

PALEO FOOTNOTES

NEWSLETTER OF THE PALEONTOLOGICAL SOCIETY OF AUSTIN

VOLUME 17 | NUMBER 09

SEPTEMBER 2022



President's Note

An eventful and fossiliferous Autumn is upon us!

Are yall ready for Fossil Fest? Well Heather, our Vice President and Show Chair, is getting things together and we are on schedule! Look for her sign-up sheets for the show itself November 5th & 6th with set up Friday the 4th. Please sign up early and help take some of the pressure off. We can only make this happen with your help. And besides it's so much fun! Other than volunteering the weekend of the show there are a few other tasks that we all need to pitch in on:

(continued on page 2)

This Month's Speaker

Badlands Fossil Hunting with Heather Aziz

Within the Badlands of South Dakota, you can find the fossilized remains of life during the Late Cretaceous. Since 2019 I have worked a multitaxic bone bed with PaleoAdventures, a commercial paleontology company owned and operated by Walter and Heather Stein. I will share with you the history, stratigraphy, and taphonomy of this bone bed in addition to sharing my personal finds and experiences in both the field and prep lab.

(continued on page 2)

SEPTEMBER 2022

PSoA Hybrid September Meeting Tuesday September 20th - 7pm

AGMS Clubhouse 6719 Burnet Lane

Remote on Zoom:

<https://us02web.zoom.us/j/82280932986?pwd=SjUxOXYrNHE0anZHRHE4anVodWNnZz09>

Meeting ID: 822 8093 2986

Passcode: 285212

PSoA September Field Trip

Saturday September 24th
Brady and Santa Anna Sites

(see page 2 for more details)

Fossil Fest Meeting

We will meet @ 6pm before the club meeting to Stuff Fossils!

(see page 3 for more details)

President's Note

(continued from page 1)

First off, we need to stuff give-away bags. Those are zip-lock bags with a Fossil Fest flyer and a small fossil. We will start the September meeting an hour early (6pm) and stuff as many bags as possible. It's always fun. We'll try and have some drinks and snacks for those who come early.

Next, we need volunteers to man our both at the AGMS Gem Capers show (October 21-23). This is a great event, and by volunteering you get free access (bonus!) We need folks to man our booth and represent PSA. You do not need to be an expert on Texas paleontology, you just need to be enthusiastic about fossils.

Finally, Heather is going to be looking for members to fill some of the display cases at Fossil Fest. The theme this year is dinosaurs. Any dinosaur, or dinosaur related, material will go a long way to sprucing up the show. Display cases don't have to be fancy. Hand written labels are fine. And if you don't happen to have a case full of dino material then fill the case with other fossils. In fact just about anything is welcome. Heather has sign-up sheets for those as well. And if you are not sure about what or how to display stuff just contact me (president@austinpaleo.org) and I'll help guide you through what a case should include. It's easy.

Looks like the September field trip is going to be Brady and Santa Ana. Both great locations. One in the Pennsylvanian and one in the lower-most Permian. And the Santa Ana site has been known to produce the rare Texas trilobite!

See you at the next meeting!

Erich Rose

PSoA President



This Month's Speaker

(continued from page 1)

About our Speaker:

Heather Aziz

Heather Aziz is a staff neuroscientist in the College of Pharmacy at the University of Texas at Austin. She holds a BSc in Animal Science from the University of Maryland and a MSc in Laboratory Animal Science from Eastern Virginia Medical School. Heather is also the Vice President and Show Chair of our Club - so exciting to have a presentation from one of our own!

September 2022 Field Trip Brady and Santa Anna Sites

Our field trip will be to the road exposor north of Brady at 8.00 am, This location includes the Adams Branch limestone of the Canyon Group and beneath this are shale and mud stones mapped as the Strawn Group undivided. Both Pennsylvanian period Fossils include a variety of Brachiopods, bivalves, Bryozoans, Coral, some Gastropods, Nautilods and lots of Crinoid material. Wood fragments have also been found.

We will then go to another Pennsylvanian site, Santa Ana lake, afterwards if possible. On occasion trilobites have been found at this location and a nice Brachiopod called wellerla. Unfortunately I am still waiting back for permission. Most material will be small to hand size but there are larger blocks with nice things in them. And some in large boulders with things you might want to remove. Bring containers of various sizes, hammer and chisels, eye protection and something to wrap fragile things in. Bring bags for the larger items. Bring lots of water, sturdy footwear, a hat is recommended, food for lunch or snacks, we may not be near and stores or restaurants. Watch the weather in Brownwood for the appropriate clothing. It will probably be hot this time of year unless some rain clouds come in. It is a long way back to town and there are no facilities, so be prepared. Please wear a mask when close proximity to to each other until we disperse out. Hope to see you there.

Take Hwy 71 west out of Austin and drive to Brady. From Brady, take Hwy 377 north and turn right (east) onto FM 765. After a short distance, you will cross CR 450 and see the collecting site. Hint: If you are driving on 377 and cross the Colorado River – you went too far. OR Take Hwy 183 north to Lometa. On the south side of Lometa take Hwy 190 to Richland Springs. From Richland Springs go north on Hwy 45 and turn left (west) onto FM 765. You will get to the collecting site just before you cross CR 450.

Melvin Noble

Field Trip Co-Chair

Outreach

I have been invited to give a presentation on PSA to the Austin Gem and Mineral Society on the September 22nd. That will be at their regular September meeting. Seems that a good portion of AGMS doesn't know much about us. I'll do a simple presentation outlining our groups mission to educate the public on the cool earth history of Texas and describe the variety of events and activities that make up a typical year with PSA. I believe their meetings are open. to the public, so if you are interested please show up and learn about AGMS.

Erich Rose

PSoA President

The Paleontological
Society of Austin's
30th Annual

FOSSIL FEST

FOSSILS

FUN

GIFTS

PRIZES

MORE

@ austinpaleo.org/fest

November 5th & 6th

9 am - 5 pm
Old Settler's Park
Round Rock, TX

Discover the
prehistoric
in your backyard!



Fossil Fest 2022 Update

Here is a brief update before the September in-person PSOA meeting:

- This month's Fossil Fest meeting will be combined with our regular September meeting Tuesday September 20th, 7pm at the HGMS Clubhouse.
- Volunteer sign ups for both AGMS Gem Capers and Fossil Fest will be at the September club meeting.
- Flyers and tear pads will be available for members to pick up and distribute to nearby locations at the September meeting.
- Shirts are \$10 for members and will be available at the September club meeting (see page 8).
- Teacher, Scout, and Media letters have all been mailed.
- Fossil Fest is advertised on Do512, Facebook, and Instagram. See image above!
- Storage unit has been cleaned and organized.

Heather Aziz
Show Chair

Fossil Bag Stuffing Party!

It's that time again. We need to stuff zip-locks and Fossil Fest flyers at the next meeting. We haven't needed to do this for two years but it is time to catch up. **Please come an hour early (6PM) to the September meeting.** We will supply the bags, flyers and fossils. All we need is your nimble fingers. The regular meeting will start at 7PM as usual.



Storage unit cleaned and organized and ready for Fossil Fest!



August Field Trip Report: Houston Museum of Natural Science

The Houston Museum of Natural Science is a fantastic museum. The paleontology exhibit is excellent. About 11 of us showed up at different times but eventually we all run into one another to socialize and take a group picture.

The exhibit started out with some info about the Precambrian with a fossil traces exhibit then went directly into the Cambrian where there is a video setup on the wall that shows a Cambrian ocean floor. As as you watch the video you will see Cambrian animals like the ones found in the Burgess shale. Bizarre little worms that live in the sand, come out to snatch other species, then a *Opabinia* comes along while a *Amomalocaris* comes swimming overhead. A bunch of Trilobites come creeping by then all of a sudden you see a *Hallucigenia* and just all kinds of strange creatures of that time period. If you do not know what these are look them up on the internet.

As you walk around to the left they are all kinds of fantastic trilobites on display, Cambrian, Ordovician, Silurian, Devonian, some very exotic with all kinds of appendages that protrude out. It slowly evolves around to the Carboniferous with plant fossils and fish into the Permian with early reptiles and amphibians.



August Field Trip: HMNS (continued from page 4)

Leaving the Paleozoic behind we come into the grand hall that has the Triassic, Jurassic and Cretaceous. It's the age of the dinosaurs but there are other exhibits such as mammals, ammonites and fish that lived during that time also. The articulated skeletons are just amazing. This museum is the closest thing Texas has to the Chicago Field Museum or the American Museum of Natural History in New York or the Smithsonian. Next there is a wonderful ammonite exhibit plus a great petrified wood exhibit, just some amazing stuff.

Then as we leave the Mesozoic we start coming into the Cenozoic with creatures from the Paleocene, Eocene, Oligocene, Miocene, Pliocene, Pleistocene and Holocene. Skeletons are here of the ancestors of early hogs, camels, horses, then saber tooth lions, mammoths, and a fantastic skeleton of the giant sloth that's big as a pickup truck. We had these in Texas, Ed found a claw from one that I stepped over once. There's also the complete jaws of a Megalodon shark. I believe it's a replica but it's just so amazing. It shows you how one could swallow you with one mouthful or maybe it would just chew you up if they still existed. You can see how the teeth revolved around in circle and as it lost one a new one came into place.

Towards the very end it had exhibit of modern man and how we evolved from the earliest ape like creatures to Australopithecus to Homo Sapiens, with several species in between. Also on display was a lot of Spear points, Atlatl points, Arrow points, scrapers and primitive tools. The whole exhibit is just totally amazing testimony to the evolution of Life on planet Earth.

Melvin Noble
Field Trip Co-Chair



Side Trip: Drumheller - Alberta

I recently participated in the Dinosaur Valley Half-Marathon in Drumheller Alberta. The race was just used as an excuse to go to the Royal Tyrrell Museum. If you have not been to Drumheller before, it is known as the “Dinosaur Capital of the World”. The town takes this proclamation very seriously. There are dinosaurs on everything from the street signs to the sides (and tops) of buildings. Drumheller is in the Badlands of Alberta, and it looks remarkably like the Badlands of South Dakota. (see the landscape on page 1). The Royal Tyrrell is approximately 6 km from downtown Drumheller and is also physically in the middle of the Badlands.



Side Trip: **Drumheller Alberta** (continued from page 7)

My day started an hour before the museum opened and on the interpretive trail. This is a gravel trail through the badlands on the museum property. It's a mild and leisurely stroll through the eroding outcrops. If you pay close attention to the wash at the bottom of the hills you can spot weathered, sun-bleached, fossilized bone. If you are lucky enough to spot a fossil, you must leave it where it lies. Surface collecting in Alberta is illegal unless you are on private land. Even if you are on private land, only residents of Alberta can hold onto the fossils, as stewards. Fossils cannot leave Alberta and cannot be excavated by anyone but the scientists from the Royal Tyrrell. However, if you do spot something that may be of interest you can report it to the Royal Tyrrell. All finds are reported this way in Alberta. I spotted approximately 30 pieces of fossilized bone (1 cm³ – 5 cm³) that made a trail up one of the hills. I took a theodolite photo which included GPS coordinates and a video and when the museum opened, inquired about reporting the find. I then submitted all the information I had to the museum.

My first activity was called "Dino Site". I paid \$12 CAD to spend 90 minutes walking around the Badlands with an educator learning the geology and history of the Badlands. We did look for fossils. Fair warning this is geared towards the younger crowd, but all would enjoy it!

Next, I was able to walk around the exhibits. The "Fossils in Focus" hall was both enjoyable and extremely exciting. I was told that the exhibits in this hall are regularly changed out to give the public a more well-rounded picture of what the museum has in its collections. This trip there was an "exploded" Daspletosaurus skull (original Fig. 3), a beautiful Gorgosaurus juvenile skeleton (original Fig. 1), and the best-preserved armored dinosaur in the world: Borealopelta markmitchelli (original Fig.2). All these pieces were visually stunning and breathtaking if I'm being completely honest. Following the "Fossils in Focus" halls the museum moves in a linear fashion through time and major extinction events. The Bearpaw Sea exhibits were beautiful. The "Hall of Dinosaurs" had one fossil that I couldn't take my eyes from: Confuciusornis sanctus (original Fig. 4). Just look at all of those feathers! It would have been easy to miss if I wasn't taking my time because it was so small, compared to all the giant dinosaurs in the same room.

I ended my day with my second activity: a casting class! This was the best \$10 CAD and 45 minutes that I could have spent at the museum. We were taken into a small classroom within the preparation wing of the museum and shown how fossil casts are made. Then we got to make our own! I made a Stegoceras skull piece! (Fig. 5) We were shown lots of fossils (both original and casts) while we waited for ours to dry. Best part: we got to keep them!

I highly recommend anyone making the trip to Drumheller and the Royal Tyrrell. It's a friendly, small town, that love their dinosaurs. The museum offered regular and exciting side activities that most museums don't typically have and were relatively inexpensive!

Heather Radford

Vice President + Show Chair



Fig 1. juvenile Gorgosaurus



Fig 2. Borealopelta markmitchelli



Fig 3. exploded Daspletosaurus skull

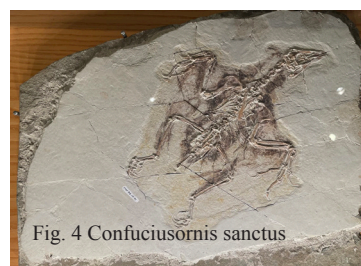


Fig 4 Confuciusornis sanctus

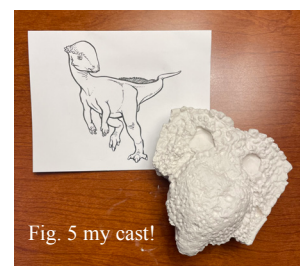


Fig 5 my cast!



Tailings...

In The News

Drought Exposes Dinosaur Tracks in Texas

The 113-million-year-old footprints were largely made by the carnivorous *Acrocanthosaurus*

Margaret Osborne, [Smithsonian Magazine](#), 26th August 2022

Why were reptiles such evolution success story?&s

It was thought they just got lucky when climate change killed off foes. New study finds they also adapted sooner to rising heat.

Juan Siliezar, [The Harvard Gazette](#), 29th August 2022

Portuguese Man Accidentally Finds 82-Foot-Long Dinosaur in His Backyard

Scientists say this could be the largest specimen ever discovered in Europe

Margaret Osborne, [Smithsonian Magazine](#), 31st August 2022

The Oldest Airborne Vertebrate Animal Was a Reptile With 'Weird' Wings

Paleontologists describe a 255-million-year-old weigeltisaurid fossil that likely glided through the air with the help of expansive winglike membranes

Tess Jooose, [Smithsonian Magazine](#), 31st August 2022

Eyes Provide a Window into the Strength of Dinosaur Bites

Having elongated eye sockets—rather than the more common round ones—could have enabled *Tyrannosaurus rex* to chomp down on prey without compromising skull stability.

Katherine Wright, [Physics Magazine](#), 8th September 2022

How a Giant Eagle Once Came to Dominate New Zealand Before the formidable bird went extinct, scientists say it likely hunted the flightless moa

Boyce Upholt, [Knowable Magazine](#), 12th September 2022

2022 Field Trip Schedule

- September: **Brady / Santa Anna 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

Dallas Paleontological Society



FOSSILMANIA XL

40 years

and

Extra Large

Somervell Co. Expo Center

202 E Gibbs Blvd, Glen Rose, TX 76043

October 28, 29, 30, 2022

Friday 8 am to 6 pm

Saturday 9 am to 6 pm

Sunday 9 am to 4 pm

Fossil Vendors
and
everything Paleontology

FREE Admission
FREE Parking

For schedule and more information:
dallaspaleo.org/FOSSILMANIA



FOSSILMANIA is one of Texas' longest running shows dedicated to fossils and everything paleontology. Not a gem and mineral show - FOSSILMANIA is a **fossil show**. Vendors have more than fossils. They have books, apparel, artwork, and other products related to fossils and paleontology.

FREE activities include fossil collecting field trips, a Kid's Corner with hands-on exercises, a guided tour of dinosaur tracks, and a badge workshop for Scouts. This is an educational and entertaining event for all ages.

A door prize awarded every hour. A raffle and a silent auction add excitement to this event. Look for pictures of the raffle items and other activities on the website at dallaspaleo.org/FOSSILMANIA.

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)

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