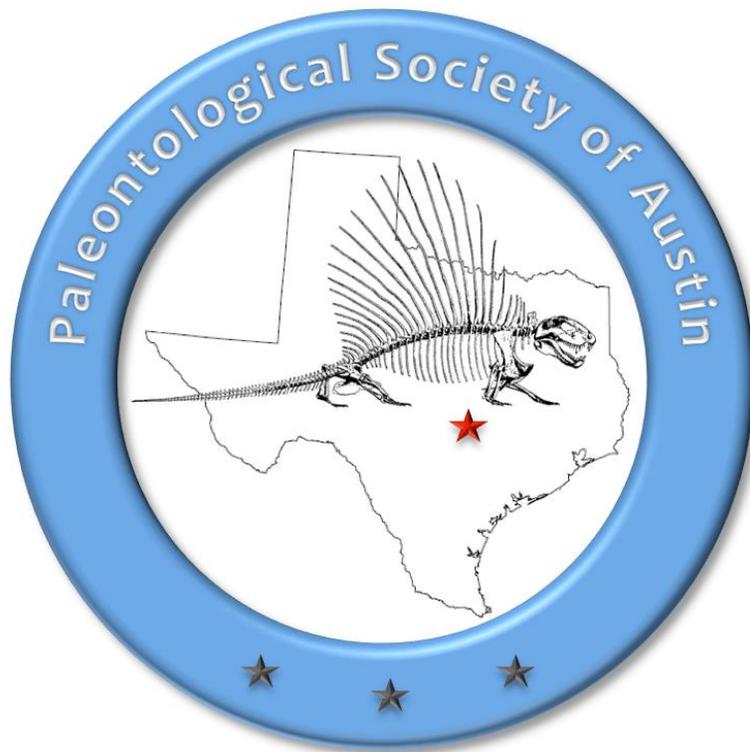


# Paleo Footnotes

Newsletter of the  
Paleontological Society of Austin

Austin and Central Texas



Volume 9, Number 3  
March 2014

## **President's Note**

This will be a short note this month.

Tuesday's meeting will feature a lecture by our own member and science advisor, Dr. James Sprinkle. Dr. Sprinkle will speak on the evolution of crinoids. Personally I find crinoids, and echinoderms in general, to be one of the most interesting phyla with their strange five-fold symmetry and truly bizarre shapes and forms. This should be interesting.

The March feild trip will be to east Texas as usual. Expect to drive far but be rewarded with some spectacular fossils. This trip is to much younger formations than our local Cretaceous or even older Pennsylvanian Period locations.

Please take a look at the volunteer opportunities listed in the newsletter. Doing these events is a lot of fun and we will pair up new members with older experienced members so you can see how easy it is to present what we do to the public.

-- Erich

## Next Meeting

**Tuesday March 18**  
**7:00 p.m. at the Austin Gem and Mineral Society building**  
**6719 Burnet Lane, Austin, TX**

### **Early Evolution of the Crinoid Cup and Crossovers Between Major Designs**

Dr. James Sprinkle

Our Science advisor and long time member Dr. James Sprinkle will be talking about one of his favorite subjects, the crinoids. Considered one of the foremost authorities on the subject this should be an interesting lecture.

Bio from the UT Jackson School of Geology web site:

Dr. Sprinkle is an invertebrate paleontologist who studies Paleozoic marine communities and ecosystems and specializes in early (and now mostly extinct) echinoderms. Jim has worked on late Paleozoic echinoderm communities in Montana, Oklahoma, and Texas. Since 1989, he has been working on Late Cambrian and Early Ordovician echinoderm communities from the Rocky Mountains, Texas, and Oklahoma. Most of this recent work has been done with colleagues Tom Guensburg (Rock Valley College, Rockford, IL) and former Ph.D. student Colin Sumrall (now University of Tennessee, Knoxville), funded by two NSF grants. These time intervals overlap the critical transition between the Cambrian Evolutionary Fauna and the initial radiation of the Paleozoic Evolutionary Fauna, which then dominated marine ecosystems for the next 220 million years. However, before their work, they represented a "gap" in the echinoderm fossil record, with very few echinoderms from anywhere in the world. They were very successful collecting new echinoderms in the Early Ordovician on the first NSF grant (1989-1991), discovering several new faunas that are the largest ever found in North America. They were somewhat less successful collecting echinoderms from the Late Cambrian on the second NSF grant (1993-1994), an interval where echinoderms were apparently much less common and harder to find in the field. The Late Cambrian project is now nearly finished (7 papers published, 1 more in press), but the Early Ordovician work (now 19 papers published, 3 more in press, and at least 10 more in preparation) has expanded so much that it will take many more years to complete.

## **March Field Trip**

**Saturday March 23rd**  
**East Texas**

We will meet at 8:00 on Saturday at O'Reilly Auto Parts on N. University Dr. in Nacogdoches . Go north on Business 59 to E. Main St. (Highway 21) and turn right (east) and go approximately 9 blocks. At the intersection of University Dr. turn left and go a short distance and see O'Reillys on your right. This can be a collection site but it will be just a meeting place to caravan from this time.

We will be collecting Eocene invertebrates both Saturday and Sunday. We will be in the San Augustine area all day Saturday and back in the Nacogdoches area for Sunday. Much, but not all of our finds will be small - so sectional boxes will be useful. Bring lunch and water and the usual collecting materials. Watch the weather and dress accordingly. It should be a really good spring trip with dogwoods and other things in bloom.

For more information contact Ed Elliot, Field Trip Leader at 512-657-7581

## February Field Trip Report Harker Heights, TX and vicinity

I arrived a few minutes late for this trip and was met with quite a crowd. Melvin Noble, John Hinte, Ron Root, Kevin Bills and family, Mike Smith, Kathleen Howard, Christy, Todd, and Thomas Runnally, Chantal and Will Berezovych, Debora Dean, Gary Vliet, Frederick and Melinda Falk, Tess Weaver, Dave Hoppes, Cathy and Gary Rylander were waiting and ready to go.

Our first site needed to be someplace that we were going to stay a while, as I was waiting for a late member. This one has over 40 acres and we hunt 2/3 of it. Everything we were to see this day is Walnut Formation, Fredericksburg Group. I've been told by someone better at stratigraphy than I that the first and the third sites are of the Keys Valley Marl member. I enjoy going to the Harker Heights area because of the large number of fossils available. Similar outcrops in the Walnut of the Austin area just aren't as plentiful. The echinoid *Phymosoma* is found in Austin, but no where in the numbers found around the Harker Heights to Copperas Cove area. The echinoid *Coenholectypus* is found in the Walnut of Austin but seldom around H.H. And the ammonite *Oxytropidoceras* is ubiquitous around H.H. (usually in pieces) but I've never seen one in the Austin Walnut and seldom any ammonites at all. Further north of us the outcrops of the Walnut are thicker and there must be a facies change as well. Due to the large number of hunters, I didn't get to see most of what was found. I do remember that Kathleen and Frederick both found *Engonoceras* ammonites and I saw Gary V. putting plaster on another to try to get it home for some TLC. I'm sure that most of us took home some *Phymosomas*. John found a nice nest of seven at the first site. And Gary R. said he'd picked up over 20 at the third site. I wasn't really looking for them and still picked up seven, about half *P. texana* and half *P. mexicanum*. The great variety of bivalves, gastropods, oysters, horn corals and so much more make Harker Heights a place to go back to many times. I do think that it suffers from the same problem a lot of Texas has – a distinct lack of rain. As good as it was, it would be a lot better with some serious rain. A great day, lots of fossils and friends – sounds like a great day to me. See you in East Texas for the next one. ---Ed



Collecting in Harker Heights (photo: E. Elliott)



Shark vertebra, fish teeth & more (photo: C. Rylander)



J. Hinte's pocket of *Phymosoma* echinoids (E. Elliott)



*Phymosoma* (M. Smith)

### Volunteer Opportunities

Please check your calendar and see if you would be available to help with either of these events. We will combine new members with our more experienced members for each. These events are great fun and all you really need to bring is your enthusiasm for fossils. Contact Erich Rose ([president@austinpaleo.org](mailto:president@austinpaleo.org)) if you are interested.

What: Science Night for Caraway Elementary, Where: 11104 Oakview Drive Austin, TX 78759, When: March 27th, from 6-8pm

What: Cedar Creek Elementary Science Day, Where: 3301 Pinnacle Rd., Austin, TX  
When: Friday, April 4th, 8:30-2:30

What: Nature Nights, Where: Lady Bird Johnson Wildflower Center, 4801 La Crosse Avenue Austin, TX 78739, When: June 19th, from 5-8pm

## **Paleo Society Board meeting Minutes 2.18.2014**

Erich welcomed the meeting to order at 7:04, and Ron introduced our speaker, Dr. Xia Wang, whose talk tonight is "From Dinosaurs to Birds". She related the ancient evidence tying modern birds' direct lineage back to dinosaurs by comparing shared bones, breastbone, wishbone, their 3-toed foot, hollow bones, airspaces within their skulls, even their behavior in similar sleep and fighting positions. Dr. Wang displayed charts tracking the development of feather-like structures, feathers and wings, showing fossil pictures and renditions of their probable live appearance. She even displayed a Tyrannosaur decked out with possible colorful plumage. She covered birds' early appearance 150 MYA and touched on the early discoveries in the 1800's as well as the important recent Chinese locales for feathered dinosaur fossils. She then covered the rise of modern birds, and detailed their extensive academic work analyzing feather strength and flight capabilities for various wing structure types, both modern and dinosaur. Her talk concluded by summarizing modern birds' flight predictability, and feather and wing structural evolution. She then took questions.

We took our break and Erich helpfully reset the clock time. The Treasurer's report was given and approved. Frederick also reported that we are now officially and correctly updated with our bank account authorization process. He called for everyone to get their membership dues in now. Ed and others enjoyed commenting on our snail mail version of the newsletter. Kathleen requested info on how to purchase a Paleo Society ball cap. The meeting minutes were barely approved. Erich reported that Suzanne and Linda were in Florida at the FOSSIL conference and were having a blast, and will report back personally on their experiences upon their return. Erich announced the official date for our 2014 Fossil Fest is Nov 15-16 and that this year's theme is Ice Age Texas. He then spoke about some upcoming volunteer opportunities. Then Ed discussed the details for the upcoming field trip to Harker Heights. Frederick announced the tentative list of field trips beyond March. John then told of his recent encounter with Jean Wallace, a beloved senior member, and there was lots of discussion and humor about her and about the newsletter. Ed mentioned the biographical info for Gunther also. New members welcomed include Betsy, Peggy and Debora, who brought some of her fossils for us to look at. A door prize was finally won and Erich adjourned the meeting.

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

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DATED MATERIAL – *HOLIDAY PARTY NOTICE!*

**FIRST CLASS MAIL**