

PALEO FOOTNOTES

NEWSLETTER OF THE PALEONTOLOGICAL SOCIETY OF AUSTIN

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AUGUST 2022



President's Note

Who would have thought it would be “cooling down” in August.

Crazy summer. Go figure. I'm currently in Santa Fe, NM where it is quite pleasant. Gonna be hard to return.

We have a fun field trip to Houston planned. It includes both fossils and air-conditioning. What a novel concept. But seriously, the natural history museum in Houston has an incredible paleontology exhibit. And their hall of minerals and gems will blow your mind. In addition there are loads of other really great exhibits to enjoy.

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This Month's Speaker

Paleo Travels with Chris Garvie

Chris will be taking us on a tour of some of the interesting fossil spots he has visited in his life including information on the fauna and other interesting facts about the sites.

About our Speaker:

Christopher Garvie

Chris was born in Aberdeen, Scotland, and grew up between London and Hamburg, Germany. He spent the first half of his career working in the aerospace industry for Lockheed, McDonnell Douglas, NASA,

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AUGUST 2022

PSoA Hybrid August Meeting

Tuesday August 16th - 7pm
In Person @ AGMS Clubhouse
6719 Burnet Lane

OR Remote on Zoom:

<https://us02web.zoom.us/j/88331317416?pwd=T1VxeEh5K295S29jQitNSlVHNk9iQT09>

Meeting ID: 883 3131 7416

Passcode: 558578

PSoA August Field Trip

Saturday August 20th
Houston Museum of Natural Science
(see page 2 for more details)

Fossil Fest Meeting

Monday, August 22nd at 6:30pm on
Zoom (see page 2 for more details)

President's Note

(continued from page 1)

With summer ending(haha) it will be time for us to be getting ready for FossilFest. So check out what Heather is up to and if you can, please let her know how you can volunteer some time, both to show prep and show participation. We need you.

Take care, stay cool, and stay safe,

Erich Rose

PSoA President



Fossil Fest 2022 Update

Here is a brief update before the August in person PSoA meeting:

- We have nine vendors participating this year.
- We will set up on the evening of Friday 04 November, Saturday and Sunday (5th and 6th) are the events.
- The University of Texas has confirmed participating this year.
- We will have the Dig Pit, Touch Table, and Wheel.
- We will have pre-packaged snacks available in the kitchen.
- Jamie Shelton has graciously offered to put together the Paleo Passports.
- **Fossil Fest is now advertised on [Do512](#)**
- Adult and youth size **Fossil Fest T-shirts** will be available to purchase at the August PSoA meeting. Cost of shirts for PSoA members is \$10.00 (see page 7 for more details)
- Please reach out and let me know how you would like to contribute.

The next meeting will be on August 22nd at 6:30 on Zoom:

<https://utexas.zoom.us/j/98267293209?pwd=cUx1SGJhTFhXUEFPWmEwQ0M4SDUxdz09>

Meeting ID: 982 6729 3209

Passcode: 037467

Heather Aziz

Show Chair

August 2022 Field Trip

Houston Museum of Natural Science

Join us for this months field trip to the Houston Museum of Natural Science. Beat the heat and see fossils from every time period, Cambrian thru Holocene. Go to [tripadvisor.com](https://www.tripadvisor.com) and search for tickets. \$13:75 per person, all ages. Buy in advance. If you buy the at the door they are 25 dollars, but this is a great museum. Messenger me for any more info. You can also go to [viator.com](https://www.viator.com) and I believe groupou has discounts also.

The exhibit starts out in the Cambrian only, then winds thru each time period exhibiting fossils from that period to present day. They have many dinosaur skeletons on display, mammoth skeletons, great petrified wood exhibit, fish, the museum has it all. It also has a repeating video of the Cambrian ocean floor that gives you the illusion of looking into an aquarium. Houston Museum of Natural Science 5555 Hermann Park Dr., Houston take highway 71 to interstate 10, then 10 to Houston. Stay on 10 till 610 loop south, take 610 to 69 (southwest freeway) east. Take 127A to main street drive to loop around mecom fountain to right on Hermann st , then right on Caroline st to parking garage.

Melvin Noble

Field Trip Co-Chair



This Month's Speaker

(continued from page 1)

Messerschmidt, and the European Space agency. The second half was more focused on more business-oriented jobs, Compaq, EAI, Johnson & Johnson, etc. (mainly self-employed).

Most of his time living in the US was spent in Houston, and Austin, along with stints in College Station and El Paso. While in Houston, Chris joined the Paleo Section of Houston Gem and Mineral Society where he was field trip chairman for several years, and then the president.

Chris holds a patent on laser beam control, has published numerous papers on invertebrate paleontology and has won the Paleontological Society award, the Katherine Palmer (PRI) award, as well as the Best Paper award with Dr TI Yancey.

We look forward to hearing Chris share his many adventures with us!

July Field Trip: Loop 360 Roadcuts

Roasted Walnuts!

Well, it was hot. We all knew it would be. But at least the early morning was pleasant enough for some serious fossil hunting right here in our hometown! We had a small group of intrepid fossil hunters: David Lindberg, Jeannie Bowman and granddaughter Lucinda, Joseph Agudelo, Gene Wu, Erich Rose and Gary Kendrick and myself.

The 360 Roadcut is one of the best Walnut Formation exposures around – with a huge variety of possible finds, everything from the always abundant oysters *Texigryphea* and *Ceretostreaon* to the more elusive echinoids *Leptosalenia mexicana* and *Coenholectypus* and other more rare ones. Everyone goes home with at least a bagful of decent fossils!

David Lindberg found the most interesting (and tiny!) thing – probably a foraminifera (Fig. 3), but one I’d never seen before. It is a lovely little ruffled edge round flat disc. He must have amazing eyes to have seen such a little thing! Joseph came away with a great selection of Walnut fossils (Fig. 2), a little bit of everything. Erich was finding *Coenholectypus* echinoids (Fig. 1) left and right and I was happy to find a decently preserved *Leptosalenia mexicana*...my first from this site.

If we had had some decent rains, the site probably would have been more productive. This lack of spring rains has made fossiling a little more challenging. We need those rains to “grow” some more fossils, so keep the rain dances coming, y’all!

Jamie Shelton
Field Trip Co-Chair



Fig. 2 Fossil horde from the site (Joseph Agudelo)



Fig. 1 *Coenholectypus* echinoid in situ (Erich Rose)



Fig. 3 Foraminifera (?) (David Lindberg)



Side Trip: Brazos Tributary

Since I have been a little under the weather lately it has caused me to miss a couple of the field trips. I've been feeling a little bit better now, so I reached out to my friend, Ed Elliott, about going to the Brazos River. Early on a summer's morning, Edward Elliott, Kevin Bills and myself took of on a trip to a tributary of the Brazos River we knew to be a good hunting spot. You need a four-wheel drive to access the site so I took my Toyota and Kevin took his Jeep so we could make it down to the Creek. We had to walk through one to two feet of water to get to our spot, but at least it was in the shade most of the time. We went to a side tributary of the creek that was dry where we could find some Eocene fossils, mostly the same material as Whiskey Bridge except there is a type of bristle worm shell (*Rotularia leptostoma*) and some gastropods that are different and interesting.

We didn't find much at first so we went on down to look at an arroyo that washes into the creek. Earlier Ed had talked to Chris Garvey who said that at one time this area produced a lot of material. We explored it but never really found anything except a live turtle. We think that perhaps over the years dirt has washed in to cover all the exposure. We decided to head back to the little side tributary to look again. As we were walking Ed found a Pleistocene horse tooth in the gravel. We got to digging in the dirt to come up with lots of interesting

(Side Trip: Brazos Tributary continues on page 5)

Fig. 1 Eocene Crab (Melvin Noble)



Fig. 2 Eocene Gastropods (Melvin Noble)

Side Trip: Brazos Tributary (cont'd)

gastropods (Fig. 2) and bristle worm shells (Fig. 3). After picking up a good sampling of that material, I got to looking in the gravel to see if I could find a tooth. When I picked an interesting rock up and turned it around, I found out it was a crab! A Eocene crab perhaps from the Stone City formation (Fig. 1). Totally cool. This was just pure luck and something that doesn't happen everyday. I just had to keep commenting to Ed that, hey, I found a crab.

A little bit after that, Ed found a whole colony of some kind of strange worm tube looking things. Later, after a discussion with Lisa Boucher, he found out that they were Tereidolites (Fig. 4+5). They looked like some strange plant roots at first. From what I read on the internet, they are dwelling and feeding trace fossils made by wood boring bivalves or suspension feeders. <https://ichnology.ku.edu/invertebrate-traces/tfimages/tereidolites.html> Another totally cool find and something you don't see everyday.

We looked around some more but as it was getting a little on the warm side and at about 1pm we decided to head back to our trucks and make the trip back to Austin. But we did stop for some good Mexican food in Elgin at Jalliscos! It was a fun trip even if it was short. It was nice to collect in the shade in the somewhat cool of the morning.

Melvin Noble
Field Trip Co-Chair



Fig. 3 *Rotularia leptostoma* (Melvin Noble)



Fig. 4 Tereidolites - trace fossil (Edward Elliot)

Fig. 5 Tereidolites - trace fossil - detail (Edward Elliot)



I have a couple of fossil friends who are great explorers – happy to trek through muddy water and foliage choked pathways. I am the first to admit I am not that much of an explorer. I love to get out and find the fossils, but I am not very comfortable wading in water I can't see through or pushing my way through scrubby foliage (I've done it, and paid the price with some major poison ivy outbreaks! NO FUN). So consequently, I do miss finding some cool fossils because of my lack of.....adventureness.

So I was very fortunate to have one of these friends take me to a spot he had found on Shoal Creek, a different spot than I usually go and a bit less accessible than I normally like! But the creek was super low, so it didn't entail too much sloshing through mucky water to reach a spot that is Eagle Ford Formation – a rarity in Central Texas. About a half mile upstream, these two fossil friends of mine had recently found.....a mosasaur. I was invited to help excavate it, but wasn't able to, so missed out on that opportunity, sadly! But both of these guys are still actively searching this area and finding all kinds of amazing things, so I was happy to get to tag along and make a few nice finds myself!

I have always heard that you could find *Ptychodus* teeth in Shoal Creek and I've seen a few that others had found, but I had yet to find one. I am happy to say I did

indeed find one (fig. 2), and a new (to me) species that I had not found before – a *Ptychodus occidentalis*. It has a really interesting “worn” spot on the crown. Also in this same spot I found another new to me fossil – a *Cretoxyrhina mantelli* shark tooth (fig. 1). It's my first *Cretoxyrhina* so that was a bit of a thrill!

I didn't stay very long because it was noon when we got to the site and I only had about an hour left of energy in me.....it was one of those 106 degree days and I was just DONE. So I scooped up a gallon baggie of dirt and rock matrix to see what I could find when I got home, from the comfort of my air conditioning! And wow... did I find some nice stuff! Some small *Squalicorax* teeth (fig.2), one TINY TINY *Scapanorhynchus* and some interesting fish *Protosphyraena* teeth, early barracudas. But the real find was this diminutive, not very exciting looking tooth.....I'd found one at Post Oak Creek in Sherman, so I knew what it was and I am thrilled to say I found a tooth from a small marine reptile called a *Coniasaurus* (inset). This one was probably the size of an inguana! Imagine this little critter swimming amongst the Mosasaurs! It's quite an image!

So sometimes....just sometimes, it is worth the trek through the wilderness to find some exciting fossils. But I'll take a nice roadcut any day....



Fig. 1 *Cretoxyrhina mantelli* (Shark)

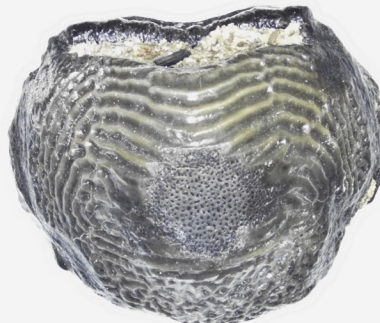


Fig. 2 *Ptychodus occidentalis* (Shark)
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Fig. 2 *Squalicorax a.* (Shark)



Tailings...

In The News

This Map Lets You Plug in Your Address to See How It's Changed Over the Past 750 Million Years

The interactive tool enables users to home in on a specific location and visualize how it has evolved between the Cryogenian Period and the present

Meilan Solly, [Smithsonian Magazine](#), 15 February 2019

Amber Fossil Shows 'Hell Ant' Was Unlike Anything Alive Today

The 99-million-year-old ant had scythe-like jaws that swung upward to pin prey against a horn-like head appendage

Alex Fox, [Smithsonian Magazine](#), 10 August 2020

Great White Sharks May Have Driven Megalodons into Extinction

Scientists analyzed zinc isotopes in fossilized teeth and found both sharks may have competed for the same food

Elizabeth Gamillo, [Smithsonian Magazine](#), 01 June 2022

New Fossil Finds Track When Armored Dinosaurs Spread Around the World

Discoveries in Asia and Africa are rewriting the backstory of dinosaurs like Stegosaurus

Riley Black, [Smithsonian Magazine](#), 31 May 2022

Paleontologists Find Biggest Pterosaur Species Ever Unearthed in South America

The ancient fossils with wingspans the size of school buses are estimated to be 86 million years old

Elizabeth Gamillo, [Smithsonian Magazine](#), 25 May 2022

2022 Field Trip Schedule

August:	Houston Museum of Natural Sciences
September:	Brady / Santa Ana Sites
October:	Texoma (Moody/Evant as backup)
November:	Brownwood
December:	Christmas Party!

Important Note: Please refrain from visiting sites the club is scheduled to access as part of a scheduled field trip. Doing so can clear a site of quality fossils and negatively impact the experience folks will have, especially new members, if the site suddenly feels "picked over". We do our best to carefully space out trips to allow them to recover, so please be respectful of the club and stay off these sites within 3 months of a planned trip.

Fossil Fest 2022 T-shirts!

Fossil Fest 2022 T-shirts are here! The designs are shown below and shirts are being offered in Sport Grey, Heather Maroon, Heather Military Green, and Heather Galapagos Blue. We are offering both adult and youth sizes - all shirts are \$10 for members. You can purchase these at our upcoming meeting at the Austin Gem and Mineral Society Club House (see page 1 for day and time)

Fossil Fest



Austin, TX

This pattern on left breast pocket

Texas Dinosaurs



Paleontological Society of Austin

This pattern on back

Good Field Trip Etiquette

1. Arrive on time or early. At the prescribed meeting time (often 8AM) you should be out of your car standing with the field trip leader, signed in and ready to hear the day's schedule, directions and helpful pointers.
2. Do your homework. Use one of the online mapping programs to determine travel time and directions from your home the day before. Take the map with you and leave at least 15-30 minutes early. This is critical when we are going to quarries, private property or if the first stop is a meeting-point, not the collecting site. The field trip leader will not wait more than 15 minutes beyond the scheduled time.
3. Make sure you have the field trip leader's phone number. Their number will appear in the field trip notice. Bring a copy of the notice from the newsletter or e-mail blast so you have the information. That is the best way to find the group if you do get delayed or lost. But do not count on it. Some of our remote sites have poor cell reception. We have no way to guarantee you will get there if you miss the meeting spot.
4. The first stop is not breakfast. Please do not expect the rest of the group to wait while you order food or take care of business. If you need to do that, arrive 30 minutes early and then be ready to go at 8:00AM sharp!
5. The field trip leader sets the schedule. Gather near the leader at the beginning of every trip and listen carefully. The leader will describe where and when things will happen. That will include directions, plans for breaks and everything else you need to know about how the day will unfold. If you are not sure about directions or the schedule speak directly with the field trip leader. Do not count on hearsay.
6. Do not ask the entire group to stop for unscheduled breaks. If you need to take a break during the day, do it after you know where the collecting site is located. The field trip leader will usually schedule a break around lunch but not between every stop. Follow the group to the site and then circle back for food or facilities. This is why we suggest bringing your own food and beverages. Also being prepared with TP, or whatever else, for "emergencies".
7. Sign in and don't forget to report to the leader when you leave. This is not critical, but he or she will greatly appreciate those two things. Having everyone's name let's him know how well attended the trip was and we like to list everyone in the follow up reports. Secondly, getting a chance to hear and see what you found that day and being able to keep track of who is on site at the very end is just a good thing.
8. Be prepared. Make sure you have the materials you need to collect safely. In particular, water, hat, sunscreen and food.

9. Don't crowd the next guy. Please be courteous of your fellow collectors space. If someone says "Hey I found a good one!" don't come rushing over and crowd into their collecting zone. Let them offer to share the space. You can ask them where they found it and then move off to one side or the other, but don't just flop down next to them.

10. Be safe. If someone is working an area on a slope do your best not to pass above them. If you need to do so, please let them know you are passing and do your best not to send any debris down on top of them. If someone is working above you and you must pass below, please alert them for the same reasons. Generally speaking, if someone is working a spot respect that they "own" that area and your passage through or around that location should only be done with their permission and/or invitation.



Editor's Note:

I would like to extend an invitation to all members to submit stories of their own travels for publish in future episodes of SIDE TRIPS. All I need is a short write up (and I can assist with this) as well as some photos of your trip (iPhone or Android photos are perfect - just make sure to send me the full resolution version). Fossil hunting trips are always welcome, but so are trips to museums, fossil/mineral shows, and other adventures that explore the world around us. You can reach me at editor@austinpaleo.org and I will do my best to include your stories in future issues.

Brian Bedrosian
Newsletter Editor

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 normally 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.

Please note, due to COVID 19, in person meetings have been temporarily paused, and monthly meetings are instead being held on Zoom. Please see instructions above to attend the meetings virtually. Please note all virtual meetings are recorded and the Society may elect to publish the video of these meetings, in part or in total, to the Societie's website or another publically accessible venue as benefits the goals of the club listed above.

Membership Information

Annual Dues: **\$18/individual**
\$24/family
\$12/associate (non-voting, receiving newsletter)

Pay on-line at: <https://www.austinpaleo.org/newMembership.html>

Send payment 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**

Facebook: <https://www.facebook.com/austinpaleo>

Twitter: [@Austin_Paleo](https://twitter.com/Austin_Paleo)

2021 Officers

President	Erich Rose	president@austinpaleo.org
Vice President	Heather Radford	vicepresident@austinpaleo.org
Treasurer	Mike Smith	treasurer@austinpaleo.org
Secretary	Gary Vliet	secretary@austinpaleo.org
Field Trips Programs	Melvin Noble & Jamie Shelton	fieldtripchair@austinpaleo.org
Editor	Paul Hammerschmidt	programchair@austinpaleo.org
Webmaster	Brian Bedrosian	editor@austinpaleo.org
Show Chair	Mike Smith	webmaster@austinpaleo.org
	Heather Radford	showchair@austinpaleo.org
Science Advisors:	Pamela R. Owen, PhD.	powen@mail.utexas.edu
	James T. Sprinkle, PhD.	echino@mail.utexas.edu

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