



Paleo Footnotes

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September 2015

President's Note

Erich Rose
PSoA President

Are you ready for fall? Of course we all know that has nothing to do with a calendar date and more to do with the last solid days in the upper 90's. But the forecast is for rain and not just a 20 percent chance. Let's hope the forecast for a wet fall and winter means an end to the last handful of drought years. We, and the fossils waiting to be collected, are ready.

The next three months are going to be a very busy period for our club. We have numerous outreach events toward the end of this month. Gem Capers and the national American Federation of Mineralogical Societies show will follow in October, and November is Fossil Fest time. There are plenty of great opportunities for all members to take part. Suzanne will be looking to start the scheduling sooner rather than later, I predict, so look at your calendars and pencil us in where you can. Find exact dates and volunteer job descriptions in this month's newsletter.

I think we have a very interesting speaker and topic for the Sept. meeting. Sleep isn't just a thing. It apparently evolved, and we will learn much more about that evolution on Tuesday. I'm looking forward to seeing everyone after missing the August meeting.

Fossil Stuffing Party: Sept. 15 at 6 p.m.

Join us before our regular meeting for the annual stuffing of 1,500 zipper bags with Fossil Fest flyers and small fossil giveaways. Got Fossils? Bring 'em! We need 1,500 clean, recognizable fossils that will fit in a sandwich-sized zipper bag. These will be given out at the numerous upcoming public outreach events, including the AGMS Gem Capers show.

Next Meeting

Tuesday, Sept. 15 – 7 p.m.
Austin Gem and Mineral Society Building
6719 Burnet Lane
Austin, Texas

Upcoming Field Trip

Hunting the Pennsylvanian Near Brownwood: Take 2!

Ed Elliott
PSoA Field Trip Chair

I had hoped that we would be able to go to the Brazos River this month since we couldn't last month, but the river is not cooperating. It COULD still go down, but it seems unlikely. Rather than do all that last minute e-mailing again, I suggest that we just forget it for now. When "we" went to the Brownwood area last time, only a few showed up. I suggest we try it again.

So, we'll be collecting the abundant Pennsylvanian to Permian age material around Brownwood. Those that go can decide whether we go to Wilson, the spillway, Santa Anna or Erichs' spot on the way home.

The Club will meet at 8 a.m. in Early at the Heartland Mall (300 Early Blvd, Brownwood, Texas 76802). From the mall we will caravan to the first site. Be there on time and ready to go as the first site may be another 30- to 40-minute drive.

Most of what we will be collecting will be small to hand-sized. But there can be some nice stuff to chisel free of large slabs, so bring plenty of small to large containers, a hammer/pick, chisels, eye protection and stuff to wrap delicate fossils. The terrain can be rugged, so wear sturdy shoes. Bring food, plenty of water and whatever else you'll need, as we will probably be out in the country all day. It's a long drive back to town, so plan accordingly. There is no restroom. Depending on the site we may be in full sun for hours, so bring sunscreen and appropriate clothing. Don't forget to check the weather.

Early is north on Hwy 183 from Austin. As you approach Early and Brownwood (about 2.5 hours from central Austin) Hwy 183 will make a left turn. From there, the mall will be about 1 mile farther on the right. Look for a group of cars in the parking lot (We'll be the only ones there that early).

Upcoming Presentation

Ron Root
PSoA Program Chair

William Gelnow will be joining us to talk about sleep and the evolution of the pineal organ and the pineal foramen. The pineal organ is formed by a small eminence sticking up from the middle of the brain and regulates sleep cycles in vertebrates by producing melatonin. The ancestral condition is to have an actual photo-sensitive spot on the top of the head, very much like an eye sticking up through the top of the skull. In some animals that still have one, the pineal has an actual lens that focuses light onto the bed of nerve endings. Because the pineal organ leaves a bony trace behind, we can trace its repeated disappearance, and sometimes even re-appearance in the fossil record. In modern animals that don't have the pineal sticking up through the tops of their heads, the pineal still produces melatonin in response to light cycles, but has to get the signal from the eyes via a bit of novel cross wiring in the brain. We can infer that every time the pineal foramen is lost in a lineage, that group of animals must have evolved some secondary way to get the information about the light cycle to the pineal, now embedded fully within the brain. Furthermore, we can infer from the ecology of animals that have lost the pineal foramen that there are common environmental pressures that are driving the loss of this feature. It is a great example of how the fossil record can contribute to our understanding of convergent evolution and neurobiology.

Will was born and raised in Southern California. He became interested in paleontology at a young age, even lying about how old he was so he could volunteer at a local museum. From California, he moved to Alberta, Canada when he was 18 so he could attend the University of Alberta in Edmonton. He chose that school because it was one of the few schools that offered an actual degree in paleontology. During the semesters, he sometimes worked in the paleobotany lab, cutting and peeling coal balls. Over the summers, he took internships at various museums, including the Royal Tyrrell Museum and the Mammoth Site of Hot Springs, SD. After he graduated, he worked for three years for an environmental consulting company doing paleontological surveys of areas that were planned for development and monitoring potentially sensitive sites during the construction phase. His boss at the consulting company ultimately introduced him to Jim Mead, who would become his adviser for his Master's degree, which he obtained at East Tennessee State University. While at ETSU, he had the tremendous fortune to visit both China and Australia as part of his studies. Will is now pursuing his Ph.D. at The University of Texas at Austin, specializing in the evolution of skinks and the mechanisms of convergence.

Field Trip Report

Waco Mud Pit

Ed Elliott
PSoA Field Trip Chair

Our group for the Lake Waco Research Area consisted of Ron Root, David Florin, Cathy and Gary Rylander, Mike Smith, Kevin Bills, Frederick and Melinda Falk, and Rose Egretman. This site is the Del Rio Formation, upper Washita Group. As this is a "micro" site, we all promptly found a spot and got down on our knees. I mostly found all the usual things with only a few new additions. Rose and Ron both picked up a nice *Goniophorus whitneyi*, with Roses' being a rather large echinoid for this species. Cathy picked up a small *Hemiaster* cranium, I believe, though I didn't ask them if they looked it up when they got home. Kevin found the best shark tooth of the day, a *Cretolamna appendiculata*. He also found a pyritized scaphod, which I hadn't seen there before. Kevin and I had looked at the pyritized ammonites we had, and he had shown me one that was very thin and pretty. I threw out the name *Placenticerus*. Just before we left, Gary had picked up a very nice larger one, and I told him the same. I didn't look at it with a hand lens. After getting home I looked to see what it might be. Both *Placenticerus* and *Sphenodiscus* are only from the uppermost Cretaceous (Santonian-Maastrichtian). It must have been a *Metengonoceras*. Hot and tired are my excuses. Kevin, Ron and I went to the Mammoth Site Museum after leaving the Pit. It is worth the time and the \$5 if you are close by. If you go to the Pit, it is just down the road.

Upcoming Shows

PSoA Booth at AGMS Gem Capers Show

Don't miss out! Sign-up as a volunteer at the August meeting or online (after the meeting) at www.mysignup.com/agms (the passcode is paleo) for the Paleontology Table at the Austin Gem and Mineral Society (AGMS) Gem Capers show held Friday through Sunday, October 23–25 (with set-up on Thursday, October 22) at the Palmer Events Center. No prior experience or expertise is required. This is our largest educational outreach of the year and presents an enormous opportunity to spread the word about Fossil Fest. The PSoA booth will feature an educational Quest for Knowledge, fossil touch table, fossil displays, paleo tools, fossil cleaning and giveaways. Please consider filling a display case for the show (PSoA has three cases reserved). It's great practice for Fossil Fest! If you're interested in filling a display case at the show, consider participating in the SCFMS Case Competition (optional). For more information about Gem Capers, visit the AGMS Gem Capers website at www.austingemandmineral.org/gemcapers/index.html.

Please note: AGMS is also hosting the National Show for the American Federation of Mineralogical Societies (AFMS) during Gem Capers at the Palmer Events Center. PSoA will be leading a field trip for AFMS. We'll include more details in the newsletter when we know them. If you'd like to know more about the AFMS schedule, please visit www.amfed.org/show2015.htm.

Fossil Fest Update

The 25th Annual Fossil Fest will be Saturday to Sunday, Nov. 14-15, 2015 (with set-up on Friday, Nov. 13). This year's show theme is Prehistoric Sea Monsters! We'll be exploring the diverse group of marine reptiles that roamed prehistoric Texas. Sign up to volunteer NOW at www.mysignup.com/fossilfest (passcode is paleo). Also, all of our vendor and exhibitor booths are SOLD OUT! We're now placing interested vendors on a waitlist.

I'd like to give a special shout out to David Lindberg for the tremendous effort and time he has dedicated to pulling together fossil Teacher Kits for the show. These kits are full of higher quality specimens to be used in classrooms across the Austin area and may be picked up by teachers at Fossil Fest. ***If you have any spare central Texas Porocystis (algal) fruiting bodies and Brownwood (or Jacksboro) horn coral, please bring them to the Sept. 15 meeting.*** The specimens need to be in good shape so that they are easily recognizable by teachers and students.

Last month, members volunteered to disperse Fossil Fest tear pads/flyers. Those flyers should all now be in place at designated public attractions and facilities around the Austin area. Please send email to showchair@austinpaleo.org if you have ideas for other locations where we should advertise our annual show. The support and assistance of all members is essential in making Fossil Fest a success. There are many ways that members can help, so please stay tuned for upcoming opportunities!

We also encourage you to create an exhibit case for the show this year. We are looking to fill cases in the front room with marine reptile fossils to go along with our show theme. Additionally, we have a lot of display cases to fill in the Hall! We want to see those fossils you worked so hard to collect in searing heat, ankle-deep mud, slippery slopes, capsizing canoes or finger-numbing cold! So start sorting through your fossils now! Additionally, it would help us teach some key curriculum concepts to students. If you're in need of exhibit case ideas, please consider:

- Collection of fossils from a specific locality around Texas and surrounding area
- Collection of a specific type of fossil from localities all around Texas and surrounding area
- A display of how a plant or animal becomes a fossil
- Examples and a brief description of changes to an organism over time
- Collection of a particular organism and their structures
- One organism - the characteristics used to identify it with samples and diagrams
- A fossil and display showing what we were able to learn about it

Upcoming Public Outreach

Suzanne Galligher
PSoA Vice President and Show Chair

We have some sensational opportunities to spread the word about Fossil Fest at these upcoming public outreach events. You don't need to be an expert to volunteer! You just need a friendly smile and willingness to talk fossils with others. Volunteering is really gratifying! As an added plus, you get to hang out with your fellow club members at some pretty festive localities. Won't you join us? E-mail vicepresident@austinpaleo.org to reserve your preferred volunteer spot.

[Identification Day](#) at the Texas Memorial Museum on Sunday, Sept. 20 from 1 p.m. to 5 p.m.

Need volunteers. PSoA members should bring loupes for fossil identification purposes

Details: University scientists and experts from Central Texas will be on hand to identify natural objects such as fossils, bones, rocks and prehistoric archaeological materials.

[Homeschool Day](#) at Austin Zoo on Friday, Sept. 25 from 9:30 a.m. to 3:30 p.m.

Need 2 volunteers. Austin Zoo is flexible with hours at this event. PSoA will bring touch table fossils, make & take craft, and giveaway fossil flyers.

Details: Homeschoolers will have opportunity to visit stations located throughout the zoo sharing various information. You are welcome to stay the duration of the day or whatever portion you choose.

[Dino Day](#) at [Champion Park](#) in Williamson County on Saturday, Sept. 26 from 10 a.m. to 2 p.m.

Need 3-4 volunteers. PSoA will bring touch table fossils, some dinosaur activities for kids, and giveaway fossil flyers.

Details: Williamson County Pct. 1 Commissioner Birkman and the WilCo Parks Department invite you to attend Dinosaur Day at Champion Park. Live music, an inflatable playhouse and many activities for children and families are free and open to the public.

[Pioneer Day](#) at the Dr. Pound Historic Farmstead in Dripping Springs on Saturday, Sept. 26 from 10 a.m. to 4 p.m.

Need 3-4 volunteers. PSoA will bring touch table fossils and giveaway fossil flyers.

Details: More than 40 exhibitors of pioneer crafts will be demonstrating their skills.

[National Fossil Day](#) at the Texas Memorial Museum on Wednesday, Oct. 14, time TBD

Need 3-4 volunteers. PSoA will bring touch table fossils and giveaway fossil flyers.

Details: TMM will be offering a couple of gallery talks in the afternoon and open the dig pit for a couple of hours for National Fossil Day on Oct. PSoA has been invited to set up a table to promote the Club, provide fossil identifications, etc. Their busiest hours last year were 10 a.m. to 11 a.m. and 1 p.m. to 2 p.m. Admission to the museum will be free that day, and TMM will cover parking fees for PSoA volunteers.

Do512 Family Tent at [FunFunFun Fest](#) at Auditorium Shores on Friday, Nov. 6 from 6 p.m. to 6:45 p.m.

Need 3-4 volunteers. PSoA President, Erich Rose, will be giving an engaging paleo demo. PSoA will bring flyers.

Cool App Lists Surrounding Wildlife

The Map of Life mobile app provides lists of birds, mammals, reptiles, butterflies, trees, cacti and other plants and animals that are indigenous to your location. Check it out: <https://auth.mol.org/mobile>.

Meeting Minutes

August 17, 2015

Austin Gem and Mineral Society Building

Dale Vargo
PSoA Secretary

At 7:10 p.m., Suzanne encouraged everyone to sign in and gavelled the meeting to order. Kathleen stated that she encouraged the members of AGMS to attend our meeting. The minutes were approved by vote, and the Treasurer's report was given. Mike noted in his report that we have unused scholarship funds available and that we are required to award some of these funds this year. Dr. Sprinkle said that there are some UT invertebrate students who may be eligible for some of this scholarship money for their conference attendance. Mike told of Melinda's system for managing the scholarship funds. Then Suzanne spoke of our outreach opportunities and described an event for Austin Homeschool Day, and on Sept. 26, Dino Day, from 10-2pm at Williamson County Park which could be a booth we could present. Another outreach event coming up is Dripping Springs' Pioneer Days and Mike described the various aspects of it. Suzanne encouraged everyone to be involved in these outreach activities, and she reminded us that our own Fossil Fest is coming up in 3 months and that we can start signing up for the many volunteer spots available. We also need people to fill our display cases with marine reptile fossils for the front room and to fill our other display cases with our favorite fossils for people to see. We also need small fossils donated for the spinning wheel. Suzanne announced that there will be a fossil goodie bag stuffing session before the regular meeting at 6pm next month and to please bring some of our extra fossils to put in the many bags for school students. Suzanne noted that President Erich wants our club to be more visible at AGMS' upcoming Gem Capers event this year, and that we will likely host a field trip collecting event to Whiskey Bridge in connection with Gem Capers as well. In new business to consider, Mike said that we are down to 5 hats available for sale, as people committed to buying those remaining. We talked about whether to re-order more hats, with Ron suggesting that we order more. The need for ordering more T-shirts was brought up and Dale suggested that we look into creating a new, more attractive logo for the club and putting it on the new shirts or possibly creating a new shirt graphic for this year's Fossil Fest. Volunteers were encouraged to create a possible new design to consider and Paul and Joe volunteered to work together on possible shirt graphics. A short discussion of the hats and shirts ensued. Then Melinda, Gordon and Kathleen all agreed to work on the scholarship awards. Mike explained some important logistics for awarding the scholarship funds so that they will be available when needed by the recipients. Mike also suggested that scholarship funds be taken directly from the Fossil Fest proceeds instead of funding them from the general fund. Then the 5 door prizes were won by Angie, Cathy, Mark, Bill, and Dale. Since Ed had not arrived yet, the field trip report was delayed. Mike stated that the Brazos River level is too high to have a good field trip there this week, and so alternative field trip destinations were discussed. The revised location of this field trip will be announced by email upon Ed's confirmation calls he will make. Another call for more refreshment volunteers was made and then we took our refreshment break. After the break, Ron introduced Dr. Sprinkle who related the details of his recent discovery of a previously unknown camerate crinoid type of specimen from his collecting in the Bromide Formation of Southern Oklahoma. He discussed the details of this discovery, as well as the difficulty of cleaning and he will present his finding at an upcoming conference. Then Ron reported on the preliminary investigative trip to the Van Horn area ranch whose owner has offered to us as a possible fossil field trip collection location. Ron, Paul, and Mike journeyed there for a scouting of the area, and noted that the areas they looked in were not very fossiliferous, and so they visited the area's Tax Assessor office to find other names of landowners to contact for possible permission as a field trip location. Ron reported that there are some promising new leads from their research on this. Bill started a discussion of using Google Earth to study the terrain at these remote sites by computer and even overlaying geologic map files onto the Google Earth maps to better analyze the sites being considered. Bill began a presentation of the details of his upcoming landmark book on fossil echinoids of Texas. He showed some nice recent specimen photos and spoke of the creative process involved in getting the details right for this book, such as identifying species accurately, the right graphics and page layout, and obtaining reviews for the book, which will be published later this year. He also told of his Tucson fossil purchases. Then David told of his field trip for petrified wood to some coal mines in NE Texas with the Houston club. Then the meeting adjourned at 8:50 p.m. with people looking at the fossils that were brought by members for show-and-tell.

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 on the third Tuesday of each month at 7:00 p.m. in the Austin Gem and Mineral Society building located at 6719 Burnet Ln. in Austin, Texas. The public is welcome to attend. Visit austinpaleo.org for more information.

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

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