



Paleo Footnotes

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March 2015

President's Note

Erich Rose
PSoA President

Hope you are enjoying this continuation of winter. Lock those chilly memories in, because you'll need them come August.

I don't know about you but I'm getting itchy, and the fossils are calling their siren song. I certainly was thinking about the group that visited Whiskey Bridge on that last field trip. It is one of my favorite places to collect and I look forward to hearing and seeing what you all found.

One day again I'll have Saturdays off and be able to join up with the club for these great field trips. I'm sure Ed will have some great locations lined up as always for the East Texas trip this month. Someday...

Bill Thompson's presentation at the last meeting also has me going back through old echinoid specimens and even trying my hand at some higher level cleaning and preparation. Another friend assisted with some photography along the level of what Bill discussed and the results were rather interesting. There are so many levels to which you can take this hobby if you are willing (and have the time).

I haven't seen any new requests for outreach recently, and I believe we are all set for the ones we have. The exception is Dino Day, which will be coming up soon and is a Club favorite. Mark down May 9 at Champion Park in Cedar Park. Contact Suzanne or me if you want to participate. This would be a great opportunity for new members to volunteer and see what is involved when we do outreach. It is an outdoor event that lasts only four hours, and it is very family friendly. We don't need paleo experts, just enthusiastic members of any age or experience. See you at the next meeting!

Upcoming Field Trip

Eocene hunting in East Texas

Ed Elliott
PSoA Field Trip Chair

This month the Club will be heading out to East Texas in search of a wide variety of Eocene fossils. We will meet at 8 a.m. on Saturday, March 21 in Nacogdoches, Texas.

We will be collecting Eocene marine invertebrates in the San Augustine area on Saturday and back in the Nacogdoches area on Sunday. Most – but not all – of our finds will be small, so sectional boxes will be useful.

We will meet at the O'Reilly Auto Parts located at 614 N. University Dr. in Nacogdoches. If you get there early enough, you can collect a bit behind the store along the cliff wall. The caravan will leave from this spot to our first location.

Bring lunch, water and the usual collecting materials. Watch the weather and dress accordingly.



A crab carapace and two Club members hunting for more

Next Meeting

Tuesday, March 17 – 7 p.m.
Austin Gem and Mineral Society Building
6719 Burnet Lane
Austin

Field Trip Report

Eocene hunting in East Texas

Ed Elliott

PSoA Field Trip Chair

Fifteen Club members and friends met for our “Whiskey Bridge” outing. Paul Hammerschmidt, Melvin Noble, Cathy and Gary Rylander, Ron Root, Gary Vliet, Jim Linn, Dax and Cruz Gonzalez, Kevin Bills, Rose and Mike Farmer, and Dan, Laura and Dave Bloemker.

The predicted rain never materialized, and we had short-sleeve temperatures with an overcast sky for most of the day. Other than an overabundance of mud, it was a great day to be collecting fossils.



Gary R. and Melvin

This site is Stone City Formation, Middle Eocene, Claiborne Group. It is approximately 44 million old and a few million years younger than the Weches Formation that we hunt in East Texas. This is a Stone City locality and has the entire exposure from the Sparta Formation below to the Wheelock Member of the Cook Mountain Formation above. The literature suggests that this location was deposited in a lagoon or an estuary, probably more toward the seaward end as approximate normal salinity is indicated. The depths ranged from low tide to around 200 feet. Over time, the depth alternated between deeper water – the barren dark shale layers – and just at wave base – the shell hash layers.

“The glauconite-rich beds may have been deposited in front of some weakly developed barrier islands in the shallow open sea.”* The lack of bedding in the glauconitic layers was due to bioturbation by many infaunal organisms. This “in a nutshell” analysis was done from the stratigraphy and the types of fossils found, their lifestyles and ranges. I think this will answer some of the questions I’ve heard asked about this locality.

When we arrived, five of us decided that, with the water low, we would try our luck on the east side of the bridges. These are the oldest of the beds, just above the Sparta. A few others followed the deep footprints in the mud and joined us. As I stayed on the east side all day, I don’t know what was found on the west.

A great deal of what was found were the usual suspects – the more common gastropods. I don’t want to get into a long list of species names (easy at this site) and will just mention the more unusual. Melvin found a button coral, *Discotrochus*, and a colonial coral *Madracis* – both are not rare but hard to find. Kevin and Gary V. both found a large gastropod called *Cornulina*, 7 cm long and 5.5 cm wide. These were the third and fourth I’ve ever seen. Gary V. and I both picked up nice sized *Athleta petrosus*, very pretty and usually broken. Gary R. picked up several shark teeth. I found a nice-sized *Belosaepia*. The only other thing which was unusual for me was finding more than a dozen bivalves and getting them home unbroken. One of the large *Arcas* had a large nice incrusting bryozoan on it, *Membraniporida*.



A pair of nice conus shells

It was a great day with wonderful company and a huge selection of pretty fossils. I think it was another great trip and everyone I spoke with left with a smile on their face.

*UT Pub #5704, 1957 BEG

Upcoming Speaker

Fossil Herpetofauna from New Caledonia

Ron Root

PSoA Program Chair

University of Texas PhD Student Alicia Power will be our featured speaker on March 17 and will share with the Club her dissertation research on the impact of skeletal variation on the identification of lizard fossils. She was originally inspired to do this research through her Master's degree work (outlined below). She earned a Master's of Science from Villanova University and a Bachelor of Science from Sam Houston State University. Power has worked on fossil and modern lizards from several different southern hemisphere localities including South Africa, Botswana, Australia, and New Caledonia. She is hoping to elucidate some of the factors driving the challenges that are faced when identifying disarticulated and fragmentary fossils.

Fossil Herpetofauna from New Caledonia

Excavations in the Pindaï Caves of New Caledonia, a large island in the South Pacific, have yielded an assemblage rich in fossil remains of squamates. The fossiliferous deposits at Pindaï Caves are known from six caves along the northwest coast of the Grand Terre. The fossils I examined are from four of the caves and are hypothesized to be from degraded owl pellets. Radiocarbon analysis yielded dates of 1370 to 5590 calibrated YBP spanning the deposits. Because humans are thought to have reached New Caledonia about 2800 YBP, these assemblages provide an opportunity to examine the effects of human arrival on the herpetofauna of New Caledonia. Approximately 25,000 fossils, comprising chiefly squamate maxillae, premaxillae, prefrontals, frontals, parietals, quadrates, dentaries, surangulars, and vertebrae were recovered from the Pindaï Caves. All are attributable to Gekkota and Scincidae, with the diplodactylid gecko species *Bavayia cf. cyclura* and *Rhacodactylus trachyrhynchus* being the most common. Similar to the New Caledonian avifauna, which experienced elevated extinction rates upon the arrival of humans, the Pindaï fossil herpetofauna includes at least one extinct species. Additionally, *R. trachyrhynchus* is rare in the region today, being known from only a single recent specimen, and gekkonid geckos, which are widespread in coastal New Caledonia today, are absent. Gekkonids may have been introduced as recently as 235 years ago with the arrival of Europeans, but the arrival of Melanesians nearly 3000 years ago may have precipitated ecological changes that changed patterns of lizard relative abundance and species composition. – Alicia Power

Meeting Minutes

February 17, 2015

Austin Gem and Mineral Society Building

Dale Vargo

PSoA Secretary

Erich called the meeting to order at 7:05 p.m., noting a good turnout. He offered a current newsletter to anyone who wanted one. The January meeting minutes were approved with no changes. Mike gave the Treasurer's report' stating that the scholarship fund is to be subtracted from the financial total reported. Erich reminded those in attendance that a copy of the Treasurer's report is available to any interested member. Suzanne reported that there are 2 outreach events this month, both at the same school, for 40 and 60 students. Suzanne, Ron, Danny and Melvin said they would be there to assist. Kathleen volunteered to go to Laurel Mountain Elementary for a Friday morning outreach. There is a pre-school outreach request being handled through Melinda.

Erich then welcomed new visitors, first Joe from New York and then Phil and Melissa from Hutto, who found out about our meeting online. Erich discussed the upcoming field trip to Whiskey Bridge, an Eocene site on the river banks Brazos River near College Station. The locality has provided excellent collecting, with abundant sea shells, shark teeth and lots of small fossils in great condition. Melvin asked what the weather forecast was for Saturday, to which Erich said it could be muddy. Ed went into the details of the field trip and talked about some techniques for excavating fossils at this site, and Erich also described some methods.

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Next, Suzanne displayed the grand prize and some other prizes we have for our upcoming Fossil Fest: a beautiful ammonite, a multi-ammonite slab, and a beautiful coral fossil from Florida. Erich then outlined some of the aspects of Fossil Fest. Melvin, the Hospitality Chairman, announced that he needs people to sign up for a certain month to bring refreshments and snacks for the regular monthly meeting break. Ron announced that he is putting together a fossil collecting trip to New Mexico and wants to hear from those interested. Erich stated that there was no other club business and moved to awarding door prizes. James donated several nice geologic maps as door prizes. Melvin, James, Dax and Kathleen won the door prizes.

The Club took a 15-minute break. After the break, Erich presented long-time member and restaurateur Bill Thompson. Bill began describing the process of one of his passions: creating his new photo book about Texas echinoids. He gave a slide presentation along with his talk outlining his work on various aspects of the book along with some of the high quality echinoid photos. He began to thoroughly answer his question, "Why a new echinoid book?", by noting some other books and sources of echinoid information including published papers and online and museums. Bill described some of the features of the new book such as it being Texas echinoids only, with more ages represented, with excellent quality, extensive photographs of the specimens, at more angles, and that the book will give the latest updated scientific names for each fossil. The book will include info on every echinoid species known in Texas. Bill talked extensively about his photography work he has done along with the experimentation in developing effective techniques, and equipment types used and the software he has used to produce the highest quality photos at such a close range. He also described the difficulty of correctly identifying a particular echinoid correctly from just a photo and that he is going to great lengths to ensure that the info for each specimen is accurate and up-to-date in the final published work. Bill included many interesting aspects he has discovered and dealt with creating an excellent quality new echinoid book that will make an impressive addition to the body of information on Texas echinoids. Bill called on us for more echinoids to be photographed from our club members' collections. His talk ended by taking questions and suggestions on his book. Ron then mentioned the UT upcoming online program called, "Adopt-a-Fossil," which would supply one with a 3-D photo file of the adopted fossil. The meeting adjourned at 9:08 p.m.

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.

PSOA Web Site: www.austinpaleo.org
Webmaster: Gordon Galligher, webmaster@austinpaleo.org

2015 Officers:

President	Erich Rose	president@austinpaleo.org
Vice President	Suzanne Galligher	vicepresident@austinpaleo.org
Treasurer	Mike Smith	treasurer@austinpaleo.org
Secretary	Dale Vargo	secretary@austinpaleo.org
Field Trips	Ed Elliott	fieldtripchair@austinpaleo.org
Programs	Ron Root	ron@grassrootstrader.com
Editor	Dax Gonzalez	editor@austinpaleo.org
Webmaster	Gordon Galligher	webmaster@austinpaleo.org
Show Chair	Suzanne Galligher	showchair@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

Dax Gonzalez, Editor
7802 Mullen Dr.
Austin, TX 78757