



Paleo Footnotes

Volume 11, Number 2

February 2016

President's Note

Erich Rose
PSoA President

Does it feel like winter to you? Maybe at 6 a.m. when the thermometer has dipped low and there is a little frost on the grass. Then that sun starts to do its business and you're thinking it would be a great day to go out and look for fossils.

In the last month I have managed to squeeze out a few hours here and a few there for collecting. My most interesting find was a handful of bone material from the Lower Glen Rose Formation. Probably from a turtle, not a dinosaur, but still quite interesting and it was a beautiful day.

I will look forward to our next meeting. The preliminary report on Jacksboro was good. Sounded like it was a good turnout and many stayed over for a second day of hunting around Mineral Wells.

Take care, and see you soon.

Next Meeting

Tuesday, Feb. 16 – 7 p.m.
Austin Gem and Mineral Society Building
6719 Burnet Lane
Austin, Texas

Next Field Trip

Saturday, Feb. 20 – 8 a.m.
Harker Heights & surrounding area

Meet-up:
McDonald's
630 Indian Trail
Harker Heights, Texas, 76548

Upcoming Field Trip

Hunting for Cretaceous fossils in Harker Heights.

Ed Elliott
PSoA Field Trip Chair

The Club is headed out to Harker Heights and other locations along US-190 this month. We will be collecting from the Fredericksburg Group, Walnut and Comanche Peak Formations. Although many of you have collected these same formations in and around Austin, the variety of fossils will be somewhat different with a few more types of echinoids being common and other species of invertebrates we don't commonly see here. Shark and other fish teeth have also been found.

Most of the fossils will be loose and easily collected. Some may require a little digging or down-sizing, so a rock hammer and chisel could be handy. Mostly you will just need a variety of containers (boxes, zipper bags, divided boxes, etc.) for everything from tiny crab claws to ammonites.

Meet at 8:00 a.m. at the McDonald's on the north side of 190 at Indian Trail. Take I-35 north to Belton and head west on US 190 to Harker Heights. Exit at Indian Trail and look for the McDonald's on the right.

Travel time from central Austin is about 1 hour and 15 minutes. So plan to be there on time because we will caravan to our first stop fairly quickly.

Contact Ed Elliot at 512-657-7581 with questions.



Shark vertebra, fish teeth & more from Harker Heights area.

Upcoming Speaker

Geochemical proxies and the search for algae with symbiotic relationships with fossil corals.

Paul Hammerschmidt
PSoA Program Chair

Chiara Tornabene is an international student from Italy who graduated with a Bachelor of Science in geology and a double major in classical civilizations at the University of Mary Washington in Fredericksburg, VA. She is now a second year Master's student in geological sciences working with Dr. Rowan Martindale at The University of Texas at Austin.

Her presentation will focus on her thesis, which aims to test quantitative proxies for photosymbiosis in the fossil record. Photosymbiosis is a mutualistic relationship between modern corals and photosynthetic algae, known as zooxanthellae. This arrangement enhances the corals' growth rate, so it is considered the evolutionary innovation that allowed corals to become major reef-builders. Yet, because zooxanthellae are not preserved in the fossil record, it is difficult to determine whether reef-building corals had symbionts.

Tornabene's project tested the oxygen, carbon and nitrogen isotope composition of modern and fossil corals to determine the reliability of geochemical proxies for photosymbiosis in the fossil record. A successful proxy for photosymbiosis in the fossil record may provide new insights into the evolution of modern corals and their relationship with zooxanthellae.

Field Trip Report

Ed Elliott
PSoA Field Trip Chair

Saturday morning in Jacksboro was rather chilly, but it didn't prevent the other seventeen faces around me from smiling. We all look forward to hunting there. With me were Mike Smith, Paul Hammerschmidt, Melvin Noble, Cathy and Gary Rylander, Dave Hoppes, Vaughn Nelson, Gary Vliet, Rose and Mike Farmer, Nathaniel and Jonathan Rice, Melinda and Frederick Falk, Dax Gonzalez, John Hinte, and Mike Zimmer. This site is the Finis Shale, Graham Formation, Cisco Group and is Virgilian. The excellent preservation and the great diversity of species draws us back. I wouldn't mind going several times a year.

After our short caravan and the walk across the spillway, we all scattered. I started out looking for microcephalopods and quickly picked up a rostroconch (*Apotocardium lanterna*). Later in the day, John and Melinda showed me theirs – large and perfect. Very nice. Everyone that I talked to had full containers. There are at least five corals there, more than 35 brachiopods, sponges, bryozoans, conularids, many bivalves, many gastropods, vertebrate material, wood, and a great number of cephalopods. I had picked up half of a *Neodimorphoceras* ammonite and was happy. Melvin found a whole one as well as a good partial nautiloid. I had picked up a nice one (*Eoasianites?*) earlier. John and I had talked that morning about the fact that we didn't know of anyone who had picked up a *Petalodus* shark tooth at the spillway. Gary found one that afternoon and it was nice. Mike picked up a *Derbya crassa* brach which is a species I hadn't seen there. I picked up a very small crinoid cup, a plagioglypta (scaphopod), a couple of unusual brachs and a gastropod I hadn't found before. The wind hadn't been blowing, so it wasn't too cold, the sky was blue, we hunted all day in the Finis and had dinner at Dairyland afterward. A perfect day.

Eight people showed up at McDonald's in Mineral Wells on Sunday. The first stop was the Union Hill cut. This is the Salesville Shale of the Mineral Wells Formation, Strawn Group, Des Moines Series. The usual free floating crinoid (*Paragassizocrinus*) was there, as well as the normal things found there. Mike Farmer found a small but nice enrolled trilobite. And then it was on to the Mineral Wells Fossil Park. This site is the Keechi Creek Shale of the Mineral Wells Formation. Also included is the Wynn Limestone (which makes up the upper surrounding walls) of the Palo Pinto Formation, Canyon Group, Missourian. Sponges, corals, brachs, crinoids, trilobites, all of the good stuff of the Pennsylvanian. The day was finished out here. I know that Mike S. was happy with a crinoid cup he found. Another great trip to North Texas. See you in Harker Heights for the next one.

Meeting Minutes

Jan. 18, 2016

Austin Gem and Mineral Society Building

Dale Vargo
PSoA Secretary

Erich gavelled the meeting to order at 7:07 p.m. with a nod to our visitors and guests. Then Ron introduced tonight's presenter, one of our own long-time members, Alan Peters. Alan began his talk, "Everyday Geology: Tricks of the Trade," with a fast-paced presentation of many interesting facts about Earth's physical makeup; describing the main elements of the core, its inner temperature and other geologic descriptions of the planet to us. He gave us quick rules for finding fossils, depending on whether we are in an erosion zone. Alan had young volunteers from the audience come to the front, and by using large, lightweight graphic blocks, he had them demonstrate the types of faulting and movement of Earth's crust in a fun and understandable way. Alan showed slides of Earth's constantly moving tectonic plates, and the ways that the plate movements are creating and destroying the surface areas of the planet. Alan showed the audience simple ways of understanding different types of rocks and the ways they are formed, again using fun ways of teaching, such as stomping toast into layers. Alan concluded his talk by giving us the "ten commandments" of dating rocks. We then took our refreshment break.

After the break we started the regular business portion of the meeting, with Erich noting a good number of young people in the audience. The door prizes were won by Angie, Dale, Francis, and Frederick. Then Ed gave the upcoming Jacksboro field trip details. Erich announced that we have set a proposed field trip schedule at our recent board meeting. We then recognized our newcomers for tonight, including Linda, Jonathon, Nathaniel, Laura and Harmony. Ed and Erich explained some of the ways in which we conduct our field trips, by going to distant localities as well as nearby ones to find a wide variety of quality fossils. Rose mentioned that even Shoal Creek her is a good fossil locality. Dr. Sprinkle requested an extra person to write a letter recommending that our member Linda McCall be given an award for her paleontological activities. Erich volunteered to do it and noted what an accomplished scientist Linda is.

Erich announced the upcoming instatement of Board members and Officers for 2016: President Erich, Vice-President Suzanne, Treasurer Mike, and Secretary Dale, as well as the other positions : Webmaster-Tech Gordon, Newsletter Editor Dax, Show Chairman Suzanne, Field Trip Chairman Ed, Program Chairman Paul and Refreshment Chairman Melvin. We then talked about the upcoming calendar dates for the Auction in April, which will be the Saturday before the regular meeting this time. Fossil Fest will be held the weekend before Thanksgiving this year. Erich suggested that we include reports of our outreach activities in the monthly newsletter. Erich reported that the Board has met and reviewed our financial activities for last year and has proposed a budget for 2016. Mike noted that we had a successful financial year last year, making a profit at the Auction and Fossil Fest. Our board has approved a grant to fund a summer internship working at the UT paleontology labs. Ron and Ed both recommended volunteering to help catalog the UT labs' old fossil collection. Frederick inquired about approving the budget and Mike and Erich outlined the 2016 budget and process Then Frederick moved that we accept the budget as presently proposed. Acceptance was seconded by Gary and then voted approved. The meeting was then motioned adjourned.

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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