DALLAS PALEONTOLOGICAL SOCIETY

DECEMBER 2021

THE FOSSIL RECORD

NEXT MEETING: WEDNESDAY, DECEMBER 8TH… IN PERSON!

DPS ANNUAL HOLIDAY PARTY/AUCTION

The **DPS Annual AUCTION** is coming up evening of **Wednesday, December 8th** at **7pm** at our usual meeting place at **Brookhaven College (Building H)**. We still can use some quality fossil-related auction items. Items can be dropped off at our storage unit near Midway Rd, just north of LBJ Freeway or we can pick them up. Please contact Mercer Brugler, 214-755-9808, to coordinate donation of your items. **Attached is a data sheet that will accompany each item**, so please click and download the Auction Sheet and fill out for your donation. Supply as much information as possible so we may get a fair price for the item.

PLEASE don't wait until the night of the auction to submit your items as each has to be logged into our database and data/bidding sheets must be completed. This will be a pretty hectic evening, so please plan ahead for us. We also need some help setting up and implementing the auction (organizing, check-out, etc). Please contact Lucia Smith if you can help us out here 214-263-8625 and/or hospitality@dallaspaleo.org.

We will be livestreaming the event from DPS Facebook Group; however, you will have to be a member of the group to be watch the livestream and you have to be present in person order to participate in the auctions themselves. Masks should be worn at all times. No food will be served; don't bring food; soft drinks with straws will be provided Live auction and silent auction for our fundraiser. There will be an election for our 2022 leadership team. We look forward to seeing so many of you! Happy Holidays!

DECEMBER 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4 **Wildlife Conservation Day**
5	6	7	8 **DPS Holiday Party and Auction**	9	10	11
12	13	14	15	16	17	18
19	20	21 **Winter Solstice**	22	23	24 **Christmas Eve**	25 **Christmas**
26 **Kwanzaa**	27	28	29	30	31 **New Year's Eve**	

Visit dallaspaleo.org for most up-to-date information and further details.

HOLIDAYS AT THE HEARD (McKINNEY, TX)

Event Announcement by Heard Natural Science Museum and Wildlife Sanctuary

Holidays at the Heard brings the beauty of the holiday season into nature. Bundle up your family, get out of the house, and experience the most unique family-friendly holiday event in North Texas. A fun, festive and family-friendly fundraising event that benefits Heard Natural Science Museum & Wildlife Sanctuary and its many programs!

Holiday lights and décor will accentuate a lovely half-mile Heard nature trail. Your family will be enchanted by this nighttime hike through the woods. Also, you'll get a glimpse of the "Dinosaurs Live!" exhibit along the trail. Please note that the dinosaurs will not be animated during the event. In keeping with the Heard's role as a nature preserve, this light display is designed to enhance, rather than overpower, the sanctuary's natural beauty. Live, festive music will delight audiences under the stars in the Heard outdoor amphitheater.

Scheduled for Friday, December 17th and Saturday, December 18th from 6pm to 9pm.

For more details, check out their website at: http://www.heardmuseum.org/holidays-at-the-heard/

TOASTING WITH THE PRESIDENT

by Estée Easley

I am delighted to have been the 2021 DPS President!

I believe it was a successful year, all things considered, and I hope you feel the same. I would like to toast to our success as a Society! All of the success we have had is volunteer driven and team led. I want to thank more people than we have room for, so I will narrow it down to groups and thank the DPS Leadership team and numerous other volunteers for their support and endurance working within pandemic parameters.

I look forward to seeing you all in 2022!

PIN ON THE EDITOR'S HAT: THE FINAL EDITION

by Diane N. Tran

Greetings, guys, gals, and paleo pals, from your friendly neighbourhood Editor! I had only been a member of the Society for about a year, writing articles for the newsletter when requested, before I was tapped to be Editor-in-Chief at the end of 2019 and I vividly remember fearing I would cause some extinction-sized failure when I took on the reins. Nevertheless, I took on the responsibility with great seriousness and desired to make this newsletter accessible for all ages and all backgrounds, from children to adults, from avid collectors to academic professionals, from amateurs just starting off to advocates with lifelong experiences: I wanted this newsletter to be fun, eclectic, distinctive, but always informative, and did my freakin' best I could to keep them on deadline — believe me, I tried my best!

The pandemic was when my position became... a *challenge*, for a lack of a better word: Everything went into lockdown, events shut down, and content became *scarce*, but I adapted — as we all had to — and I could not have done it without *everyone* whom took the time and effort to submit everything and anything, from articles, overviews, reviews, announcements, artwork, to blurbs, especially those whom submitted on a *monthly* basis, which was absolutely *essential* during the pandemic, from "DPS Scrapbook," "Paleontology in the News," "Women in Paleontology," "The History Corner," "High Plains Paleo," "Dino Bo Bulletin," and more.

While I am sadden to announce this issue will be last for me as Editor-in-Chief for the DPS, as it will mark the end of my two-year tenure, I am not going to disappear: You will still see me actively continue attending and volunteering at meetings, events, and such within the Society, most likely with that crazy hat filled with paleo-related pins perched of my head, and hope to apply my services to the DPS Leadership under a different position (assuming I am formally voted in during the DPS Election, so fingers crossed).

I sincerely hope everyone has enjoyed these last twenty-four issues (dating from January 2020 to December 2021). And, now, my final edition to the "Pin on the Editor's Hat"…

Continued next page

PIN ON THE EDITOR'S HAT CON'T

For anyone who knows me, I have been obsessed with dodo birds (*Raphus cucullatus*, from The OnionCakeStore) since childhood: Of course, the dodo became the poster bird for extinction, hence the popular expression "as dead as a dodo," and became synonymous with stupidity and ineptness, believing the species was doomed to fail, when nothing could be further from the truth.

Even for a species that, famously, has been extinct for more than 350 years, dodo remains are *phenomenally* scarce: In 2019, an anonymous buyer paid almost $625,000 for the skeleton of a dodo bird from Christie's auction house; or, more precisely, the buyer purchased a (chimera) set of fossilized bones belonging to at least two different birds, dug up, and assembled into a skeleton by collectors. The last such assemblage sold back in 2016 for about $430,000. Before that, no dodo skeleton of any kind had been offered for public sale for nearly a century. The University of Oxford has a dodo head — the only specimen that includes any soft tissue — and a skeletal dodo foot, which was rescued from a bonfire. There's a dodo skull in Copenhagen, a dodo beak in Prague, and the British Museum used to have its own dodo foot, but lost it around 1900. We actually know less about dodos than we know about mammoths, which went extinct more than 5,000 years ago.

Originating from island of Mauritius, which is east of Madagascar in the Indian Ocean, this flightless bird was a member of the subfamily Raphinae, which includes pigeons and doves; it was about 3 feet (1 m) in height and may have weighed 30 pounds (14 kilos) in the wild. The origin of its name is debatable: The word "dodo" does translate from Dutch as "fat arse," but it just as likely that it was named after the cooing "do-do" sound that the animal supposedly made.

Its appearance in life is evidenced only by drawings, paintings, and written accounts from the 17th century. Since these portraits vary considerably, as only a handful of the illustrations are known to have been drawn from actual live specimens and, even then, most were captive, severely malnourished, grossly obese, and almost always mistreated; therefore, the dodos' exact appearance in life remains unresolved: It has been depicted with brownish-grey to blue-grey plumage, yellow feet, a tuft of tail feathers, a grey, naked head, and a black, yellow, and green beak.

Little is known about its behaviour. Based on what little fossil specimens remain, it was a sturdy, robust bird, with thick leg bones and a broad pelvis. It had sizable kneecaps, which were maneuverable, strong, and supportive, making it ideal for the dodo to move quickly in its rocky, densely forested home, and using their wings, fluttering and stretching them, to better improved its balance. In fact, one 17th-century sailor reported that dodos were so speedy that they were difficult to catch; however, because they were no predators on their island, dodos would naturally approach humans without fear. Its meat was described by sailors as plump, stringy, and satisfying to tough, oily, and inedible; although, these culinary opinions are subjective to how well one can cook (just saying!).

The ecosystem of Mauritius had plentiful fruit and seeds due to the island's highly fertile volcanic soil, but as the forests were completely cleared off for settlements and farming, their habitat completely obliterated their food resources, in addition was the introduction of feral and invasive animals, such as dogs, cats, rats, and pigs, which further devastated the population with the destruction of their ground-level nests. In less than a century, the entire species was gone!

Understand that most people at the time believed that all species were divine creations and that extinction — the notion that an entire species could vanish with no possibility of return — was impossible. And when that realization finally hit, that extinction is indeed real and *final*, the dodo was long gone, hazily remembered, almost mythical in nature, depicted alongside mermaids and griffins. Its anatomy and behaviour were beautifully adapted to its specific environment and it holds important lessons for managing endangered animals that are just barely holding on to survival today.

DPS NOVEMEBER MEETING: "WHY IS THE DALLAS-FORT WORTH METROPLEX HERE?"

Lecture Overview by Joseph O'Neil

Dr. Robert Stern of the University of Texas Dallas stepped in as a last-minute substitution for speaker for the monthly meeting in November. Dr. Stern received his Bachelor of Science in Geology from UC Davis in 1974, and his Ph.D. from UC San Diego in Earth Sciences in 1979. His research interests are the evolution of continental crust, geologic evolution of the Gulf of Mexico, the geology of the Dallas Fort Worth Metroplex, and scientific ocean drilling. Much of his work has been in the Izu-Bonin-Mariana island arc system in the Western Pacific, and the Neoproterozoic crust of NE Africa and Arabia, China, and Iran. He has been at UT Dallas since 1982, where he served as Geosciences Department Head from 1997 to 2005.

Dr. Stern gave an interesting lecture that brought geologic perspective to the history of the Dallas Fort Worth Supercity (a core area with a large population, together with adjacent communities having a high degree of economic and social interaction with the core). Dr. Stern explained that DFW sits along the western perimeter of the area of the US that can sustain rain-supported agriculture. With maps, he showed that the areas west of us are too arid to support such agriculture, until we move into California, and Oregon.

We explored population density and growth over the years between 2010 and 2019, and found that the Dallas-Fort Worth Supercity is the fourth fastest growing population center in the US. Coming in behind New York, Los Angeles, and Chicago, Dallas-Fort Worth only slightly beats out the Houston Metro area to take that fourth-place spot. If DFW were a state, he explained, it would be the fourteenth in population size: 2.3% of US citizens live right here in the Metroplex. There is no doubt that DFW is a successful location for settlement, but why was it so?

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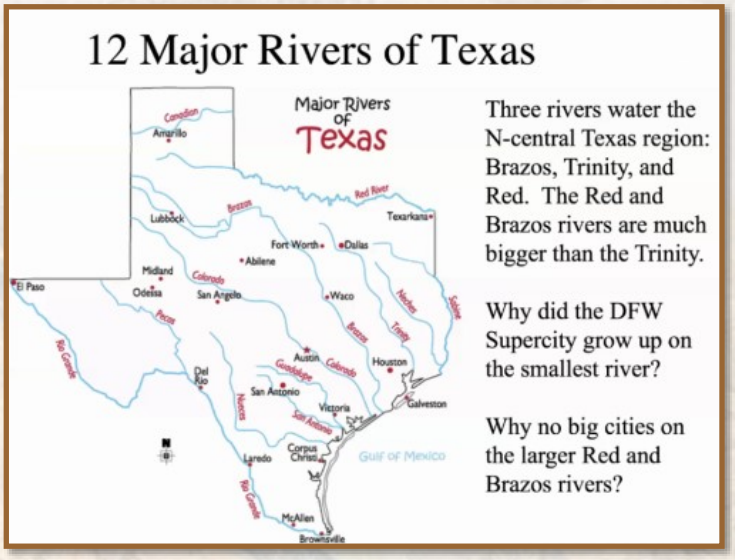
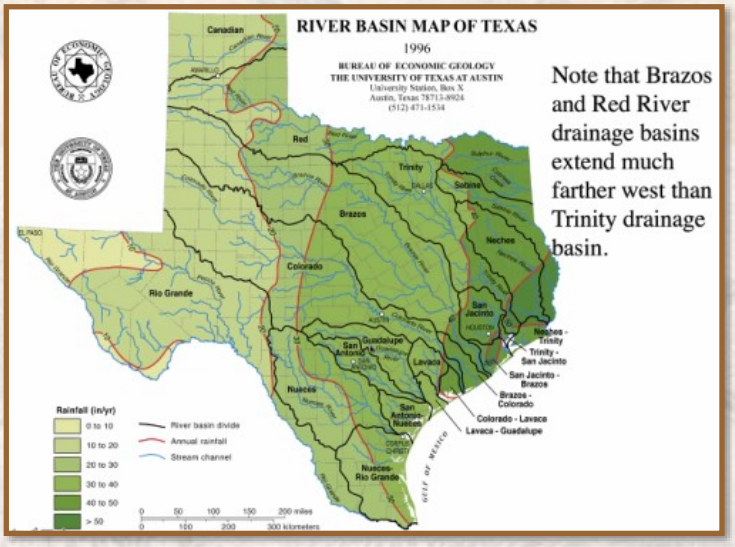
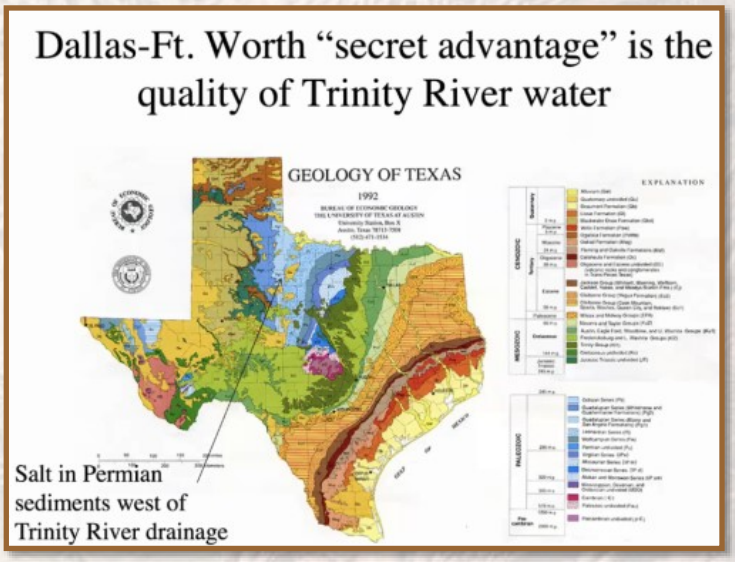






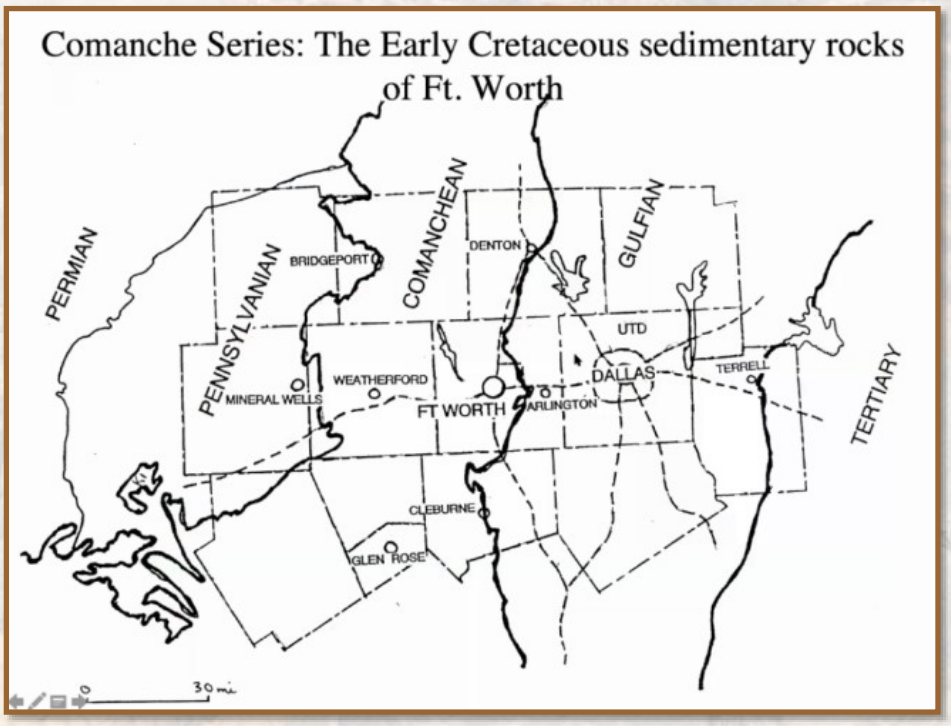
Maps of Texas: Twelve major rivers (top)**; river basins** (middle)**; and geologic sediments** (bottom)**.**

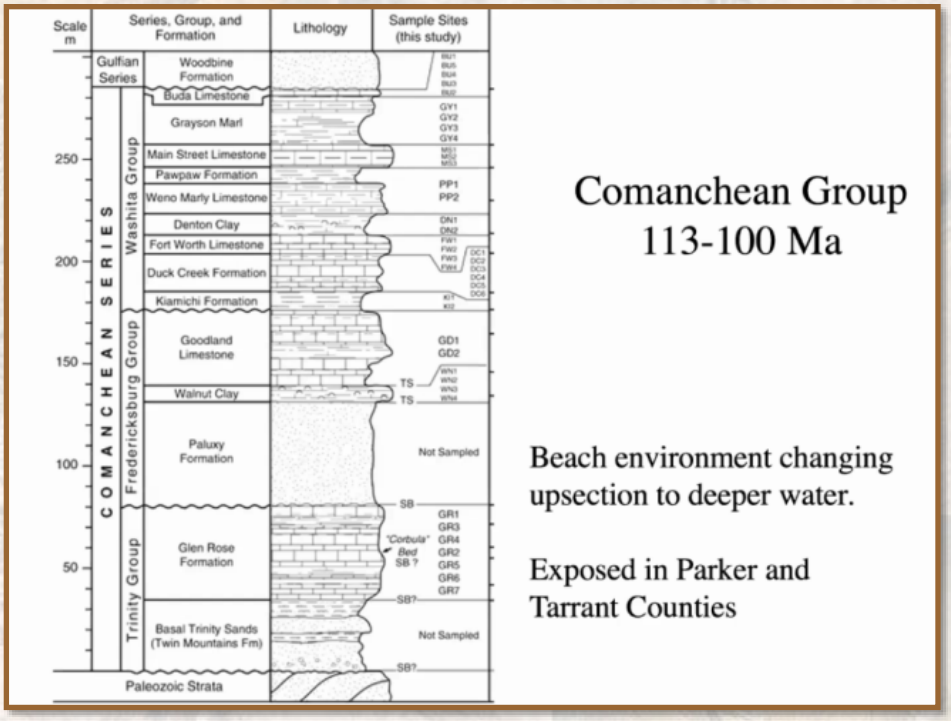
DPS NOVEMBER MEETING CON'T

Looking at the geology of the state, we find that the most difficult impediment to travel was crossing the rivers. With the Trinity River cutting across the state just below modern-day Dallas, the underlying geology was a large influence on where that crossing would be. The Austin Chalk that runs north and south along the I-35 corridor provide solid footing, while just to the east and west of that corridor, the Eagle Ford Shale has with it deep mud and silt deposition, making crossing the river difficult.

In 1841, John Neely Bryan came to Texas from Tennessee to start a trading post. There was no post, no junction of trade routes and no affluent natives in the area when he arrived. He built his log cabin trading post and had the idea to build a ferry to make crossing the Trinity River accessible. The relative ease of crossing the river encouraged travelers to pass through the area. The water of the Trinity was relatively sweet compared to that of the Brazos and the Red Rivers, along which few settlements occur. The dissolved particulates (salts) in the water of the Trinity are up to five times fewer than those of the Brazos or the Red, making the water more palatable, which helped to encourage travelers to cross the Trinity and settle in what is now Dallas.

The relative ease of travel along the Austin Chalk made it a popular north-south route for animals, and people. That ease of travel and the availability of better quality water were the main factors for DFW being where it is today.



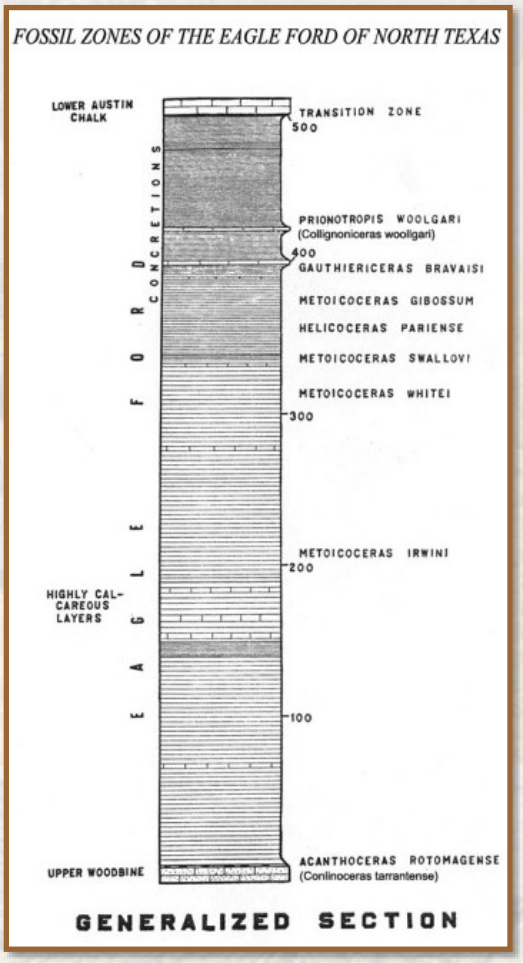


Details of Early Cretaceous Sediments of DFW: Comanchean Group.

Dr Stern concluded his talk about DFW with an additional few slides and a discussion about the scarcity of quality water in North Texas and the need for more reservoirs, like the new Bois D'Arc Lake near Bonham, and Lake Ralph Hall, being installed along the North Sulfur River near Ladonia.

DPS NOVEMBER MEETING SUPPLEMENTAL: EAGLE FORD

Lecture Supplemental by Joseph O'Neil



After the November meeting, one of the questions that came up had to do with Eagle Ford, Texas, and its importance to fording the Trinity River in the early days of Dallas. I found this little bit of Eagle Ford history interesting and worth sharing.

Eagle Ford, Texas was on the Missouri, Kansas, and Texas rail road and modern-day Loop 12, six miles west of downtown Dallas in Western Dallas County. It was on the original land grants of H. Burnham and the Buffalo Bayou, Brazos, and Colorado Railway.

It was first settled by the family of Enoch Horton, who moved from Missouri in 1844 and established a home at a shallow part of the West Fork of the Trinity River, which became a fording spot for travelers. Finding an eagle's nest near the crossing, Horton named it Eagle Ford.

Eagle Ford had a Post Office from 1858 to 1866. The community began to develop once the depression of 1873 halted construction of the Texas and Pacific Railway, making Eagle Ford its western terminus until 1876. Cattle holding facilities allowed the community to become a cattle shipping port to rival Dallas and Fort Worth as the major city of North Texas. Population grew to several thousand and fifty new businesses, including a two-story hotel and railway station. A local newspaper, the *Weekly Eaglet*, began publication by W.W. Basque, and a second Post Office was opened and remained in service until 1918.

Westward movement of the railroad resumed in 1876 and by 1878 reached Fort Worth, decreasing the importance of Eagle Ford as a cattle shipment center. The community developed into an agriculture shipping point. By 1882, population had dwindled to 200, predominantly farmers. Population decreased to 50 in the late 1890s and remained there into the 1930s. By 1941, the population had grown to 150. There was a period of rapid growth after World War Two, which resulted in many living in temporary shelters awaiting the construction of new homes. By 1947, a steel-fabrication plant, new school and roads accompanied other industrial growth and infrastructure construction. With a population of 4679, Eagle Ford was incorporated into Dallas in 1956.

The Eagle Ford shale, or Eagle Ford Group, is a Cenomanian and Turonian (late Cretaceous) age deposition of sedimentary rock formation. It predominantly consists of organic-matter rich fossiliferous marine shales and marls with interbedded thin limestones. It derives its name from outcroppings on the banks of the West Fork of the Trinity River near the old community of Eagle Ford, Texas.

The Eagle Ford outcrop belt trends from the Oklahoma-Texas border southward to San Antonio, westward to the Rio Grande, Big Bend, and the Quitman Mountains of West Texas. It also occurs in the subsurface of East and South Texas where it is the source rock for oil found in the Woodbine, Austin Chalk, Buda Limestone.

The Eagle Ford Group was deposited in an inland epeiric (shallow) sea making fossils relatively common in the Eagle Ford rocks. Vertebrate fossils include plesiosaurs, mosasaurs, teleost fish, and teeth from sharks and other fish. Invertebrate fossils include crustaceans, sea urchins, "swimming" crinoids, ammonites, oysters, inoceramid clams, and gastropod shells.

"WOODBINE CRITTERS" ART COLLECTION (GRAPEVINE, TX)

by Murray Cohen

Panorama of the "Woodbine Critter" art collection at Grapevine REC and Library, by Murray Cohen.

I am very excited that the Grapevine REC and Library will be displaying my "Woodbine Critters" collection.

For years, I have been talking to people in the general public about what we have been finding in the Grapevine, Lewisville, Flower Mound, and Arlington area. Trying to give a full rundown of all the fun stuff usually overloads people. I tried to find examples of everything to create a slideshow on my phone. I was disappointed in the lack of general visual aids. I then got the brilliant idea of sketches. If I could get pictures of fossils, maybe I could create a file of sketches for the general public.

It seemed fairly simple at the start. Just go to museums, look on line, reference the material found at The Arlington Archosaur Site and Grapevine. Should be straight forward...

Here, hold my beer!

A few were that easy. *Protohadros* had plenty of material. Many others I had to dig a little deeper. Many of the species are known from a few bones or teeth. What did pycnodont really look like based on teeth.

For each of the sketches, I attempted to include known material with speculative concepts based on regional fossils from the same time period and modern animals. I hope the resulting representation of "Woodbine Critters" creates an interest in Paleontology for the general public.

The display should be up at the REC of Grapevine by the end of the week. The Grapevine Library is having dinosaur days for the kids for a few days around November 23rd. The artwork displayed will be enhanced photocopies. Both facilities wanted to display the collection. Since these are intended for educational purposes, the copies were accepted by both locations. I enhanced many of them with touch ups of color with pencil.

I plan to bring the originals to the next in person DPS meeting. I would like to extend thanks to Dr. Chris Noto and Brenton Adrian for their professional support on a few Arlington Archosaur Site Critters.

- John Beeck
- Brad Carter
- Philip Scoggins
- Art Sahlstein
- Erin Rose Tansey
- David Willis
- Ronnie Colvin
- DonnaRea Boston
- Robbie Gilbert
- Pat Cline

Also, my friends who weren't afraid to point out that some of my first attempts were less than appealing:
I would like to thank all of the hard working volunteers in Paleontology that play in the sandbox.

If any of you have documents or information that adds to the accuracy of the sketches, I have an eraser and plenty of color pencils.

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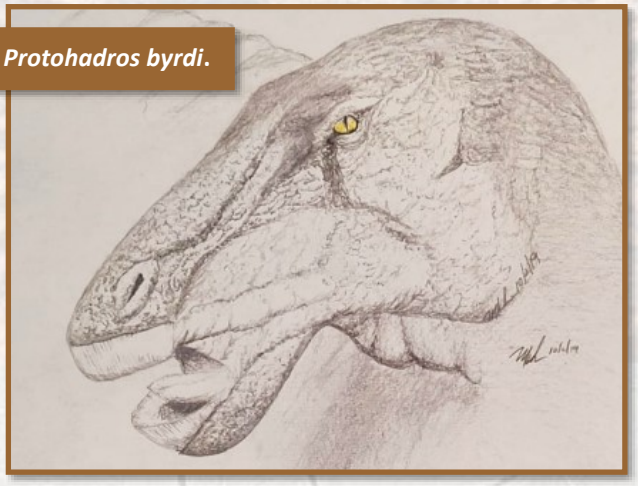
"WOODBINE CRITTERS" ART COLLECTION CON'T

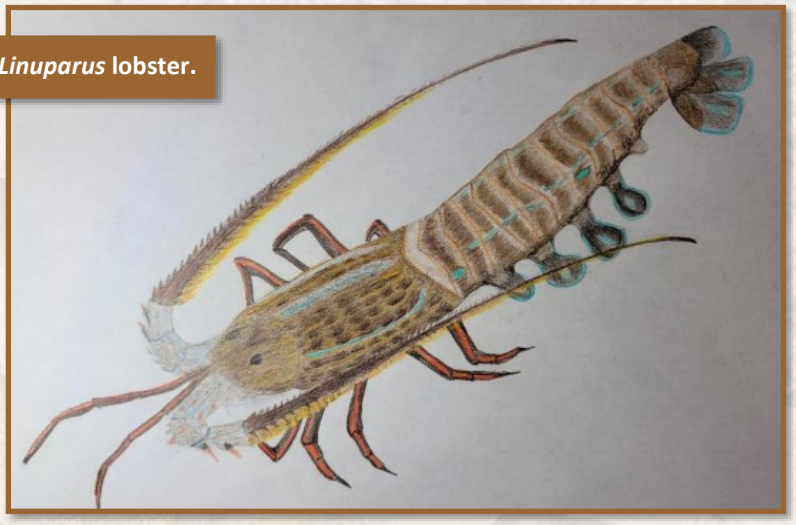


Protohadros byrdi.

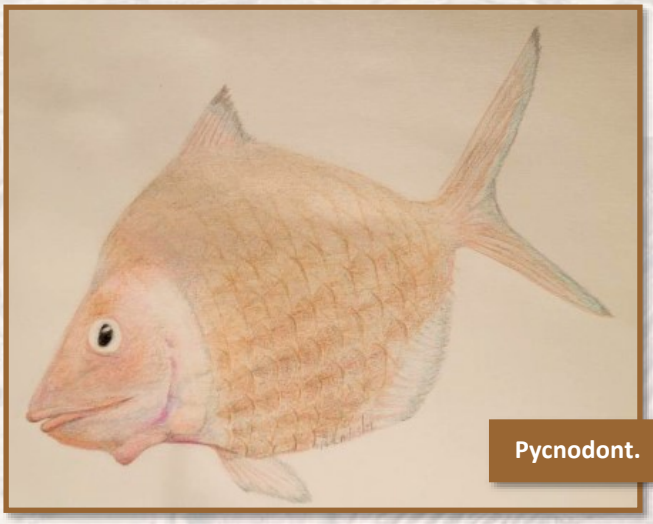
Scolomastax sahlsteini.

Dromaeosaurid.

Scolomastax sahlsteini.



Linuparus lobster.



Pycnodont.

"Woodbine Critters" art collection by Murray Cohen.

DPS 2022 ELECTIONS

Announcement by Rocky Manning

December Elections are here!

The constitution of the Dallas Paleontological Society calls out five elected offices: President, Vice President, Secretary, Editor, and Treasurer. Elections are held in December of every year; only DPS members are eligible to vote. Terms are for one year and the same person cannot serve more than two terms in a row. The DPS advisors are responsible for selecting a Nominating Committee.

Nominees for Offices for 2022 are as follows:

- **President**: Estee Easley
- **Vice President**: Kate Fenton
- **Treasurer**: Pam Lowers
- **Secretary**: Genevieve (Gen) Freix
- **Editor**: Laura Peterson
- **Social Media** (new position): Diane N. Tran

Nominations can also be taken from the floor at the December meeting. If you are interested in running for an Office, contact an officer or signify so at the December meeting.

DPS 2020 Election (from left to right)**: Rocky Manning, Philip Scoggins, Estée Easley, Kim Pervis, and Diane N. Tran.**

WOMEN IN PALEONTOLOGY: AUGUSTA THEKLA HASSLOCK KEMP

by Tom Vance

Augusta Thekla Hasselock Kemp.

A hundred years ago, very few ladies were involved with the fields of paleontology/geology of Texas. However, one of the first was a brilliant schoolteacher named Augusta Hasslock. She was the first person to discover Permian vertebrate tracks in north Texas. Very little information has appeared concerning this person, so this brief article will serve to introduce her to the Dallas Paleontological Society.

Augusta Thekla Hasslock (1882-1963) was the daughter of Herman Hasslock and Clara Whorley Hasslock. She was born in Nashville, Tennessee, and attended Nashville Public Schools. She found her first fossil, a trilobite, at the age of ten years which stimulated her interest in paleontology and geology. She went on to graduate with a Licentiate of Instruction and a B.S. from Peabody College and the University of Nashville. She worked on her M. S. in geology and paleontology at the University of Chicago which she was granted in 1910. Her thesis, "A STUDY OF THE CALLAHAN DIVIDE," was based mostly on material she had gathered while living in Abilene, Texas. Her summers were often spent in study at the University of Texas during 1921-1924 and at Iowa State University, University of Wyoming, and the University of Iowa.

While at the University of Chicago in 1909, Augusta had a graduate scholarship for which she worked in the Geology Library. She once said the "Geology faculty conspired against the Devil to keep me out of mischief" and noted that there were very few girls in the Geology Department. She also took courses taught by Samuel Wendell Williston who had published many papers on mosasaurs, plesiosaurs, turtles, and Permian vertebrates. She was present when Williston and Paul Miller were excitedly photographing a remarkably complete skeleton of *Seymouria baylorensis* from the *Cacops* bone bed of north Texas.

Her professional career involved teaching in high schools in Tennessee, Arizona, and Texas. In 1907, she hired on at the high school in Abilene. Later in 1910, she moved to Austin to teach junior high school, but from 1920-1943, she taught high school science in Seymour. It was also while she worked in Seymour that she organized and sponsored the Explorer's Club consisting of her students. They often spent their Saturdays on field trips, or she would invite them to her house to examine various rocks, minerals, and fossils collected locally. In addition, Augusta performed paleontological and geological research as a side interest. A 1927 trip with her Explorer's Club resulted with another discovery of an almost complete skeleton of *S. baylorensis*.

Augusta maintained a lifelong interest in fossils, and, although she was first to discover Permian vertebrate tracks in the state, her interest was centered on the invertebrates especially the cephalopods, such as nautiloids and ammonites. She built a collection of over 5,000 specimens collected mostly from Baylor County during the late 1920s to the early 1960s. Some of the fossils were designated as type specimens of new genera/species. Her hobby of collecting allowed her to conduct research in the Baylor County area which resulted in the publication of eight geological/paleontological articles in peer reviewed journals. One paper coauthored with A. K. Miller of Iowa State University, she named and described a new species of nautiloid, *Koninckioceras bibbi*, from near Seymour. As a result of her research and unfaltering generosity for aiding other workers, *Solenochilus kempae*, *Knighticeras kempae*, and *Dimetrodon kempae* were named in her honor.

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WOMEN IN PALEONTOLOGY CON'T

In December 1958, she fell and broke her hip. No longer able to hike around the countryside on her quest for fossils, she became severely depressed. Eventually, she developed uremia due to a kidney problem and suffered from arteriosclerotic cardiovascular disease resulting in her death on July 18, 1963, at the age of 80. She and her husband are interred in Oak Grove Cemetery, Walnut Springs, Texas.

Augusta H. Kemp in the field in her typical hiking clothing.

Augusta's fossils were given to the University of Texas Bureau of Economic Geology shortly before her death along with her professional library. She had also collected seashells which were donated to Texas Tech along with her records, scrapbooks, genealogical information, etc.

Her legacy of Permian exploration lives on today in Seymour, Texas. A former student and philanthropist, Clyde Whiteside, had accompanied Kemp on various field trips and became interested in Permian age vertebrates. He was encouraged by her to learn as much as he could about *Seymouria baylorensis*. Whiteside also remembered her wearing riding breeches, a large hat and lace up boots. He noted that she could outwalk any mule (or student) on exploratory hikes. The interest she generated remained with him for life. After his retirement, Clyde Whiteside became the benefactor of a new museum in Seymour by converting a former Chevrolet dealership into a museum. The Whiteside Museum of Natural History opened to the public in June 2014 and is dedicated to the exploration and interpretation of the paleontological treasures of Baylor County and the Texas redbeds. Augusta was the first lady to call attention to the Permian life of Texas and the author finds it appropriate to consider Augusta Hasslock Kemp as The First Lady of Texas Paleontology.

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Extracted from Thomas Vance, *A BRIEF HISTORY OF PALEONTOLOGICAL VERTEBRATE DISCOVERIES IN TEXAS AND THE PIONEERING/INFLUENTIAL SCIENTISTS WHO MADE THEM*.

ACKNOWLEDGMENT: My thanks is extended to Jim Flis of the Whiteside Museum of Paleontology for the (second) photo of Mrs. Kemp. First image was taken from FindAGrave.com.

WOMEN IN PALEONTOLOGY SUPPLEMENTAL: VERA KORASIDIS

by Reah Easley


Vera Korasidis.

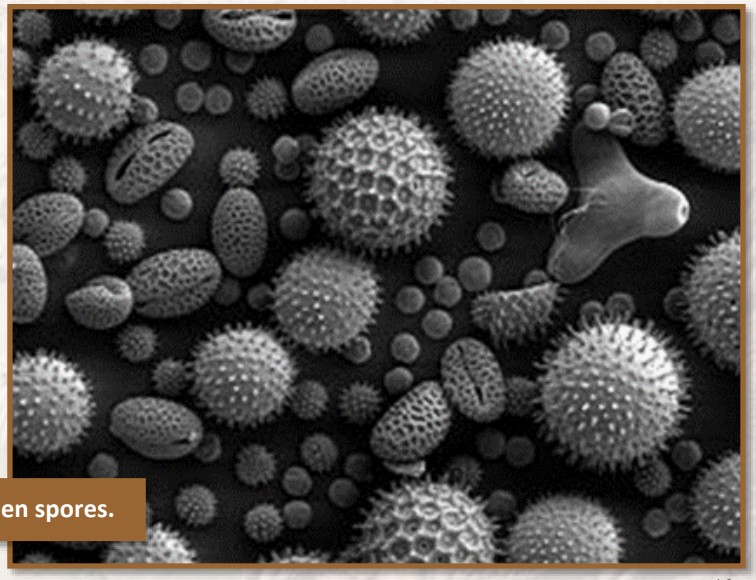
What kid interested in fossils doesn't know the *T. rex*? Dinosaurs and giant marine reptiles are great and kids are certainly taken with learning all the names of these amazing lifeforms. There is a whole field of paleontology that is equally fascinating but not so well publicized. The only thing that keeps kids from collecting these amazing fossils is having a home-version electron microscope! And availability of GPG t-shirts (Giant Pollen Grains). And even these barriers can be over come.

Palynology, the study of pollen, especially ancient pollen, is expanding the knowledge of dino-eco systems worldwide. Scientist Lennart von Post (look him up) established the importance of this discipline only about 100 years ago. **Dr. Vera Korasidis**, currently with the National Museum of Natural History at the Smithsonian is studying the pollen of Cretaceous Wyoming and the climate changes that have occurred in the last 56 million years. Ancient climates are indicators of the animal lifeforms that existed in any given study area.

Dr. Korasidis also has discovered and named an angiosperm (flowering plant) pollen in Early Cretaceous strata in her native Australia: Her field research, including her newly discovered *Tricolpites tortuous* and more than twenty other angiosperms which established the spread of flowering plants in the study area of Early Cretaceous deposition.

Ancient pollen and spores are coated with sporopollenin, a highly resilient substance that withstands grinding the rocks in which it is found, application of strong chemicals to further break down the matrix and mounting on slide. Sporopollenin defies degradation so effectively that prepared slides from a century ago are still usable in lab collections.

If you or your PIT Crew member want to have a look at some of the beautiful pollen grains but don't have that home-version electron microscope mentioned earlier go to gettyimages.com or stockphoto.com. There may be a charge for downloading images from these sites. These are great sources for creating that longed for GPG t-shirt! This could be an opportunity to create paint-it-yourself fashion wear and (since magnified pollen appears colorless) you can artistically interpret your favorite grain the most flattering colors of your choice!


Pollen spores.

Here's another activity for a future palynologist: Think of a shape- simple or complex and make a line drawing of it. Then look online (sites above have hundreds of thousands pollen photographs) to find a pollen grain like your drawing. Best match wins.

There is a good video with Dr. Vera at Smithsonian's NMNH YouTube.

THE HISTORY CORNER

by Bob Williams


Roland Gooch.


Tom Dill.

This month we look at two of the volunteers who do the work behind the scenes that keep our organization operating. There are many who have served on the executive committee for many years, in multiple roles and more than once in the same role, but much of the work is done by our committee chairs. Some of those folks have served for a very long time and most of them are a committee of one, doing virtually all of the work themselves.

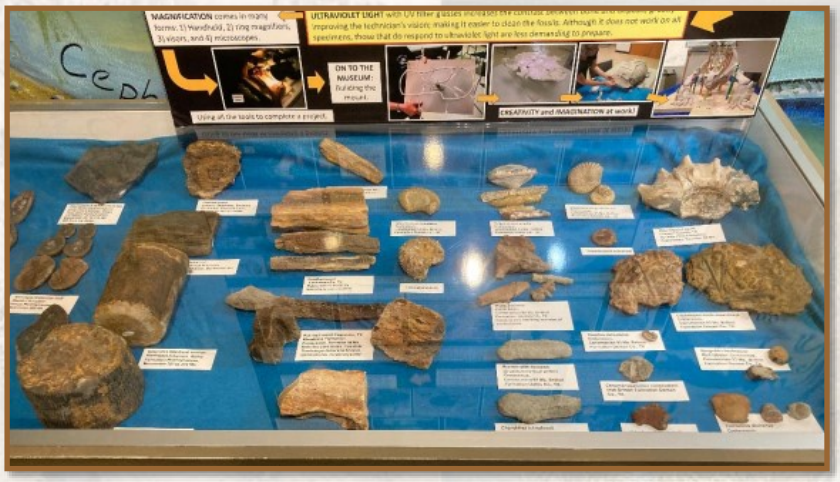
We will focus on the two members who have served for the longest time, without interruption, in the same committee chair for DPS. The record-holder for longest serving is Roland Gooch. He has been our Scholarship Committee chairman since 1993 when that position was first inaugurated. That is 28 years! If someone wants to beat that record, you had better be pretty young and start now! Roland works with the local universities to select students who are the most deserving of some help in fields related to paleontology. They usually thank us with a presentation explaining their work at one of our general meetings.

Number two is our Programs Committee chair, Tom Dill. He has served without interruption for eleven years, since 2011. He also held that position while he was Society President from 2017 through 2018. As an educator, Tom has many connections in the academic community and knows how to use them. He has never failed to provide us with the best speakers from here and around the country. Many notable names have graced our members with their knowledge on a diversity of paleo-related subjects.

Please take a moment to thank these and all of our behind-the-scenes volunteers. If you have a yearning to receive some of that gratitude yourself it's easy, just volunteer! Even if a current chair is not willing to give up their seat you can serve on their committee and show them how it's done.

HEARD MUSEUM'S COLLECT-IT-YOURSELF EXHIBIT (McKINNEY, TX)

by Rocky Manning



The next installment of the ongoing Collect-It-Yourself exhibit at the Heard Museum is by Kim Pervis. Kim is our field trip leader. Kim has been collecting prolifically around the North Texas, Oklahoma, and Arkansas area for several years. Come see the variety of fossils that Kim has collected. The display is in place now and will remain for another six months. Come see what you can find by collecting the North Texas area. More information on the Heard is at: Heard Natural Science Museum & Wildlife Sanctuary (heardmuseum.org).

Besides nature and paleontology displays, there are miles of hiking trails.

PALEONTOLOGY IN THE NEWS

Complied by Andrew "Dino Dad" Stück

1. **Primitive Snake Actually a Mosasaur** (Taylor & Francis Online) — The Early Cretaceous *Tetrapodophis* of Brazil has long been considered an early snake with vestigial limbs, and the name itself means "four-legged snake." However, an exhaustive re-analysis of the remains has determined several initially reported features are not actually present in the specimens, and other diagnostic features were initially missed. This re-analysis suggests that *Tetrapodophis* actually sits on an early split of the mosasauroid family tree. This does seem to lend some support, however, to the idea that mosasaurs might be closer to the split of snakes from lizards than to the monitor lizards as popularly assumed.

2. **Toothless, Beaked Ceratosaur** (Nature) — In more news out of Brazil, a new ceratosaur called *Berthasaura* has been described, with an interesting dentition. Not only does it represent the second known ceratosaur to have lost teeth, but it belongs to the noasaur subclade, a completely different branch than the other toothless ceratosaur, *Limusaurus*. It even appears to have possessed a beak in life, something unknown until the evolution of much more advanced theropod dinosaurs. This evidence indicates that toothlessness evolved more than once among the greater ceratosaur family.

3. **Aztec Axe Ankylosaur** (Nature) — A new ankylosaur has been described out of southernmost Chile (in a region biogeographically linked to Antarctica), and been given the named *Stegouros*. It seems to have been a rather basal ankylosaur, as it shares numerous features with stegosaurs, such as its hip structure, though the skull clearly places it among ankylosaurs. It's the tail that has everybody talking, however. Instead of the knob-studded tail of nodosaurs or the powerful club of more derived ankylosaurines, *Stegouros* had a flat, fern-leaf-shaped arrangement of wide blades, drawing comparisons to the obsidian blades embedded in the battle axes/clubs of the ancient Aztecs.

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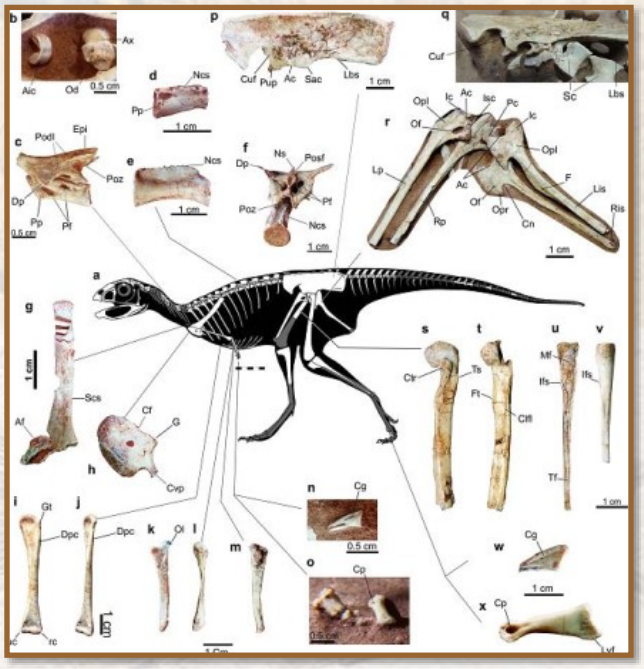
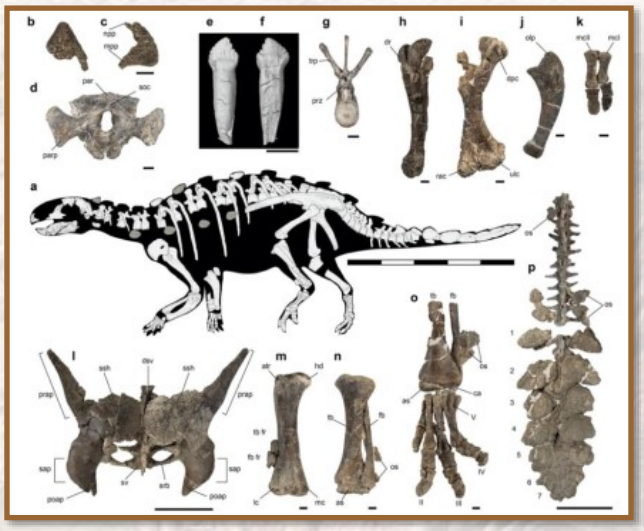




Tetrapodophis (top)**; *Berthasaura*** (middle)**; and *Stegouros*** (bottom)**.**

PALEONTOLOGY IN THE NEWS: TEXAS MEMORIAL MUSEUM SHUTS DOWN

by Rocky Manning

The University of Texas and the Texas Legislature have decided to eliminate the miniscule $162,000 yearly budget for the Texas Memorial Museum. The TMM will thus close down completely in the next two years. For more details, see the following article at *Austin American-Statesman*.

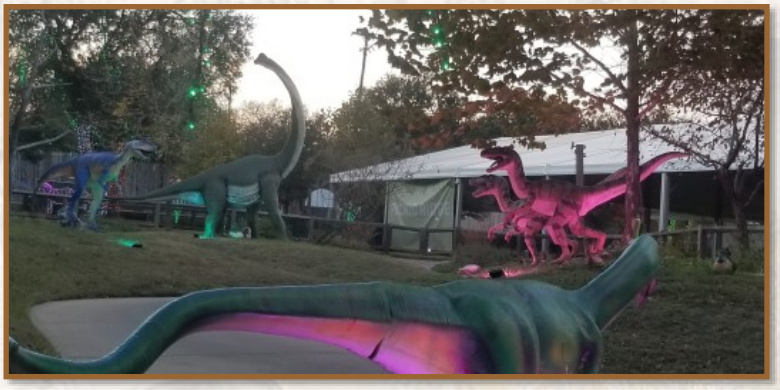
If you object, you might let your State reps know.

DALLAS ZOO LIGHTS (DALLAS, TX)

Event Announcement by Diane N. Tran and Elizabeth Matic

The annual Dallas Zoo Lights, presented by Reliant, as a socially distanced drive-thru experience this holiday season. Featuring one million twinkling lights, elaborate holiday-themed displays, dazzling 3D lighted sculptures, larger-than-life animal lanterns, and more, one can cruise the mile-long route through the Dallas Zoo and enjoy many magical holiday moments along the way all from the comfort of your vehicle.

Guests will drive along a pathway that winds through both familiar areas of the Zoo, like Primate Place and the Flamingo Pond, as well as Pride Rock, which is not regularly open to the public, and enjoy mesmerizing animal-themed vignettes, ranging from a lush tropical rainforest to an Antarctic adventure, including an area of prehistoric surprises, with *Tyrannosaurus*, *Pterandon*, *Allosaurus*, *Brachiosaurus*, unfeathered *Deinonychus*, a frilled *Dilophosaurus*, and more. Between vignettes, guests will be immersed in stunning, 360-degree light-covered tunnels, hanging lighted décor, fully wrapped trees, and silk-covered, illuminated animal lanterns.



Open on select nights November 19th through January 2nd from 6:00pm to 9:30pm. For tickets and details, see http://www.dallaszoo.com/zoolights/.

DALLAS PALEONTOLOGICAL SOCIETY OFFICERS, COMMITTEE CHAIRS, AND ADVISORS

Elected Offices:

President	Estée Easley	president@dallaspaleo.org
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Programs Chair	Tom Dill	programs@dallaspaleo.org
Promotions Chair	Roger Farish	promotions@dallaspaleo.org
Publications Chair	[Group Effort]	publications@dallaspaleo.org
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DPS Advisors:

Philip Scoggins, Rocky Manning, Tom Dill

Professional Advisors:

Dr. Tony Fiorillo, SMU Shuler Museum
Dr. Louis Jacobs, SMU Shuler Museum
Dr. Merlynd Nestell, University of Texas at Arlington
Dr. Ron Tykoski, Perot Museum of Nature and Science

The Dallas Paleontological Society was founded in 1984 for the purpose of promoting interest in and knowledge of the science of paleontology. It was intended by the founding members that the Society would be a network for the exchange of data between professionals and serious amateurs in this field.

dallaspaleo.org

The Dallas Paleontological Society meets the second Wednesday of every month at 7:00pm at Brookhaven College, unless we have something special happening that month. Please check our calendar for exact dates. Original versions of minutes and treasury reports will be available upon requests. Come meet with us, hear a speaker, learn about paleontology, and bring your unidentified fossils and unique finds to share with the group. You will be welcome, and we will enjoy meeting you. For a map of our meeting location visit dallaspaleo.org/contact.

CONTENTS INSIDE:

A special PSA from ***Tyrannosaurus*** at **California Academy of Sciences (San Francisco, CA): "Avoid extinction, wear a mask, and get vaccinated!"**

- Celebrating the DPS Annual Holiday Party/Auction meeting in person at our old rooms at Brookhaven College (Building H), includes DPS Election 2022!
- Overviews of the DPS November meeting and supplemental history of Eagle Ford!
- Murray Cohen's "Woodbine Critters" art collection (Grapevine, TX), Heard Museum's "Collect-It-Yourself" exhibit (McKinney, TX), and Dallas Zoo Lights (Dallas, TX),
- "The History Corner," "Women in Paleontology" special, the final edition to "Pin in the Editor's Hat," etc.
- Reviews, updates, news, and more!

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