

Paleo Footnotes

Newsletter of the
Paleontological Society of Austin

Austin and Central Texas



Volume 4, Number 9
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President's Note

The temperatures are dropping off slightly and a few luck areas have even seen some rain. I know that Shoal Creek and southern Little Walnut Creek both received a good flooding. It may not have done much for our drought, but at least a few fossil sites received a good turning over. It's a start.

I honestly hope everyone will turn out to hear our good friend Dr. Ann Molineux speak on formations at this next meeting. Gaining some appreciation for stratigraphy and understanding the concept of formations can only aid in our understanding of what went on so long ago that led to what we see at the outcrop.

I look forward also to seeing a lot of you at "Whisky Bridge" for this months' outing. Digging for those little Eocene treasures is always fun. Ed

Next Meeting – Tuesday September 15, 2009

An Introduction to the Geological Formation, the Basic Unit of Lithostratigraphy

by Ann Molineux, Ph.D.

This is a basic, ground zero, introduction to an important geological concept which is used to unravel stratigraphy. For example, it allows us to correlate the rock outcrops in Austin to those in Georgetown or West Texas. We'll examine the major formations that occur in Central Texas. They are probably well-known to you. What defines the Walnut Formation or the Glen Rose Formations? You may have noted that fossils present in the Walnut Formation differ from those in the Glen Rose Formation.

Ann is the Curator and Collections Manager, Non-vertebrate Paleontology, Texas Natural Science Center, The University of Texas at Austin and a science advisor to our society.

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

Show Committee Meeting: All are welcome to attend

Come find out what's up with Fossil Mania & Fossil Fair. This is a great time to bring in all those fossils you have gathered for the teachers kits, the wheel and the kids digs.

**Prior to the monthly meeting at 6:00 p.m. at the Austin Gem and Mineral Society building,
6719 Burnet lane, Austin, TX**

Next Field Trip September 19, 2009

“Whiskey Bridge” Middle Eocene Marine Fossils

Meet at 8:30 AM at the bridges over the Brazos River on TX-21 east of Caldwell, TX. This is the world famous Stone City Bluff location known for its incredible assemblage of marine invertebrates and shark teeth. There are literally hundreds of species to be found. They are also delicate and you will need zip locks, small boxes and some soft packing to protect them. You will need a small knife, screwdriver or ice pick to dig. A small shovel & rock pick might also be needed if you get ambitious. Bring water and food (Caldwell does have food.) There is always poison ivy to avoid and the sun will be on us the first half of the day so be prepared. And it can be MUDDY!

Directions:

Take US-290 East toward Houston about 37+ miles (from I-35)

Exit onto TX-21E (Northeast) for another 37+ miles to Caldwell

Continue through Caldwell on 21 another 11+ miles

Ahead of you on the left you will see the RR bridge over the Brazos. There is a crossover and then a dirt road that runs along the tracks up to the bridge where we will meet.

If you miss the turn just continue across the bridge to the next crossover and loop back.

Park along the dirt road and if you are there late just walk down to the river.

Total drive time from downtown Austin is approximately 2 hours, 15 minutes.

The Unsung Heroes of Paleontology

By Albert G. Sheean, Southern California Paleontological Society

The unsung heroes of paleontology are not the nameless collectors who seek out new localities and tease the shy specimens into revealing themselves once more, who pore over dusty tomes in towering library stacks, seeking yet more knowledge and to learn the names of that which they have found, who joyously announce the arrival of a new specimen to join the ranks of the previously discovered; nay, it is none of them.

The unsung heroes of paleontology are the patient spouses, be they man or woman, who sit and wait whilst their loved ones crawl about as if addled by the sun, searching, searching for the perfect specimen, "Just a little longer, hon!" they've heard, "I'm almost finished here." They hear once again, "I'm fine honey, take your time." They'll reply and return to their reading, crossword puzzle or knitting; (a few more trips and that sweater'll be finished!)

Our spouses are the unsung heroes of paleontology, the ones who remind us that we actually live in the present and not in deep time, the ones who'll listen patiently as we babble in a peculiar language peppered with words like Cambrian, Cephalon and calcified! Whose eyes don't glaze over as we wax eloquent about fossiliferous minutiae and unconformities, who tolerate our rants when we groan about the errors in the latest "Jurassic" movie, who accept our planning vacations around and to destinations involving either rocks or "Tucson" it is these heroes that keep us grounded and connected to society, wash our clothing and feed us, but most importantly; tolerate us and for all of that we are grateful!

Thank you!

Originally appeared in the SCPS Bulletin, January - February 2009

PSoA August Meeting Minutes

SPEAKER

David Lindberg discussed *The Latest in Ptychodus*. Ptychodus are durophagous sharks which means "shell crusher." The information for the presentation was pulled from Shawn Hamm's 2008 UT Dallas Thesis and from *The Collector's Guide to Fossil Sharks and Rays from the Cretaceous of Texas*. One important thing to note is that Shawn Hamm changed some information from the shark and ray book. Some recent Ptychodus discoveries include jaw elements, dorsal fin, pectoral fin, denticles, lengths up to 6 meters and a tentative body reconstruction. The largest Ptychodus teeth come from Europe and can be as large as 8 cm. Around the Austin area, you will predominantly find *P. anonymous*. The Ptychodus made it to the Campanian and then vanish from the Western Interior Seaway. There are several theories as to why they vanish. One theory indicates that a shell crushing Mosasaur lived around the same time which may have out competed the Ptychodus.

MEETING

The meeting was called to order at 8:10pm by President Ed Elliot. The meeting minutes from July were approved.

OLD BUSINESS

Accounts - Treasurer David Lindberg reported \$14,583.52 combined from both accounts which does not include the CD.

PSoA Library - Mike Smith would like to revisit the PSoA Library issue at a future meeting.

NEW BUSINESS

Memberships - Mark Clark would like to see a lifetime membership option created that members could purchase. Mike Smith noted that PSoA does have a lifetime membership but it is currently designated for those over 80 and is provided gratis. The issue may be better suited for the next Board Meeting (date tbd).

Parking - Kathleen Howard requested members to please not park by the Taco Shack next door as they have trucks going in and out of there all the time.

AGMS Annual Auction - The AGMS Annual Auction will be held on Thursday, August 26th at the AGMS building.

FOSSIL SHOWS

Fossil Fest - Please collect extra fossils - wherever you go - for teacher kits, Wheel of Fossils and Dig Pits. Please start bringing fossils for the teacher kits in to the meetings. Teacher kit fossils should be good specimens for use in educational facilities. 100 teacher kits will be made. [Last year Linda McCall put the following specimens in the kit: *Porocystis globularis* (algal fruiting structure), *Heteraster obliquatus* (echinoid), *Neithea irregularis* (scallop), *Camerocrinus* (floating crinoid bulb), *Palhemiaster comanchei* (echinoid), *Salenia texana* (echinoid), *Heteraster texana* (echinoid), *Hemiaster whittei* (echinoid), *Salenia sp.* (echinoid), *Ilmatogyra arietina* (oyster), petrified wood, horn coral, bryzoan, gastropod and ammonite.] Any other good fossil specimens that you have in quantity are welcome!

MIA - If anyone has the Fossil Fest banner, please bring it to a meeting!!

Tri-City Gem & Mineral show - PSoA still needs a fossil display for this show October

10 – 11 [at the Frank Mayborn Civic and Convention Center in Temple, TX]. Kathleen Howard will ask AGMS for a display case on behalf of any PSoA display submitted. Mike Smith mentioned that the South Central Federation of Mineral Societies Inc. will conduct their business meeting as this event as well.

UPCOMING FIELD TRIPS

Saturday, August 22 - Brazos River. Meet by the statue at Stephen F. Austin State Park. Bring your own canoe/kayak for this trip. Austin Canoe & Kayak (\$25/day) is one rental source to consider. The slopes can be steep and muddy with no ramp access. The water will be low causing you to drag your canoe/kayak across sandbars and rocks at times. Bring everything you will need for the day – water, food, sunscreen and etc. Remember to bring a secure bag to hold your fossils and something to tie it to the canoe/kayak in the event of a capsized. Fossils you may find

include horse teeth/jaws, mammal teeth, elephant bone, sloth parts, camel, rhino, glyptodont scutes, wood, points and artifacts. Expect to be finished around 7:30 – 8pm.

Sunday, August 23 – Damon Mound. Ed Elliot reported that PSoA has an opportunity to collect with the Houston Gem & Mineral Society, Houston Geological Society and the Houston Museum of Natural Science at Damon Mound located near Rosenberg, TX from 11am to 3pm. The Damon Mound is a large salt dome that has been pushed up. The best collecting sites are underwater from the Oligocene – Anahuac Formation. When it was first discovered, a lot of Pliocene material came out of it. Dr. Sprinkle visited the site a few years ago and came across one urchin that proved quite difficult to extract. There are quite a variety of corals. You will need a sledge/rock hammer and chisel to remove some specimens.

August Field Trip Report Brazos River

A small group consisting of Paul Hammerschmidt, Melvin Noble, Gary Rylander, and Mike Smith met at the Stephen F. Austin statue on Saturday, August 22, to brave the lukewarm waters of the Brazos River. Actually, I parked at the statue around 8:05 and saw no one there. After a few minutes, Dianna Fry pulled up. She was visiting her father nearby and wanted to get an idea what the trip was like. I was beginning to fear that I was going to be on my own, when Paul drove up and informed me that everyone else had arrived on time and were down by the bridge preparing their kayaks.

We got a very nice gift from Cathy Rylander. She was with Gary, but her back is still not ready for kayaking. She agreed to meet us at the take out point and we were able to avoid the normal car shuttle to the I-10 bridge. As a result, we got on the water 40 minutes earlier than expected.

The first surprise was that the river was not as low as we had thought. Driving down, I had seen evidence of rain on the side of the road and Gary and Cathy noted that it had rained fairly hard in some places the night before. Perhaps this was the reason or

maybe it has rained more far up river than I thought.

The second surprise was how overgrown a lot of the gravel bars are. And, in terms of fossils, they were not very productive. We all found a fair amount of miscellaneous bone and wood, Gary found an interesting portion of a jaw, and Melvin found a really nice tooth that we are guessing is antelope (to be confirmed). On the non-fossil front, I found a nice point, as did Melvin.

Despite the less than fabulous fossil finds, it was a great trip. The water was high, so we had a number of standing waves to shoot through. I need to get John to confirm - my guess is class -1, but fun none-the-less. The best part of the trip for me was the abundance of birds, in particular waders. At one of the islands we came across a flock of roseate spoonbills. Eventually we got close enough that they took off and a beautiful cloud of pink hovered momentarily over the river.

Sometime before our next trip we need a major release of water to scour the vegetation off the gravel bars and turn over new material. Another reason to pray for rain! ---Mike



Trolls under the bridge, Photo: M. Noble



Sunrise on the Brazos, Photo: M. Noble



The Mound, Photo: M. Noble



Miscellaneous fossils, Photo: G. Rylander

Book Review by Ed Elliot:

Evolution: What the fossils say and why it matters

by Donald R. Prothero

359 pages, Columbia University Press, New York 2007

Don Prothero has spent a great deal of time debating creationists. The first three chapters of this book are basically spent shooting down all of the arguments of creationists or intelligent designers. As he does this he weaves a history of paleontology, geology, the scientific method, comparative religion, the origins of systemology, sedimentology and many other topics into the arguments in a clear and concise manner. No fundamentalist with an open mind could read these 70 pages and not accept truth of the ancient age of this planet or the realization that you can be religious and still accept the reality of evolution.

Each succeeding chapter picks a topic for discussion and runs through it with a succinct and enjoyable prose. The chapter dealing with systemology, taxonomy, cladistics and molecular approaches is clear and concise and greatly aids in understanding all the evolutionary transitions that fill the remainder of the book. He covers no topic in exhaustive detail but gives enough information to make his point easily. And at the end of each chapter there is a substantial "further reading" list.

My favorite section dealt with the beginnings of life 3.8bya through the Vendian and into the early Cambrian. In less than 25 pages he covered a great deal of material and made it all appear clear and almost obvious. Evolutionary transitions of many major groups each have their own chapters and are equally clear.

This book was certainly written for the layperson. While that is true, I've taken university classes in botany, zoology, comparative anatomy, paleontology and more....and I must say that I enjoyed this book and I think that most nonprofessionals would also. And I didn't even mention the exhaustive diagrams and photographs throughout the book.

Don Prothero is a professor of geology at Occidental College in Los Angeles and had a hand in 22 books and over 200 scientific papers.

FYI: 21th Annual World's Championship Quartz Crystal Dig.

October 8, 9 and 10, 2009 Mount Ida, AR

Sponsor - Mount Ida Area Chamber of Commerce, Contact - Director, Mount Ida Chamber of Commerce, Headquarters - Montgomery County Fairgrounds

Hours - Daily 9 to 3

Entry fee required

Win crystal trophies, prizes and \$1500.00 in cash.

See http://www.mtidachamber.com/calendar_of_events.htm

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.

Annual Dues: \$15/individual, \$20/family and \$10/associate (non-voting, receiving newsletter)

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The Paleontological Society of Austin is a member of and affiliated with:

South Central Federation of Mineral Societies & American Federation of Mineralogical Societies



PALEONTOLOGICAL SOCIETY OF AUSTIN

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DATED MATERIAL – MEETING NOTICE

FIRST CLASS MAIL