

PALEO FOOTNOTES

NEWSLETTER OF THE PALEONTOLOGICAL SOCIETY OF AUSTIN

VOLUME 18 | NUMBER 06

JUNE 2023



President's Note

This month is going to be a hot one!

Temps will finally hit the hundreds. It is really important that we stay safe when it gets this hot. Becoming overheated is something we all need to avoid. Always pay attention to the forecast. When they say it will be 95, count on a 100. Stay hydrated. Keep the water flowing. You need to consume quarts of water on a hot day. If you have it use electrolytes to keep up your mineral intake. I like to have at least two or more quart bottles with me when I am collecting, and I will have a gallon jug back at the car waiting. I nice trick on these extra hot days is to (continued on page 2)

This Month's Speaker

Lifestyles of the Dinosaurs from the Morrison Formation.

Speaker: Liam Norris

Liam shares his experience and the steps he took to go from a dinosaur-loving kid to a full-fledged paleontologist. From the Houston Museum of Natural Science, to the University of Texas at Austin, Liam has seen many aspects of paleontology, and looks forward to sharing what he has learned. Liam will be discussing his research on dinosaurs from the Morrison Formation, and what we can learn about their diet and lifestyles by using isotopes in their teeth. (continued on page 2)

JUNE 2023

Regular June Meeting
Tuesday June 20th - 7pm
AGMS Clubhouse
6719 Burnet Lane

Join Zoom Meeting
<https://us02web.zoom.us/j/89780923875?pwd=ZVZ5SENEOEliUmdrOW9ZVjVKZVQvQT09>

Meeting ID: 897 8092 3875
Passcode: 551023

June Field Trip
Saturday June 24th
Austin Loop 360
(see page 2)

President's Note

(continued from page 1)

freeze that gallon ahead of time. By the end of the day it will have melted and be extra refreshing.

The sun can be brutal. Wear a full brim hat. A bandana to go over the neck is also useful. You can soak it with water to add some serious cooling. I often wear a light weight long sleeved shirt and find that it actually is cooler than having my arms exposed to the heat. Make sure your sunscreen has a high enough SPF and be ready to re-apply as the day progresses.

And if you start to feel the heat and it affects, take break, find some shade, and drink up. Heat prostration is a drag but heat stroke is deadly. It comes on faster than you think.

Let's all stay safe this summer.

Erich Rose

PSoA President

This Month's Speaker

(continued from page 1)

Liam Norris is a third year Ph.D. candidate at the Jackson School of Geosciences studying paleontology working with Dr. Rowan Martindale. Liam is originally from Houston, Texas, and gained an early appreciation for science through his fascination with animals and paleontology. He worked at the Houston Museum of Natural Science (HMNS) as a Volunteer Docent and employed Gallery Attendant during high school and college. Liam attended Texas A&M University where he gained his Bachelor of Sciences in Geology with a specialization in biology.

Liam's research interests are based around paleoecology, particularly what the relationships between contemporaneous organisms can tell us about the environments in which they lived. His current work includes studying calcium-isotopes in dinosaur teeth from the Morrison Formation to understand niche partitioning between multiple large sauropods and their theropod predators. Liam plans to utilize calcium, carbon, and oxygen isotopes to glean as much information about the life history of these animals as possible, with a focus on diet, water resources, and migration. Liam is on track to complete his Ph.D. in 2025 and plans to continue his academic career helping to equip the next generation of scientists with knowledge.

Hunting Yellow Bluff in Oklahoma - see page 4 for our report!



June 2022 Field Trip

Loop 360 Road Cuts

We will stay close to home this month, and start at 8am because it's going to be quite warm! We'll meet at the Austin Loop 360 Roadcut which is Walnut Formation. We will park on the Northbound side of Loop 360 directly across from Pascal Lane. Make sure you pull completely off the shoulder when you park. The roadcut is easily accessible but it is fairly high up, so be safety conscious at all times! The area we hunt can be steep so wear good shoes. Fossils will include gastropods, echinoids, corals, bivalves and sometimes crab material. Small collection boxes are a good idea as well as small digging implements. This is primarily surface collecting, so no major digging.

Jamie Shelton

Field Trip Co-Chair



Fossil Fest 2023 Update

Date: November 4th & 5th

Theme: Prehistoric Life Underwater

Flyers

We have been providing Fossil Fest flyers and tear pads at outreach events to start spreading the word early. If you would like any for future events, please let me know via email showchair@austinpaleo.org and I will bring some to the next meeting.

T-Shirts

T-Shirts will be available for purchase at the June meeting and are \$12 each for members.

Vendors

We have 10 vendors that have verbally committed to our event and are still in the process of collecting contracts from all. Also, AGMS will be attending Fossil Fest this year!

Social Media

Fossil Fest is up on Do512.com and Facebook!

Heather Aziz

Vice President + Show Chair



Day One:

Oklahoma Permian Site

I often describe our fossil hunting sites like crawling around on the surface of the moon. Day one in OK was definitely that! Jamie, my mom Diane, and I began our weekend adventure on Friday with a trip to a permian site that club members have visited in the past. After a hike through very alien terrain, we found ourselves in a large shadeless rocky expanse baking in the spring sun. Much like the permian red bed site we visited several years ago with Andre Lujan, the ground was littered with blue-white fragments of the bones of (mostly) very early amphibians and the teeth of small sharks. While there were as many bits to pick up as you cared to, they were all quite small and often just fragments. The teeth of *Orthocanthus* were plentiful but intact specimens with the root and double blades were mostly limited to the micro size. A few cephalic spines from *Xenocanthus* also turned up. I was fortunate enough to walk away with several vertebra from the “boomerang head” amphibian *Diplocaulus magnicornus* which are known to be plentiful here (fig. 1) A few skull fragments and teeth of another amphibian - *Eryops megacephalus* - were also to be found. After a few hours we had baked enough and headed out with plenty of matrix to sift!

Brian Bedrosian
Editor

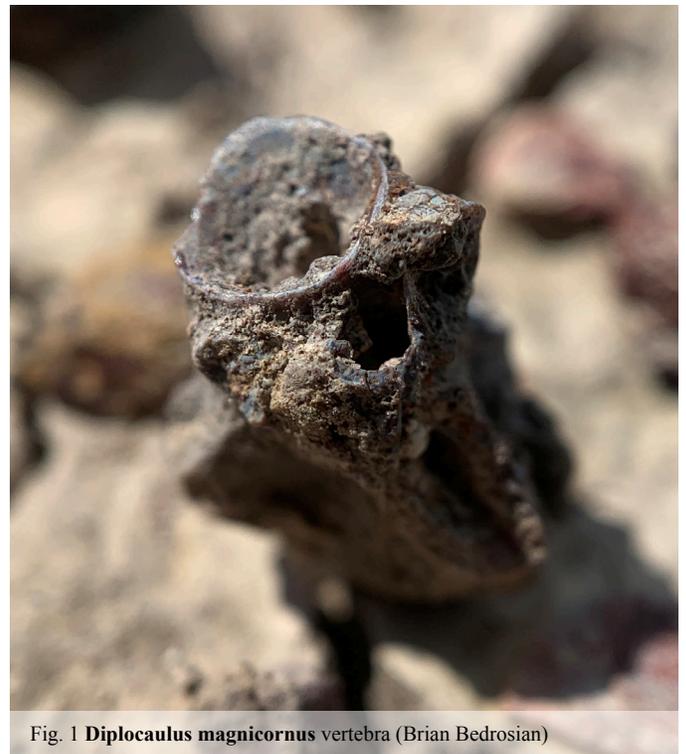


Fig. 1 *Diplocaulus magnicornus* vertebra (Brian Bedrosian)



Day Two: Yellow Bluff

I always forget how pretty North Texas and Oklahoma are in the springtime -rolling hills and beautiful green wooded areas, streams and rivers. The drive up is always a pleasant surprise! I went up on Friday (as many of us did) and, similar to last year, it was HOT on Friday – but a cold front blew in that evening and dropped the temperature about 20 degrees! So we were all very excited about the prospect of a nice day collecting as we met on Saturday morning, but it was surprisingly chilly! We were all pulling as many extra layers of clothing we had in our cars – jackets and hats etc. Quite a few new members joined us on this trip, as well as our “regulars” : Joseph Neifie, Andy Peters, Yoli and Will Lins, Frederick and Melinda Falk, Ron DePronio, Bob MacDonald, Alan Keith, Dr. Sprinkle, Dana Baggett, Susan Shore, Charlie Neal, Gary and Kathy Rylander, Brian Bedrosian and his mom Diane, Ed Elliot, Leia Pfaff, Randy Whited and Marga Tre, John Hinte and of course, Melvin and me! We all caravanned to our first site, and traversing the field of cows and cow patties, we were happy to see that the creek we had to cross was not very high.there was some concern about all the rains of the week before as to whether the creek would be passable.



Fig. 1 Calcioocrinoid crown (Bob MacDonald)



Fig. 2 **Trilobite roller** (Yoli Lins)



Fig. 5 **Floating Crinoid crown** (Diane Bedrosian)



Fig. 3 **Echinoderm plate** (M. Falk)



Fig. 4 **Crinoid cup** (Leia Pfaff)



Fig. 6 **Trilobite** (Susan Shore)

We scrambled up the creek bank to the expanse of Silurian exposure. We were greeted by a lovely view of Yellow Missouri Primroses dotting the landscape. And we also discovered a plethora of a stinging nettle called “Nose Burn” and it does give a bit of a sting! But that did not deter intrepid fossil hunters! Susan found the first big complete trilobite.... right in the main pathway that we all walked over just minutes before! More trilobites were found this time at Yellow Bluff than we found last time – just about everyone found at least one trilobite, some in quite good shape, others, not so much. Yoli found an enrolled trilo (fig. 2) and Andy and Charlie both found some decent trilos (fig. 7). Marga found a trilobite up high on the hill which is apparently Devonian era, so that was pretty special.

Of course, there are many many other amazing fossils to be found there. Melinda found some beautiful echinoderm plates (fig. 3) and Leia found a very interesting little crinoid cup (fig. 4). Diane and Gary also scored some rare crinoids up on the bluff (fig. 5). My favorite find is an interesting brachiopod called a *Dictyonella gibbosa* which LOOKS like it is covered in a bryozoan, but it’s actually not...its how the surface is decorated! But THE find of the day was Bob MacDonald who found an amazing Crinoid crown – Dr Sprinkle said it was called a calcicrinoid (fig. 1). It is a remarkable fossil.



Fig. 7 **Trilobite** (Charlie Neal)

Jamie Shelton
Field Trip Co-Chair



Day Three: Black Cat Mountain

Fig. 1 *Huntonia oklahomae* impression - rock hammer for scale

After a very full day of collecting and some somewhat decent sleep (it's always difficult getting a good nights sleep in a hotel) and our various hotel breakfasts (except those who went to Prarie Kitchen) we met up again on Sunday for some more fossil hunting! We split up and some went with Dr. Sprinkle to one site and the rest of us went to Black Cat Mountain for some Devonian collecting. It's a private quarry that we are super lucky to have access to.

The road into the quarry is, how should I put this...not at all suitable for my little Scion XB. So I and a few others who were driving little cars hopped in the back of other members trucks and had a a crazy, bumpy, low-hanging branch head whooping ride! We arrived and all spread out along the road and various areas of the quarry. It has multiple areas to look, a lower area, a middle area and an upper area and all are abundant with fossils...you just have to keep looking!! Tilobutts are everywhere – some big, some tiny – mostly the *Huntonia oklahomae*. Impressions (fig. 1) and actual fossils abound of this trilo but finding a whole one is extremely rare. Diane, found a nice specimen of a Phacops or Kainops (they are tricky to tell apart – it has to do with the lenses of their eyes - fig. 4).

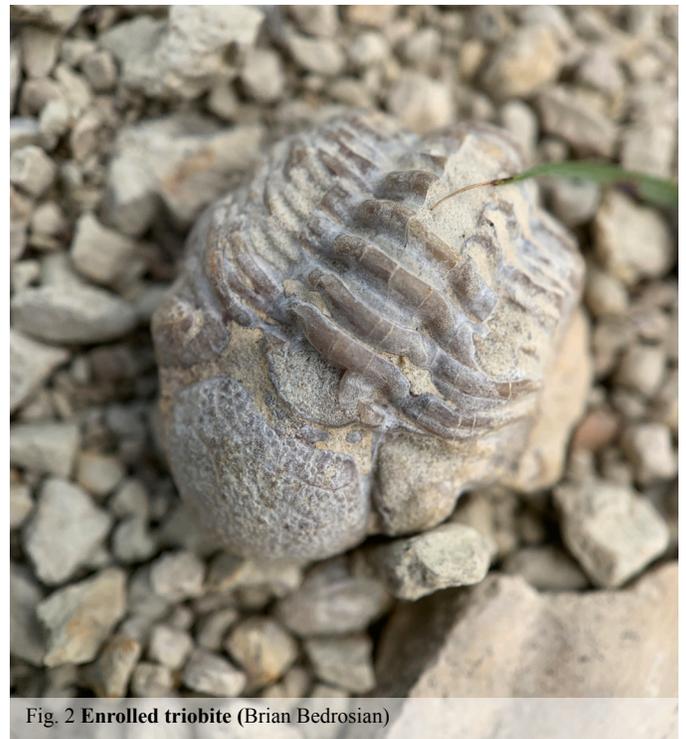


Fig. 2 Enrolled triobite (Brian Bedrosian)



Fig. 3 *Howellella* devonian brachiopod (Jamie Shelton)



Fig. 5 *Anastrophia grossa* devonian brachiopod (Jamie Shelton)



Fig. 4 *Paciphacops* trilobite (Diane Bedrosian)



Fig. 6 *Tilobite in situ* (Jamie Shelton)

Aside from the trilobites, there are incredible brachiopods – often silicified. Also straight shelled cephalopods and corals. I found a couple of big beauties – an *Anastrophia grossa* (fig. 5) and a cool little *Howellella* covered in beekite (the little rings - fig. 3). Brian found a number of different corals, including a few specimens of a very small but beautiful silurian tabulate coral *Pleurodictyum* sp. (fig. 7).

I didn't get a lot of pictures of peoples finds from Black Cat because we were all so spread out and I honestly didn't even see some of the members after the initial getting there! So I am sure there were some great finds that I didn't even get to see. After many hours of collecting, I was DONE but I have to say, some of the PSoA members have WAY more endurance than I! Brian and Diane, Ed and Melvin and Leia were there about 8 hours total...now that's a full day of Fossil Hunting. We met for dinner that evening and had a great time talking about all the finds and the beautiful day we had for collecting. I am already looking forward to next year!

Jamie Shelton
Field Trip Co-Chair



Fig. 7 *Pleurodictyum* sp. (Brian Bedrosian - left is bottom, right is top)



Day Four: Oklahoma Pennsylvanian Site

Fig. 1 Crinoid crown arms (Leia Pfaff)

After that amazing long day at Black Cat Mountain, a group of us decided to make a final stop on Monday before heading back to Austin at a Pennsylvanian site the club has had luck at in the past. The site immediately proved to deliver many of the small marine fossils we are accustomed to finding at sites like Jacksboro. We found an unusually high quantity and size of the gastropods with flaring apertures such as Knightites, Euphemites, and especially Pharkidontu - the latter of which I found several quite large and mostly complete specimens. While the site had been known for producing very good crinoid material in the past, this time significant specimens were fewer in number, but quite interesting all the same. Leah came home with a wonderful cluster of crinoid crown arms (fig. 1), and Bob MacDonald found a mostly complete but crushed little crown (fig. 2). A wonderful bookend to a fantastic trip!

Brian Bedrosian
Editor



Fig. 2 Crinoid crown (Bob MacDonald)



Tailings...

In The News

New Beaked Dinosaur Species Found in Utah

The creature, dubbed *Iani smithi*, was identified from a 99-million-year-old fossil

Riley Black, [Smithsonian Magazine](#), June 7th 2023

Unraveling the Mysteries of Oda the Ichthyosaur

Paleontologists used X-rays to identify the 240-million-year-old creature's flattened and fossilized remains

Sarah Kuta, [Smithsonian Magazine](#), June 2nd 2023

Early Apes Lived on Savannas, Not in Forests

Two new studies suggest that 21 million years ago African primates frequented edge habitat and fed on leaves

Riley Black, [Smithsonian Magazine](#), May 23rd 2023

This Trove of Fossils in Wales Is Revealing Secrets of Early Animal Life

Scientists have uncovered 170 species from around 462 million years ago, unveiling surprises about when tiny marine creatures evolved and disappeared

Will Sullivan, [Smithsonian Magazine](#), May 3rd 2023

The World's Newest National Park Protects 550-Million-Year-Old Fossils

The 148,000-acre Nilpena Ediacara National Park in South Australia is helping scientists unravel the mysteries of life's evolution on Earth

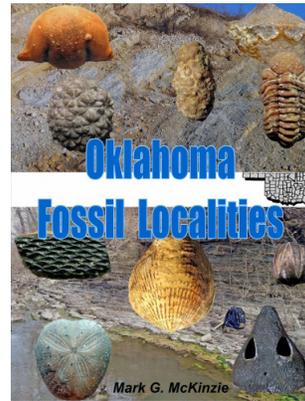
Sarah Kuta, [Smithsonian Magazine](#), May 1st 2023

2023 Field Trip Schedule

June	Austin Loop 360 (Lower Brazos)
July	Johnson City
August	Witte Museum - San Antonio
September	Texoma (Moody / Evant)
October	Brady + Santa Anna
November	Brownwood
December	White Mammoth and Pot Luck

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.

Oklahoma Resources

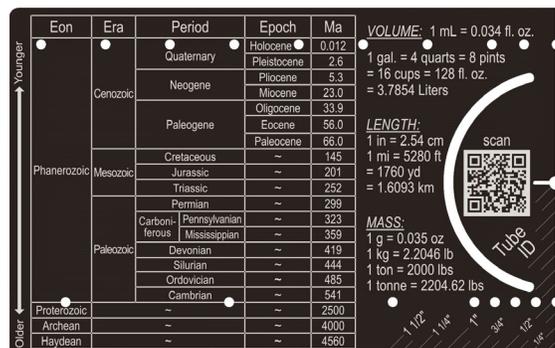
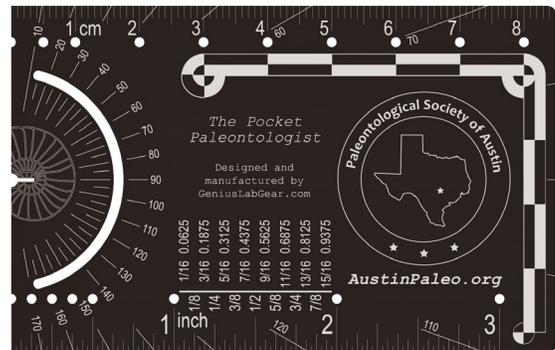


Oklahoma Fossil Localities

by Mark G. McKinzie . A collector's guidebook to the fossil riches to be had in the state of Oklahoma. Thirty-nine fossil localities described in detail, ranging in age from the Ordovician to the Cretaceous. Over 500 fossil species illustrated in full color. Revised edition updated in 2022. It is available to order on [Lulu.com](#). This is an online publisher who prints books to order, so expect a week or two for delivery. \$60 and worth every penny.

New Austin Paleo Gear!

Below are images of the new Pocket Paleontologist we are having produced and will be offered for sale. Eric Jones spearheaded this awesome new pocket sized gear and brought them to the April picnic for all to purchase. He will have them at the May meeting as well if you are interested!



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, 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

Webmaster: **Gordon Galligher, webmaster@austinpaleo.org**

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

Twitter: **@Austin_Paleo**

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