

THE FOSSIL RECORD



MAY MEETING: PERMIAN PLANTS

By Tom Dill

This month's Dallas Paleontological Society meeting will be held online only via Zoom on Wednesday, May 11th, at 7 PM Central time.

This meeting will be online only due to the normal Brookhaven meeting location being utilized for polling purposes. Additionally, our speaker this month will be traveling, so she will need to present remotely.

Dr. Rebecca Koll, Post-Doctoral Fellow at the Perot Museum of Nature and Science, will be presenting on the topic of Paleobotany with a presentation titled "Permian Texas: Exploring an ancient tropical landscape".

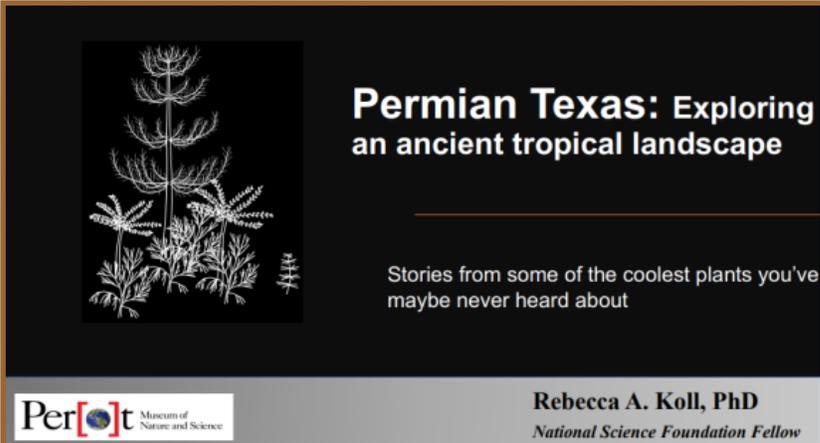
Dr. Koll has an undergrad background in tropical horticulture, so she knows plants. She has an MS in Geography, so she can map plants. And she has a PhD in Biology, 2018 from the University of Florida under Dr. Steve Manchester, so she knows fossil plants.

Additionally, Dr. Koll has published works on the fire history of the Uinta Mountains of Utah, Cenozoic flora of Panama, Pennsylvanian flora, and Permian plants and landscapes of Texas and New Mexico.

Join us on Zoom at this link: <https://us06web.zoom.us/j/83765036222>

Meeting ID is 837 6503 6222 and the **passcode** is 618114.

See www.dallaspaleo.org or the Dallas Paleo Society Facebook Page for updates and more information.



Permian Texas: Exploring an ancient tropical landscape

Stories from some of the coolest plants you've maybe never heard about

Per[t] Museum of Nature and Science

Rebecca A. Koll, PhD
National Science Foundation Fellow

COLLECT IT YOURSELF EXHIBIT

By Rocky Manning

The next installment of the ongoing Collect-It-Yourself exhibit at the Heard Museum was put together by Jordan Lee.

Jordan is one of the DPS' success stories. He and his mom, Ming Lee, were very active with the DPS while Jordan was growing up, in fact Jordan was the Society's youngest Secretary. Jordan has become very knowledgeable about fossils and part of his impressive collection is now on display at the Heard Museum.



The exhibit will be there until October of this year. Come see what you can find by collecting the North Texas area and other parts of the U.S.

More information on the Heard is at: Heard Natural Science Museum & Wildlife Sanctuary (heardmuseum.org). The museum also has a very impressive plesiosaur, mosasaur, turtles and other fossil displays. Besides nature and paleontology displays, there are miles of hiking trails. Be sure not to miss it.



Below is a write-up by Jordan about his start with the DPS and his passion for fossils.

My name is Jordan Lee.

Ever since a young age, I have been fascinated by nature and exploring the outdoors. However, it wasn't until 2005 when my father gave me my very first megalodon tooth as a present that my interest in fossils really took off.

At first, my modest collection mainly grew from purchasing specimens with lunch money or getting them as gifts, along with the occasional lucky pieces of fossil shell or wood found while hiking. Then one day I thought to myself, why not go find your own fossils instead! From the advice of a family friend, I ended up joining the Dallas Paleontological Society in which I participated in some of my earliest fossil hunting trips.

Now 13 years later and several rooms filled to the brim with fossils, I can safely say that that young boy's ambitions have been fulfilled beyond his wildest dreams.

I love fossils in every shape and form, mainly targeting Cretaceous marine fossils which were the typical fauna present in the North Texas region many eons ago. However, I have a special place in my heart for shark teeth, most notably those from the ancestral line of the giant white sharks as the fossil that started it all was a megalodon tooth.

Now on another note, I really cannot mention my fossil hunting journey without mentioning my favorite fossil hunting partner: my very own mom :)

Since the start of my fossil collecting journey, she has been there by my side, looking down at the ground and picking up treasures alongside me. Sometimes we even compete to see who can find the first, the biggest, or the best fossil of the trip.

Many of the fossils shown in this collection were found by her, including the string of black mosasaur vertebrae, which is one of my favorite memories.

On that fossil hunting trip, we were almost at the site when we realized my mom had forgotten her glasses at home. A little discouraged, yet undeterred, we decided to keep hunting instead of turning around, and low and behold my mom actually ended up finding three of the vertebrae you can see shown in the display case while barely being able to see them!

I'll close this out by saying that fossil hunting is truly a great hobby and pastime. It is not only healthy and fun, but a great way to bond with friends, family, and strangers alike. Who knows what treasures are buried beneath your feet this very instant? Only you can find out!



MOSS CREEK FIELD TRIP WRAP-UP

By Roger Farish

The Ladonia City Hall is where our hearty group met at 9AM on that perfect (72F, cloudy, windy) Saturday. Strangely, more than everyone showed up. I guess we were taking up too much of downtown Ladonia because someone called the mayor. Rocky discovered Jan Cooper approaching our group and brought her up to the front where my orientation was happening. She heartily welcomed us all to their normally quiet little town and said that the locals had been wondering what was going on.

Many 5-gallon empty pickle buckets, several screens, shovels and maps of the property were distributed along with a handout that showed the stratigraphic column of the area and a description of the paleoenvironment of the 68-million-year-old red beds we'd be collecting. (Different red beds than in the NSR.) Gerald Bogan who was one of the first to collect the creek (as in hundreds of hours of micro sorting of bulk sampled material) gave us a history and description of what was ahead. Shawn Hamm whose paper on the Moss Creek fauna is due out in a month or so wasn't able to make the trip down to join us due to a mishap on a racket ball court the preceding Thursday.

The landowners, Chris and Jennifer, met us at their new front gate on their ATVs and shepherded us into the first pasture. They had gone out of their way to mow paths all up and down the creek providing easy access for our bucket-hauling troops. Chris dropped some of us at the original collecting area while Jen guided others to good access points further downstream. They stayed with us throughout the morning and made restrooms available in their new horse barn.



The Mayor of Ladonia, Jan Cooper, addresses the DPS field trip group.



Before long everyone was busy collecting this delightful clean, clear creek. Some were content to gravel-bar collect while most were eagerly mining away at the relatively soft, six-inch thick red layer containing more than 30 species of shark, ray and bony fish teeth. These red beds are prevalent on the entire length of the creek - about 1/2 mile. Exclamations of, "Oh here's one" and "WOW, look at this" were heard up and

down the creek. The creek could have accommodated more people and we are planning future trips up there.

Carson Sloan, geologist for the Arkansas Department of Transportation, found the only echinoid (irregular) reported. Probably a *Mecaster texanus* as several others have been found previously by Gerald Bogan who only took home half a pickup full of matrix for future sorting. Several years ago, Linda Farish found the only regular echinoid that I know of, a Phymosoid *Gauthieria*.

The Pig and Whistle Café stayed open late (past 2P) for us and I think we made their day. The city council was also meeting there and we met a few more of them, in addition to the Mayor.

Thanks to those who sent in photos: David Hill, Jill Perez, Chris Stone, Sveta Earnest, Cindi Tesseneer, Bobbie Higgins, Carson Sloan, Laurel Becker, Charles Isbon and Talban Kantala.



WOMEN IN PALEONTOLOGY: HELEN JEANNE SKEWES PLUMMER A FORAMINIFERAN SPECIALIST

by Tom Vance



Figure 1: Young Helen Skewes

The field of paleontology was an important realization for the petroleum industry during the early part of the 20th century. Helen Plummer was a microbiologist who worked much of her life in Texas and contributed to the knowledge of her field through her published research and that of her husband.

Helen Jeanne Skewes (born 1891-died 1951) was born in Muskegon, Michigan, but her schooling took place in Illinois when her parents moved to Evanston. She attended Evanston High School and Northwestern University. In June 1913, she received her B. S. degree and was inducted into *Phi Beta Kappa*, and for most of the year she was a fellow at Northwestern University. Her formal study was briefly interrupted by professional work and marriage, but it was resumed in 1924 by attending University of Chicago. She eventually received her M. A. degree from Northwestern University.

While her schooling was interrupted, she worked professionally as a geologist with the Illinois Geological Survey from 1914-1917. She followed that job with a position as geologist for the Roxana Petroleum Company at Tulsa, Oklahoma, for a year.

While she was an office geologist with the Illinois Geological Survey, Helen met and married Frederick Byron Plummer (born 1886-died 1947) in 1918 which put another interruption in her geological career. Instead, she followed her interests wherever Frederick's work took him. The couple moved around to several states and to the Dominican Republic, broadening her knowledge and experience. Frederick was hired in a full time position for the Bureau of Economic Geology while Helen worked as a consulting geologist when they moved to Austin, Texas, in 1928 where they spent the rest of their lives. From 1933-1948, she was a consulting geologist at the Bureau of Economic Geology in Austin and became a regular member in 1948. She also helped to establish the Petroleum Engineering Department. Helen was one of only five women engaged in micropaleontological work on the Texas Gulf Coast during the 1920's and early 1930's.

Helen's special interest involved the foraminifera of various counties which gained her international attention. By 1931, she was recognized in England as a leading expert in the field. She discovered and named numerous taxa of foraminifera and delighted with the research involved. She became prolific in the study of the foraminifera of the Cretaceous and Paleocene that she was able to discover and describe many new taxa. To obtain samples for study Helen served without charge as a consultant for wildcatters and petroleum explorers. Her publications attest to her interest and expertise in the field of micropaleontology. She belonged to various professional organizations such as the American Association of Petroleum Geologists, American Geophysical Union, Paleontological Society of America, Geological Society of America, American Association for the Advancement of Science, and the Texas Academy of Science. As a result of her work, Helen was inducted into *Sigma Xi Scientific Research Society*.

Helen was also a dedicated wife to Frederick. Phases of domestic life did not appeal to her, such as gardening, and she would preferred to have left considerable parts of their property uncultivated around the house. On the other hand, Frederick preferred a cultivated and manicure lawn. Helen decided to make a botanical study of the native plants and grew some of them in a greenhouse. Eventually, she joined a local garden club and shared with them suitable scientific methods for growing and caring for native plants. She also disliked cooking. Therefore, she streamlined ways to prepare meals and improve flavors which allowed more time for her research activities. She lavished upon her friends and neighbors to the point the neighborhood children often referred to her as Auntie Plummer.

She had an intense regard for the scientific spirit often helped others in their scientific quests. She gave generously of her time, materials, and her unflagging spirit. She gave careful thought to their budding geological interests and quirks. Helen's Christmas lists were often long and she gave careful attention to what each recipient might like and enjoy the most.

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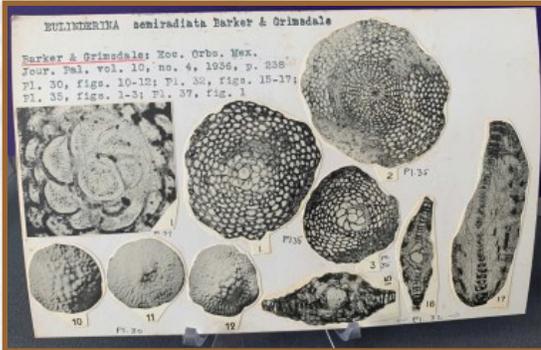
Figure 2: Frederick and Helen Plummer shortly after their marriage.

MR. AND MRS. F. B. PLUMMER, OF MINERAL WELLS, TEXAS. MR. PLUMMER IS CHIEF GEOLOGIST OF THE TEXAS DIVISION. MRS. PLUMMER WAS FORMERLY MISS HELEN SKEWES OF THE TULSA OFFICE.

WOMEN IN PALEONTOLOGY CONT'D

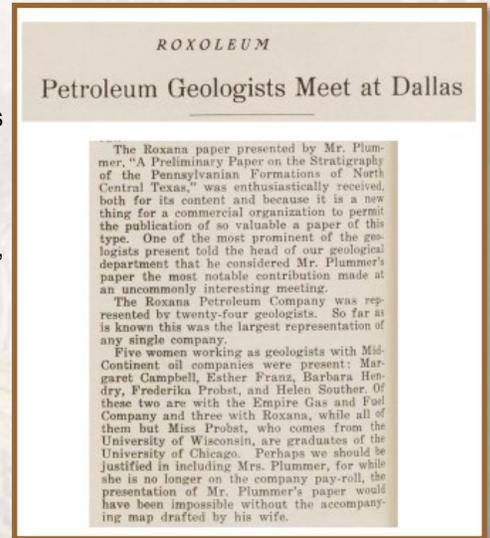
Helen was very much in love with her husband, but his sudden death from a heart attack in 1947 delivered her a blow from which she never recovered although she faced his death with determination and courage to continue her work. She was still carrying on with her regular paleontological work in 1950 when she arranged to for the proper disposal of her husband's books and papers. She also moved from their large house into a smaller more manageable one across

the street. She seemed ready to put the days of personal sorrow behind and start life anew doing the research she enjoyed, but sometimes things simply do not work out as hoped. Only 10 days after moving to her new house, Helen became ill on January 6, 1951, and was rushed in critical condition to a hospital where emergency surgery was performed. Blood transfusions were given on Wednesday, and she appeared to rally, but the strain on her heart proved too great and she died on Thursday morning. According to her wishes, she was sent to San Antonio for cremation.



Homemade species identification card, including images and published accounts of a particular foram species. Paleontological Research Institution.

Helen Plummer's scientific contributions live on in her publications and the students she nurtured through their education and professional development. Her valuable collections were presented to Cornell University and other institutions for others to study and research.



An article published in 1919, citing Helen's contributions to her husband's work "A Preliminary paper on the Stratigraphy of the Pennsylvanian Formations of North Central Texas".

2022 FRANK CRANE MEMORIAL SCHOLARSHIP AWARDS FIRST RECIPIENT: DESIRAE THORNE

The Dallas Paleontological Society awards an annual scholarship to one or more students who is preparing to pursue a career in paleontology.

At the April monthly meeting, Desirae Thorne, MS student at Baylor, was the first 2022 winner to receive her award. Scholarships Chairman Roland Gooch presented the award to Desirae, who was joined by Dr. Elizabeth Petsios from Baylor. A group of fellow students carpooled from Waco to join the meeting, and cheered on Desirae as she accepted her scholarship award.

Following the award presentation, Desirae gave a short lecture on her research topic: "Effects of light availability on Sycamore leaf morphology and organic molecules".

The DPS is looking forward to all that Desirae will accomplish as she continues to excel in her academic career!



Left to Right: Roland Gooch, Desirae Thorne, Dr. Elizabeth Petsios

OKLAHOMA FIELD TRIP RECAP

By Kim Pervis

January 15 the Dallas Paleo Society had a field trip scheduled for a Pennsylvanian plant site that is Desmonesian, Pennsylvanian in age in Haskell County, Oklahoma, but the weather turned cold and icy and we had to postpone the trip until February 6, 2022. The weather was touch and go for a bit, but I had eyes on the ground in the area who told me that there was no snow on the ground at the site. I was a bit worried driving up the night before, because fields and mountains were still covered with snow. I wanted to drive by the site before going to my motel just to make sure it wasn't covered in snow. Sure enough it was clear of snow. We arrived at sunset. As I got out of the car I could hear a waterfall. I have visited the site maybe 6 times before but there was not a waterfall prior to this trip. The snowmelt had created a beautiful waterfall to see and hear at sunset.

The site is part of the Krebs geological group with the Savanna Formation exposed, displaying 9 different units of the Savanna. Common fossil plants are multiple types of *Calamites*, *Lepidodendron*, *Artesia*, numerous genera of both seed and spore ferns. The occasional fern seed can be found. There are also a number of types of *Annularia* and *Asterophyllites*. Also, some nice examples of geological sedimentary features of load casts and tool marks as well as some ichnofossils.

The next morning, we arrived around 9:00. It was a bright and sunny day. It was a bit chilly, but we were all prepared for it. Maybe 12 people or so joined us.

I parked my car on the shoulder by the road cut. I made numerous to my car throughout the day. Towards the end of the trip I stopped to look at a large block about 10 feet from my car that I had been walking past. It had fallen from the top of the exposure and plummeted maybe 80 feet from above. As I looked I suddenly realized that it was *Lepidodendron* branches, preserved in 3D. It was over 30 inches long and about 2 feet wide and maybe 10 inches thick. See Image 1. It was way too big to haul. Lance Southwick had come with a large gas-powered concrete saw. He offered to cut it down for me. I had no idea what an undertaking that would be, but at the end of the day I carried away a good 50 lb chunk of it. As I was splitting it after he had scored it with his saw a nice *Calamites* log was exposed. I gave that to Lance for his amazing help.



Image 1. Branching *Lepidodendron*



Image 5. DPS members hunting for fossils at the road cut. Snow on the ground. Photo by Sheri Morris.

Wes and Kerry Kirpach had joined us. Wes found a beautiful, large slab that he offered me, because it was too big for him to take home. I saw black (carbon from plant material) and said I would take it. When I got home I realized for the first time that it was covered in cones. One was a *Macrostachya caranita*, which is a type of *Calamites* fruiting body or cone. Image 2. Others plants looked like they were *Lepidodendron* branches with leaves. See image 3. The slab was 30 inches long. I donated this piece to the Perot.



Image 4. Walking trace of a Pennsylvanian horseshoe crab, ichno genus *Kouphichnium*.

The site is 99.9% Desmonesian, Pennsylvanian age terrestrial plants. That said I managed to find an ichnofossil in shale that I originally thought was a cone of some sort covered in matrix, but when I got it home I realized it was a trace. It turned out to be ichno genus *Kouphichnium*, which is a cruziana trace of a horseshoe crab. You can see little feet marks and a tail drag in the middle and wave ripple marks on this 8 inch trace in image 4. Clearly the site was once near the ocean and had horseshoe crabs in its water.

Many fossils were found on that steep hill that bright February day. Some of the fossils finds can be seen below with captions.

I hope to schedule another trip there in the late Fall of 2022.



Image 2. *Macrostachya caranita*, *Calamites* fruiting body or cone.



Image 3. Branches of *Lepidodendron* with leaves.

DALLAS PALEONTOLOGICAL SOCIETY OFFICERS, COMMITTEE CHAIRS, AND ADVISORS

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 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.

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The DPS' booth at the 2022 EarthX festival. Thank you to our fantastic volunteers!

CONTENTS INSIDE:

- Jordan Lee's Collection on Display
- Moss Creek Field Trip Recap
- Women in Paleontology
- And more!



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