

# PALEO FOOTNOTES

NEWSLETTER OF THE PALEONTOLOGICAL SOCIETY OF AUSTIN

VOLUME 19 | NUMBER 07

JULY 2024



## President's Note

### Greetings from the field!

I am currently in the far away land of South Dakota searching for dinosaurs. I also brought along the Texas heat as we are seeing temperatures over 105 here. I look forward to sharing with you all the fun finds I uncover on this trip when I return. Eric Jones will lead this month's meeting.

On the 25th of June I met with the managing director of the Texas Science & Natural History Museum to deliver a check of \$5,200.00 as a donation in memoriam of Erich Rose, our President Emeritus. The funds will (continued on page 2)

## This Month's Speaker

**The Importance of Fossil Replicas in Research and Education**  
Speaker: **Rex Kowalski**

With the growing interest of dinosaurs after Jurassic Park came out, the public became more and more interested in dinosaurs and wanted to know more about them. With fossils, there are only so many available, and museums were having to lend out their displays to different museums, leaving them without their star attractions for their normal visitors. Not only that, but real fossils can be extremely heavy, and can cause unintentional accidents with fossils falling and breaking either on (continued on page 2)

July 2024

**PSoA Regular Meeting**  
Tuesday July 16th - 7pm  
**AGMS Clubhouse**  
6719 Burnet Lane

Join Zoom Meeting  
<https://us02web.zoom.us/j/88451710052?pwd=Uy9hV05BTy9rUmIzYlMzdVVnNTVjdz09>  
Meeting ID: 884 5171 0052  
Passcode: 603270

**PSoA Club Field Trip**  
July 20th  
**Johnson City**  
(see details page 2)

## President's Note

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(continued from page 1)

help with the ongoing renovations taking place at the museum. Your generous support, through donations and auction sales, made this museum donation possible. Thank you! We hope our contribution aids the museum in their efforts to inspire curiosity about the natural world with the same enthusiasm exuded by Erich.

### **Heather Aziz**

PSoA President

## This Month's Speaker

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(continued from page 1)

their own or on a visitor. Creating replica fossils were much lighter in weight, and also helped to create a full picture of what these ancient beings looked like in their entirety, due to most fossils only being 20 - 30 percent found in the field.

Just like we see with conservation efforts with animals that are still alive in zoos and other avenues that host animals for the public to view, these establishments the majority of the time advertise to a younger audience. It has been proven that if you create an interest in people from a very young age, that it can and will create a lasting impact of when they get older. For example, if you have a real dinosaur tooth, there can only be one of those teeth in the entire world, just like a human tooth. But if you were to create a replica of that tooth, a young child can add that to their collection and always have a positive memory of that experience, and possibly help out with conservation efforts with future digging expeditions for museums, or commercial paleontology projects.

Just as I stated in the paragraph above, each new fossils we find can add valuable data and on information that we have already discovered about these prehistoric creatures. Through commercial paleontology, we can have the bones that we find studied and all of the information stored into databases so we can scan the bones to keep this new and valuable information stored in a digital database. This not only helps to create a full skeleton of these animals, but it also allows us to sell these fossils to not only museums, but private fossil collectors to fund digs to keep the second great extinction of these animals from happening and allows us to continue our efforts in growing knowledge and data for future generations of scientists and paleontologists for years to come.

### **About our Speaker: Rex Kowalski**

For 4 years I worked for a commercial paleontologist company, which allowed me to see the ins and outs of academic and commercial paleontology. This inspired me to create Sturdrum Studios, where we specialize in replica bones, skulls and full sized skeletons of different types of dinosaurs and prehistoric marine reptiles.

## Jully 2023 Field Trip:

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### **Johnson City Sites**

**DATE: Saturday July 20th**

Cretaceous - Upper Glen Rose Formation

This month's field trip will be to some sites in Johnson City TX. Meet at 8am at Mountain Top Road on 281 just south of Johnson City. Google for directions to Lighthouse Hill Ranch and that should get you to the right place. This is Upper Glen Rose Formation with echinoids, gastropods, bivalves and if you are super lucky, some vertebrate material! Fossils are typically small, so little containers, a screwdriver or other implement are all that's needed. It will be HOT and there are NO facilities. Johnson City is the closest place for restrooms and snacks. BRING LOTS OF WATER and something to protect you from the sun. Be sure to pull all the way off the highway as traffic is brisk and can be distracted with all our cars. Look forward to seeing everyone there!

### **Melvin Noble**

Field Trip Co-Chair

## Fossil Show and Tell - Next Month!

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**BRING OUT YOUR FOSSILS!**

August is Museum Month, so for our presentation, we want to see YOUR fossils! We will have a member Show and Tell so gather up your (up to) three best fossils (personal finds or purchases) and plan on presenting a 5ish minute Show and Tell. If you would like your fossils to be included in a power point presentation on the screen and for our Zoom members, please send three images to [jamielynn@gmx.com](mailto:jamielynn@gmx.com) by August 10th. This is particularly good for small fossils that might be difficult to see, even for our in-person audience. This is for ALL members, young and not so young! Please send me an email if you want to participate in Show and Tell!

### **Jamie Shelton**

Programs Chair

## Outreach Opportunity

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### **ID My Rock Day**

AGMS has reached out to PSoA for volunteers to help them identify fossils at Nature's Treasures "ID My Rock" event on August 10th from 12:00 PM to 5:00 PM. This event will be at Nature's Treasures new event center. Eric Jones has committed to this event. If you are interested in volunteering your time, please let him know [vicepresident@austinpaleo.org](mailto:vicepresident@austinpaleo.org) (Eric is already in contact with Doretta Conrad of AGMS regarding the event).

### **Heather Aziz**

PSoA President



Fig. 1 *Pagurus banderensis* crab claw (Jamie Shelton)

## June Field Trip Report: Austin Loop 360

We've had a surprisingly pleasant spring here in Central Texas, but the Texas heat decided to kick in right before our June Field Trip! Fortunately, being a spot close to home, we managed to get out early and got a few hours of fossiling in before we broiled! This is one of my personal favorite locations, with a WIDE variety of Walnut Formation fossils. It seems to be continually productive, even though it's a well known spot. We had a small but enthusiastic group who joined, some new members and some long time members: Mateo Blumenthal, Angie and Joaquin De Hoyos-Hart, Manuel Oliver, Adam and Heather Aziz, Karthik Mohanasundaram and Iniya Karthik, Sophia Martinez, Gary Kendrick, Angel and Raoul Daniels, Larry Clay, Kevin Bills and myself, Jamie Shelton.

We met at the base of the cliff to take a look at some of the fossils they would be likely to find – I got there early to scout out a few common things to show, happily finding a little



Fig. 2 *Engonocerid* ammonite chunk (Jamie Shelton)

# June Field Trip Report:

## Austin Loop 360

Coenholectypus echinoid in the pile right by the road!. It's amazing how being able to not just see the fossil, but to hold it and get a feel for it, aids in the finding!

We trekked up the hillside and were greeted by a lovely sight of Mountain Pink wildflowers. Wildflowers are one of the greatest things about Central Texas, aside from the fossils! We are so lucky to have nature as a part of our everyday lives.

We all spread out and started hunting. I found a couple of the little *Loriolia rosana* echinoids to show the newcomers what to look for and that got Mateo rolling...he found a half a dozen in short order (fig. 7). Gary found a very well preserved one (fig. 8). Manuel found the other echinoid "bonanza" of multiple *Coenholectypus* sea urchins – at the top of the hill (fig. 5).

Angel found some great examples of *Ceratostreon texanum* – a robust and intricately surfaced oyster that was abundant in the Cretaceous. Iniya was on a gastropod kick and found a wide variety – the Walnut has a huge amount of snails, from extremely tiny to quite large. Iniya found a nice large *Tylostoma* (fig. 3) and I found a very tiny one that I have yet to identify (fig. 6).

Angie and Joajuin were finding some good stuff, including a *Porocystis globularis* (an algae fruiting body) which is an interesting "cross-over" from the Glen Rose Formation where they are often abundant. But this is one of the few locations that I know of that they are found in the Walnut. This is one of the lower members of the Walnut Formation (the Bee Cave member) so it seems plausible that there would be some crossover with the older Glen Rose Formation below.

Another fossil that is typically found in the Glen Rose but has some crossover to the Walnut is the hermit crab *Pagurus banderensis*. Mateo was particularly interested in finding some crab material (which is found occasionally at this site) but it wasn't until he had just left that I came across a nice big claw (fig. 1). They are kind of an unusual find....

But I did manage to find a small chunk of ammonite for Angel, as he was interested in finding ammonites. I've not seen many ammonites from this site, more echinoids than ammonites. So I was surprised to find a small chunk of an Engonocerid (fig. 2) - It has a new home with Angel.

We lasted about three hours before the humidity and the heat caught up with us. I think everyone ended up with a few nice fossils to take home. I, for one, was very thankful for the A/C and a post-fossil hunt smoothie!

**Jamie Shelton**  
Field Trip Co-chair



Fig. 6 *Gastropod* (Jamie Shelton)



Fig. 3 *Tylostoma* (Iniya Karthik)



Fig. 4 *Ceratostreon texanum* oyster (Angel Daniels)



Fig. 5 *Coenholectypus* echinoid (Manuel Oliver)



Fig. 7+8 *Loriolia rosana* echinoid (left: M. Blumenthal, right: G. Kendrick)



Fig. 1 Fossil Pavilion and excavation site Big Bend NP

## Side Trip Report: Summer National Parks Trip

Around the middle of June, Michelle, myself and the boys - Emerson and Anders - set off on a summer adventure. Part work trip, part vacation, we left and headed out to west to try to escape the Austin heat and hit as many National Parks as we could with Emerson's 4th Grade Pass. For those that don't know, the NPS has a program that offers free access to the parks for any family that has a student in 4th grade - its amazing. Our trip took us across west Texas, up into New Mexico, on to Colorado and then looping back down through the panhandle back to Austin. Over two weeks of amazing time spent outdoors with the family, an over ambitious schedule and several large summer storms had us watch the Permian redbeds in Texas, Pennsylvanian sites in New Mexico, and Miocene sites in Colorado pass us by. All the while my eye on the Rockd app tracking the stratigraphy as we drove. In order to slake our thirst for fossils, we did manage to see some amazing exhibits at the National Parks we visited.

A good friend of ours, Sarah Wilson, recently wrote a book about her grandfather - Dr. John A Wilson - and his travels and digs at Big Bend National Park. (The book, which is fantastic is called DIG and she will be coming to speak to us later this



Fig. 2 Theropod skull (cast) Big Bend NP



Fig. 3 Petrified Redwood stump Florissant Fossil Beds NM

year). During our trip to the park we stopped to see the new fossil exhibit that replaced the old hut that sat on the site. Located adjacent to the site where Dr. Wilson found many of the Cenozoic fossils that are now well known from this area (fig. 1) - the building is a rugged open air pavilion featuring many fossil casts (fig. 2 - which kids can touch and explore) as well as glass cases containing real fossils that came from the area. A highlight of a trip to this most amazing of parks in the NPS system.

Next stop of paleontological note was the Florissant Fossil Beds National Monument. We were here for the famous Eocene shale deposits that capture flora and fauna in exquisite detail - but it was the petrified redwood stumps that blew our minds (fig. 3). There are a dozen or so stumps that have been excavated from the shaly deposits around the park headquarters and were completely unexpected (so far from the coast) and impressively huge. A trip to this National Monument is not complete without a stop at the Florissant Fossil Quarry just down the road. Here you can pay \$20/hr to hunt through piles of their shale deposits for treasures of your own. The woman who runs the place is quite wonderful and gives you a quick rundown of what to look for and how to split the stone. She provides you with the necessary tools - a single sided straight razor blade, a putty knife and a butter knife to use as “hammer”. The shale splits easily and we soon had a



Fig. 4 Emerson splitting shale Florissant Fossil Quarry

box full of our own fossils (fig. 4). The majority of specimens represent the diverse flora of this site and we took home many beautiful leaf + needle fossils that look like they could have fallen yesterday (fig. 6). The prize we were looking for were insects. They are often quite small and can be difficult to find, but find we did. Only a few, but beautifully preserved flying insects with wings clearly visible with fine detail (fig. 5). Vertebrate fossils are found here as well - they recently discovered a frog they believe to be new to science - but these must be surrendered to the Denver Museum of Nature and Science for scientific study. This is a very accessible site for folks of all ages and you are guaranteed to find a good set of specimens in your first hour.

The final stop on our trip, and long on my bucket list of Texas Parks, was Palo Duro State Park. This is a gorgeous canyon system in the panhandle that feels like an oasis in the midst of the vast plains in the region. The main visitors center in the El Coronado Lodge contains many exhibits on fossils found in the area over several epochs. The canyon is also replete with many fascinating geological outcrops - including bands of gypsum crystals in the red sediment that you encounter on many of the hikes.

Despite getting a late start and temperatures pushing past the century mark, we decided to embark on the parks most popular hike - The Lighthouse - which takes you to the namesake outcrop that rises above a plateau within the canyon. The hike was beautiful and mostly flat but the heat is intense and bringing lots of water is critical. Near the middle of the hike in, Anders and I were walking together looking for cool rocks in the red sediment when we came across some unusual white deposits eroding out of the sediment. Getting down on our knees we brushing the dirt away - they were clearly bone and appeared to be a section of a skull! (fig. 7) Further down the path we found more - what looked like a socket from and shoulder or a hip - and quickly took note of the location and covered them back up. They did not appear to be fossilized, but they were old - likely from the ranching period of the park. On our way back to the car later that afternoon we ran into two rangers on a 4 wheeler (sent out to make sure hikers were okay - it was dangerously hot) and we took them to the site. They took photos to send to their resident archaeologist for further review and thanked us for letting them know - they said most folks would have tried to take them without telling anyone. They took our number and said they would let us know what was found - still hoping to get a call!

There were so many more fantastic stops on our trip - and we committed to making this a yearly sojourn!



Fig. 5 **Flying insect** Florissant Fossil Quarry



Fig. 6 **Fossilized Leaf** Florissant Fossil Quarry



Fig. 7 **Skull eroding out of sediment** Palo Duro Canyon SP

Fig. 8 **Panorama of canyon floor** Palo Duro Canyon SP

Brian Bedrosian  
Editor



## Tailings...

### In The News

#### Has Life on Earth Survived More Than Five Mass Extinctions?

Scientists aren't just arguing whether humans are causing a sixth mass extinction event now, but whether many more occurred in the past

Riley Black, [Smithsonian Magazine](#), July 12th 2024

#### Before the Dinosaurs, This Massive Salamander-Like Predator Ruled Earth's Swamps

Fossils unearthed in present-day Namibia tell an intriguing story of tetrapod evolution

Christian Thorsberg, [Smithsonian Magazine](#), July 5th 2024

#### Did the Extinction of the Dinosaurs Pave the Way for Grapes?

Newly discovered fossils in South America hint at the evolution and proliferation of grapes around the world

Sarah Kuta, [Smithsonian Magazine](#), July 8th 2024

#### Some Dinosaurs Evolved to Be Warm-Blooded 180 Million Years Ago, Study Suggests

Researchers studied the geographic distribution of dinosaurs to draw conclusions about whether they could regulate their internal temperatures

Will Sullivan, [Smithsonian Magazine](#), May 16th 2024

#### Massive Mosasaurs May Have Evolved More Than Once

The predators, which were made famous in the "Jurassic World" franchise, likely arose at least three times

Riley Black, [Smithsonian Magazine](#), May 2nd 2024

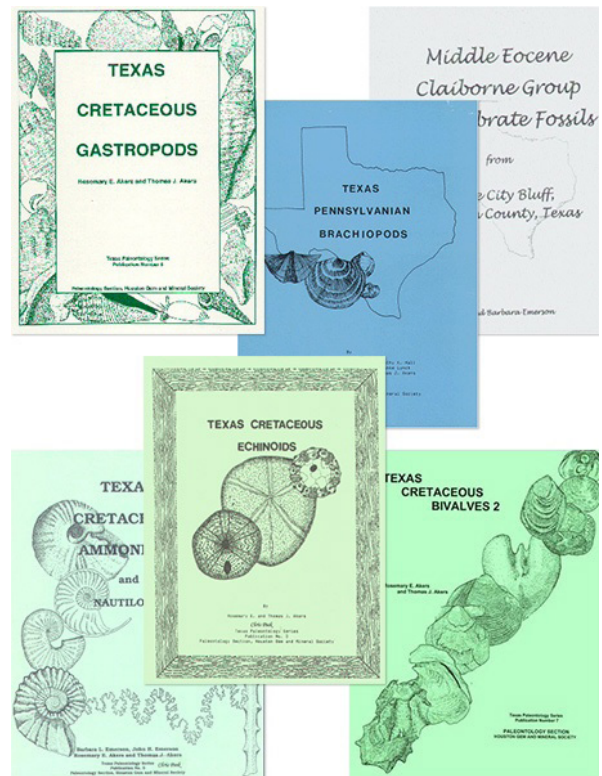
### 2024 Field Trip Schedule

July	<b>Johnson City</b>
August	<b>Ross Perot Museum Dallas</b>
September	<b>Texoma Moody / Evant (2 days)</b>
October	<b>Brady / Santa Anna</b>
November	<b>Brownwood</b>
December	<b>White Mammoth and Pot Luck</b>

*Locations in italics are alternates depending on weather and availability.*

**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. Please note that dates and locations are subject to change - check the monthly newsletter or come to our monthly meetings for updates.

### Paleo Book Resources



#### Paleo Books from HGMS

This is a book series published by the Houston Gem and Mineral Society and contains several volumes on Cretaceous and Pennsylvanian fossils from Texas localities. These can be purchased as a bundle or individually, in print or as a digital download, from the [HGMS Website](#).

- Texas Cretaceous Echinoids (Print & Digital Options)
- Texas Pennsylvanian Brachiopods (Print & Digital Options)
- Texas Cretaceous Ammonites and Nautiloids (Digital Only)
- Texas Cretaceous Gastropods (Print & Digital Options)
- Texas Cretaceous Bivalves (Print & Digital Options)
- Middle Eocene Claiborne Invertebrate Fossils (Print & Digital Options)
- Cretaceous Oysters in Texas (Digital Only)

#### WhatsApp for PSoA Members

This would be handy for folks to have on their phones for Field Trips - or just an easy way for the board to communicate with you when email is not practical.





## 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](mailto: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](http://austinpaleo.org) for more information.

*Please note, our monthly meetings are currently held in a hybrid format, with in person gatherings at the AGMS Clubhouse which can also be attended virtually via Zoom. Please see information provided on page one of this newsletter each month. While we are not currently requiring masks at any in person gatherings, we ask that you maintain a safe distance from others when socializing. 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 Society'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](http://www.austinpaleo.org)

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

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

#### Current Club Officers

President	<b>Heather Aziz</b>	<a href="mailto:president@austinpaleo.org">president@austinpaleo.org</a>
President Emeritus	<b>Erich Rose</b>	
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