

# THE FOSSIL RECORD



**NEXT MEETING: WEDNESDAY, DECEMBER 9TH... ONLINE!**

## **FEATHERING UTAHRAPTOR**

The DPS will have a very special online meeting on **Wednesday, December 9th**. We will start earlier than normal, at **6:30pm**, for a show-and-tell of fossils. We will moderate the session, and each person should limit themselves to one fossil. You are invited to show it live on your web camera, but experiment first to make sure it can be well lit and in focus. If unsure, you could take a photograph and share that instead. DPS experts will help identify it, if needed, so please be willing to share where you found the specimen (general locality). This online sharing will replace what many of us love about our in-persons meeting, where we all get to see other's finds and show our own. Then at **7:00pm**, the formal meeting will begin, and **Dr. James Kirkland**, Utah State Paleontologist, will speak on "**Feathering *Utahraptor***," about the history of dromaeosaurid discoveries, their paleobiology, including the one he named *Utahraptor ostrommaysorum*. As if that is not fun enough, we will also hold the **annual election for DPS board members**.



Jim received his PhD from the University of Colorado under the supervision of the great Cretaceous stratigrapher and invertebrate paleontologist Erle Kauffman. He taught at the University of Nebraska for two years, then was paleontologist for Dinamation International Society for nine years. He then joined the Utah Geological Survey and became the Utah State Paleontologist, a position he has held for over eighteen years. He has done much more than issue collecting permits and manage the collection database. He has authored over eighty papers, and named or co-named thirty molluscan taxa, seven fossil fish, and over twenty dinosaur species. His broad interests in the Mesozoic fossils of Utah and Colorado has served him well, as it turns out fish fossils might explain why the area has so many dinosaur fossils. He has appeared many times in the popular media, including the PBS *Nova* series "The Real Jurassic Park," Science Friday on National Public Radio, national morning television shows, and The Learning Channel series "Paleoworld". You can read about his excavation of the "megablock", arguably the largest fossil accumulation ever jacketed, at: <http://geology.utah.gov/map-pub/survey-notes/collect-dinosaur-megablock/>

Please continue to the next page (page 2) for instructions on how to register on Zoom and join the meeting live online...

## DECEMBER DPS MEETING (LIVE ONLINE): HOW TO JOIN US

by Tom Dill

We recommended creating a free **Zoom** account at <https://zoom.us> before the meeting (and you will receive a confirmation email), and then installing the Zoom application on your computer (Mac, PC, or Linux). You can also get the app for tablets and phones from the Apple or Android app stores, then click on this link to join the meeting early **6:30pm Central Time** on **Wednesday, December 9th** for our **show-and-tell fossils** and **7:00pm** will start our **regular presentation**:

<http://zoom.us/j/96665912346?pwd=N0FFTIBxTkhrNVlrVmYxdFBFY3B6QT09>

If you haven't used Zoom before, join early so you can test your audio and video; and if you cannot install the application, you can also use a web browser (they recommend Google Chrome). Or start the Zoom app and join the **meeting ID** of **966 6591 2346** and **passcode** is **536765**.

If you move your mouse over the Zoom window, controls will appear where you can turn on and off your audio and video "feeds" to the meeting. Remember that you are on camera to the world and, if your audio feed is on when you cough or the dog barks, Zoom will switch the focus to you. So, please be respectful and mute your audio until you want to talk. During the presentations we will mute everyone's audio, but if you come in late, be sure to mute yourself. You can submit questions for the speaker in the chat box, typing "QUESTION" to make them stand out. We will read them at the end in the order received. We would love to see you (appropriately dressed) and hear you (at the appropriate times) at our next meeting!

We hope to see you there!

Reconstruction of juvenile *Utahraptors* attacking an iguanodont stuck in quicksand, art by Julius Csotonyi (previous page).



*Utahraptor* skeleton at Brigham Young University's Museum of Paleontology (Photo: Jaren Wilkey).

## PRESIDENT'S MONTHLY COMMUNICATION

by Philip Scoggins

After two terms, I have to say goodbye to this position. I would like to thank the officers, committee chairpersons, and other who advised and assisted me. They deserve credit for the successes of the last two years. This group of great people got the second edition of the North Sulphur River book edited and published. After the City of Carrollton imposed regulations on what foods were allowed at meetings, Lucia Smith and others worked with the city to continue food providing food. Though Lucia's home cooked main dishes were palpably missed. Yet, no one had a clue that was not the worst of the problems to come in 2020. When the figurative meteorite hit Chicxulub in March, Tom Dill, being a good mammal, found a way for us to survive. There were a couple of hiccups with the 40-minute limit on Zoom meetings. Estée Easley helped us overcome this limitation. Not meeting in person was a major blow to our pre-meeting comradery and sharing our latest fossil finds. As bad as having virtual meetings appeared to be, virtual meetings helped bring in speakers who would not have traveled to the area under any circumstances.



An appreciation field trip was held for those who had volunteered in December 2019. 2020 squelched this along with the events where volunteers are essential. Possibly, 2021 will bring a return to the volunteers appreciation field trip or some other way to thank volunteers. There are plenty of opportunity for volunteers to come up with ideas using social media including the various video formats to promote and educate paleontology to members and non-members (future members). Rocky Manning and Beau McDaniel helped me prepare a video for the Dallas Library's [Podcast on Natural Dallas \(The P.O.N.D.\)](#) event in June.

I had hoped the Society could have participated in a couple of parades. I doubt the Mansfield Pickle Parade will happen in March 2021. Possibly by July we could participate in Arlington's 4th of July parade. A distinct possibility was to a hadrosaur replica float. Maybe even someone riding the icon of the Arlington Archosaur Site. Cancelling FOSSILMANIA was my idea. Unfortunately, execution of crowd control, sanitation, and other factors were beyond our capabilities. The EC backed me on this painful decision. Several gem and mineral shows and other events were also canceled. These shows generate income though the sale of various wares. Most importantly, shows and events attract new members.

I will be stepping into an advisory position to the Executive Committee (EC). Though Society activities will be limited, there is plenty to do. The EC and I are working on ideas for educational videos and possibly virtual workshops. We will start planning FOSSILMANIA in early 2021. Plans include widespread advertising and more vendors. An *Occasional Papers* (OP) may or may not get published 2021. Submissions are needed. I am working to have the OPs peer reviewed. We need more peer review of works to bring status to the authors, the Society, and accomplishes part of our Purpose: "... be a network for the exchange of data between professionals and serious amateurs in this field." This great organization is destined to grow.

Being President was an honor.

# DECEMBER 2020

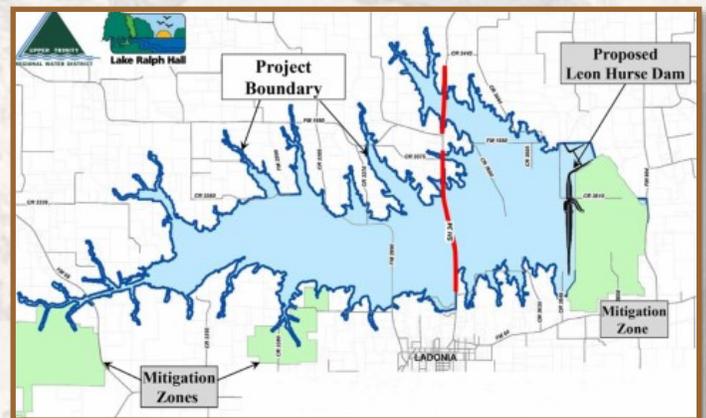
Sun	Mon	Tue	Wed	Thu	Fri	Sat
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6	7	8	9 <b>DPS Monthly Meeting</b> online	10 <b>Hannukah</b>	11	12
13	14	15	16 <b>DPS Committee Meeting</b> online	17	18	19
20	21 <b>Winter Solstice</b>	22	23	24 <b>Christmas Eve</b>	25 <b>Christmas</b>	26 <b>Kwanzaa</b>
27	28	29	30	31 <b>New Year's Eve</b>		

Visit [dallaspaleo.org](http://dallaspaleo.org) for most up-to-date information and further details.

## NORTH SULPHUR RIVER CONSTRUCTION BEGINS

by Diane N. Tran

Starting December 2020 or January 2021, Upper Trinity Regional Water District (UTRWD) will begin construction of the new reservoir on the west end of the NSR (yes, inundating the red beds). The dam site is about half mile west of the FM 904 bridge. The section of river at SH 34 (including the current Ladonia Fossil Park) east to the dam site **WILL BE CLOSED**, so there will be no “river” hunting west of the dam as the lake fills, except maybe for going in far west at the FM 68 bridge in Gober, simply because the river will no longer exist: Everything west of the dam, including the creeks and tributaries, will be flooded to a height of 25 feet ABOVE the existing SH 34 bridge.



During construction, you can access the river at FM 2990 bridge and FM 904 bridge; however, while in the river, you will be blocked from entering the construction zone between those two bridges. Other bridge accesses further west (FM 68) or east (FM 38, etc) shall remain unaffected. The creeks that lie in the footprint of the lake will flood extensively and become a part of the new lake. Fossil Park will be relocated after its completion. Happy hunting, everyone, and stay safe!

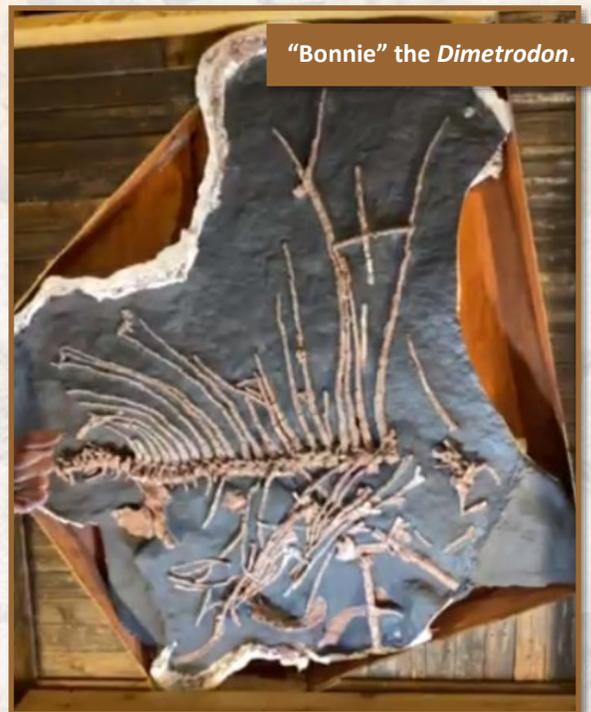
## DPS NOVEMBER MEETING: “PERMIAN RENAISSANCE”

Lecture Overview by Philip Scoggins



As I mentioned in the President’s Communication, some speakers could not be here in person under any circumstances. The November meeting was a prime example with two speakers. Christopher “Chris” McCauley, a UTA Masters student and a Frank Crane Scholarship recipient, who had a presentation on Silurian foraminifers (foram) from the Arbuckle Mountains in Oklahoma. His studies include describing new species of foraminifers, determining any foram zones as compared to conodont zones, and determining the effects the Lau extinction event had on the study area. Since Christopher’s work is new and unpublished information, anything from his presentation cannot be reproduced here.

Our main speaker was Chris Flis, Director at the Whiteside Museum of Natural History in Seymour, Texas. He was accompanied by Assistant Curator Holly Simon. They gave us a virtual tour including a “behind the scenes” look of the museum. Holly skillfully navigated the camera while Chris showed and discussed the fossils on display. Some of the fossils on display include *Diplocaulus*, *Edaphosaurus*, and *Dimetrodon*. Chris talked about the paleoenvironment as having ponds, with freshwater shark *Xenacanthus*, that *Dimetrodon* preyed upon. How *Diplocaulus* would dig burrows to survive the dry periods. Fossils of *Diplocaulus* were found where they died in place because of an extended drought. Others were found again still in a burrow but showing predation marks.



To keep people safe, the museum limits ten people at a time. Chris mentioned reservations are not required to visit the museum; however, making reservations or calling ahead is recommended in case others have filled the time slot you want.

In the collections area of the museum Chris showed us a *Diadectes* skull found by Holly.

A female *Eryops* skull with a scrape or bite mark on the left side of the nose from a male *Eryops*.



*Diplocaulus* skull.



*Diadectes* skull.



*Eryops* skull.

# DPS “NORTH SULFUR RIVER” SCRAPBOOK

Complied by Diane N. Tran

With the construction of the Upper Trinity Regional Water District (UTRWD) reservoir under way, a few of the fossil hunting grounds within the North Sulfur River will be closed off for safety reasons, but will not be cut off completely. So, in honour of one of our best local paleontological stomping grounds, here are some wonderful fossil finds and favourites found in the NSR from our fellow members on the [DPS Facebook Group](#). Stay safe, everyone!

Jarrold B: Fish with scales and vertebrae.



Jarrold B: *Xiphactinus* fish fins.



Joe W: *Toxochelys* turtle, Ozan formation.



Lewis S: *Pachyrhizodus caninus* jaw.



Cheryl L. M: Mosa-saur coprolite.

Continued next page

# DPS "NORTH SULFUR RIVER" SCRAPBOOK CON'T



Lewis S: *Clidastes mosasaur* skull, "recovered about 200 yards above the SH -34 bridge back in 1997, long before the [Ladonia] Fossil Park existed" (top left).

Lewis S: "From the giant *Tylosaurus* discovered and excavated by Jim Cheney and myself back in 2000-2001. I'm still finding a few tail vertebrae from this guy twenty years later!" (bottom left).

Cheryl L. M: False limpet (top right).

Sheri M: Fossilized shark vertebrae with preserved sharkskin having dermal denticles (middle right).

Lewis S: Three conjoined fish vertebrae with attached spines (bottom right).

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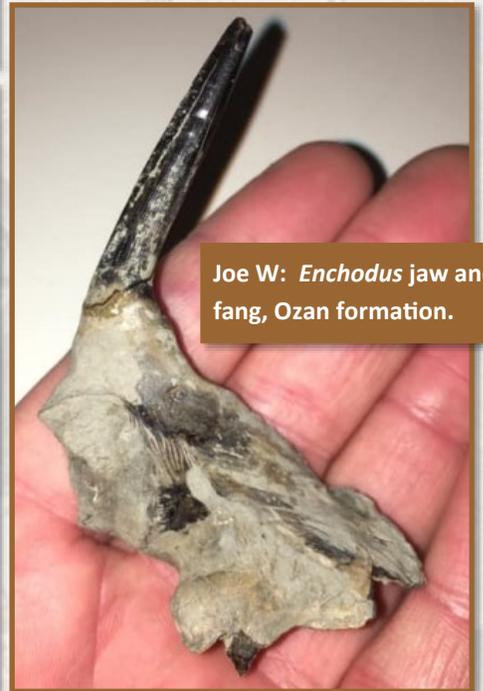
# DPS "NORTH SULFUR RIVER" SCRAPBOOK CON'T 2



Lance S: Associated shark vertebrae with some cartilage imprints.



Lewis S: *Tylosaurus* vertebrae (top and middle left).



Joe W: *Enchodus* jaw and fang, Ozan formation.



Joe W: Associated bones of eight different mosasaur specimens, Ozan formation.



Lewis S: *Tylosaurus* rooted tooth.

## THE DPS LITTER REMOVAL PROJECT

by Estée Easley

When I became Vice President of DPS, my main campaign was to remove litter from fossil sites. Then COVID hit. During this down time, I did not attend any of the few, wonderful fossil hunts DPS hosted, but my campaign was always kicking around in my head. While I have yet to hear or come up with the perfect name for this ongoing plan, I have continued to keep it mind. My first opportunity to put this thought into practice was at the November Mineral Wells Fossil Park PIT Crew hunt. My plan is simple — have a bag with you for fossils and a bag with you for trash. If you see any trash while you are collecting fossils, just pick it up.

As I was picking up crinoids with my kid at MWFP, I noticed an odd glare several yards away. It turned out to be a littered plastic bottle. From there, I collected forty-five or more great crinoid stems and over a dozen pieces of trash — from broken glass to plastic bag material that was buried deep enough that it was probably there since MWFP was a working quarry.

Overall, it is a well-kept place, and there are trash cans near the parking lot. I was delighted I could finally kick off my program concept, but it was even better that there was very little litter at MWFP!

Flash forward a week to the Whiskey Bridge field trip. This popular spot was littered with beer cans, fishing equipment, and broken glass. We took out over three bags full of garbage and didn't even scratch the surface. Please consider adopting this habit each time you fossil hunt, as well.




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## OBITUARY TO MICHAEL J. HERNANDEZ

by Philip Scoggins



Michael J. Hernandez passed away unexpectedly November 17, 2020. Michael was 55. According to the website for Metrocrest Funeral Home, no public services were scheduled. Our sympathies to his wife Nancey, his family, and all who were fortunate to know him.

Michael loved fossils, of course. He liked to collect echinoids and shark teeth. Fossil preparation was among his many skills. Michael joined the DPS in 2002. In 2007 and 2008, he was the Membership Chairperson.

Beyond the Society, Michael was a DJ and loved music. He was not shy about his political opinions. DFW Rescue Me and other dog rescue groups were among his passions. He had four dogs. Michael was a kind person who touched many lives. He reached out to those needing compassion. On anyone's wildest suggestions, he did silly things. Besides Carrollton, he lived in Round Rock, TX and Minneapolis, MN.

## CLEANING MUSEUM DISPLAYS

by Estée Easley



*Acrocanthosaurus atokensis.*

Around the end of September, the Museum of the Red River posted this picture and comment on its Facebook page. “*Acrocanthosaurus atokensis*, locally discovered and on display at the Museum! Like many things on display *Acro* requires routing cleaning. Have you ever tried to dust an *Acro* skeleton?” Well, no! I haven’t! That made me very curious, so I asked them for more details I could provide in our DPS newsletter.

Daniel Vick, Keeper of Collectio*Acrocanthosaurus atokensis* ns, responded to my question with a very visual reply. “To answer the question of ‘how do you clean the *Acro* skeleton,’ I would answer ‘very carefully!’ Actually, the process is not too mysterious. First, if there are visible cobwebs, then a good long-handled duster will do the trick. Once the cobwebs are out of the way, then it is time to bring out the ladders and the vacuum cleaners. The last time that the Museum of the Red River staff ‘deep-cleaned’ the *Acro*, two of us perched on ladders with our vacuums (with long host extensions and soft-bristled brush attachments), and delicately made our way around the *Acro*. It is also beneficial to have a new extra folks ‘on the ground’ helping to move hoses, extension cords, and steadying the ladders. After vacuuming, we then went over parts of the surface with cloths (slightly dampened with water) to remove additional dust. This was done by blotting, rather than wiping, as the cast skeleton of the *Acro* is rough in places, and wiping tends to remove small fibers from the cloth. So, in the end, the process of cleaning our cast of the *Acrocanthosaurus atokensis* is straightforward, requiring only simple tools, patience, time, and good balance!”



Mammoth tusk, close-up.

This great answer made me curious about how they clean the exhibits at the Perot Museum. I took a picture of the mammoth tusk on the fourth floor. You can see the accumulated dust in the closeup.

I emailed for cleaning details, and Myria Perez, Assistant Fossil Preparator, responded on October 27th with great details and photos! “Here are a few pictures from today’s dusting. The museum does an annual cleaning usually on Labor Day weekend, and part of the Research and Collection Team’s duty is to dust the exhibit specimens. Just like any building, dust made from clothes and human skin cells builds up over time on surfaces. If the dust accumulates on the surfaces enough, the will appear fuzzy. We carefully use soft bristled brushes and small vacuum cleaners to sweep away the dust into the vacuum to freshen up our mounts.”



Myria Perez dusts “Ellie May,” a local Columbian mammoth specimen (bottom left).



Philip Scoggins, DPS President and Perot volunteer, dusts the Alaskan hadrosaur trackway casts (bottom left).

## WHISKEY BRIDGE FIELD TRIP (NOVEMBER 21<sup>TH</sup>, 2020)

Event Overview by Talban Kantala

Photos by Talban Kantala and Joseph O'Neil

The Whiskey Bridge locality holds a special place for me. This is the first site I've ever collected in Texas for fossils when I first moved to College Station, TX, in 2012 from Charleston, SC. It has been about seven years since I last collected this site and not much has changed. The bluff is still loaded with an abundance of Middle Eocene invertebrate fossils from the Stone City Bluff Formation. The National Oceanic and Atmospheric Administration's river gauge on the Brazos River near Bryan, TX, registered a stage height of ~7 feet on this day, remaining ~15-20 feet below the base of the Stone City Bluff exposure. The last time the Brazos River reached close to flood stage (52 ft) at this site was on January 5th, 2019, reaching a max crest height of 46.21 feet. The weather was cloudy in the morning and warmed up to close to 80 degrees in the afternoon with sunshine. In summary, it was perfect weather for collecting fossils!

We had a great DPS group during this outing and amassed a plethora of fossils in no time! Several nice gastropods, bivalves, fish otoliths and bone fragments, a possible turtle scute fragment, shark teeth, and partial stingray teeth were found.

*Continued next page*



# WHISKEY BRIDGE FIELD TRIP CON'T



## THE PIT CREW FIELD JOURNAL

### DECEMBER 2020

by Joseph O'Neil



It seems forever since we were able to meet outdoors and do some fossil hunting. The November field trip took us to Mineral Wells Fossil Park, in Mineral Wells, Texas. I split the day up into three time slots and had the participants sign up for the one that worked best for them. We ended up with two full groups, with limits set at ten, including myself, Estée Easley, and our kid, Nic.

The weather turned out to be perfect for fossil hunting, and the fossils are abundant. Many, many crinoid pieces were found, and some nice examples of Pennsylvanian age sea life. Try as we may, no one found a trilobite on this trip, but there's always next time.



Mineral Wells Fossil Park.

## PAST COPIES OF *THE FOSSIL RECORD* NEEDED

by Philip Scoggins

DPS needs your help to find past copies of *The Fossil Record* for our archives: The top box indicates no copy. The bottom box indicates available copies but are not in an optical character recognition (OCR) format, searchable text. If you have a copy, please scan to PDF with OCR. Many copiers, even for home use, have this capability. Please send to [p.scoggins@tx.r.com](mailto:p.scoggins@tx.r.com).

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## DPS 2021 ELECTIONS

by Tom Dill

The constitution of the Dallas Paleontological Society calls out five elected offices: President, Vice President, Secretary, Editor, and Treasurer. Elections are held December of every year; DPS members only are eligible to vote.

### NOMINATING COMMITTEE:

- ◆ Roger Farish — ex-President, Advisor
- ◆ Tom Dill — ex-President, Advisor
- ◆ Estée Easley — current Vice President

### CANDIDATES:

- **President — Estée Easley**
  - ◆ Current Vice President of the DPS.
  - ◆ Before, served two years as Editor.
  - ◆ Volunteered with PIT Crew and Education Committee.
  - ◆ Volunteered at FOSSILMANIA.
- **Vice President — Kate Fenton**  
**(New Candidate to the Board)**
  - ◆ Worked as educational administrator for Collin College, now retired.
  - ◆ BS in Anthropology from UT Austin, and several other degrees, including a PhD.
  - ◆ Served on hospitality for Chuck Finsley lecture and for our face-to-face meetings.
  - ◆ Volunteered for DPS table at Perot Date Night. (Remember when people went on dates?)
  - ◆ Worked the DPS table at FOSSILMANIA Member since April 9th, 2018.
- **Editor — Diane N. Tran**
  - ◆ Currently serving as newsletter editor.
  - ◆ Writer of many articles for *The Fossil Record*.
  - ◆ Can serve for one more year.
  - ◆ Volunteered at Heard Museum National Fossil Day and Perot Museum's Dino Fest.
- **Treasurer — Pam Lowers**
  - ◆ Long-time member, volunteer, and board member.
  - ◆ Served before as DPS treasurer for two years, then two years with her husband Paul.
  - ◆ Can now serve two more consecutive terms.
  - ◆ Volunteered for many other projects, including DPS Christmas Party meal.
- **Secretary — Genevieve (Gen) Freix**  
**(New Candidate to the Board)**
  - ◆ Special Education teacher for the Birdville school district for over 30 years, now retired.
  - ◆ BS in Special Education and MA in Administrative Counseling and Diagnostician.
  - ◆ Got interested in paleontology from archeology digs, where she met paleontologists.
  - ◆ Worked on Parker County mammoth excavation with Lori Gough of Weatherford College.
  - ◆ Member since August 9th, 2018.



## A PEEK IN THE PEROT

Series by Estée Easley



Figure 1: Deciduous leaf fossils.

While exploring the Perot third floor Rees-Jones Foundation Dynamic Earth Hall, I enjoyed several ammonites and fossil plants. I turned the corner and discovered some beautiful leaf fossils.

At the back, according to the sign, is a deciduous broadleaf plant from the Cretaceous. It was located in Denali National Park, Alaska, and in front of it is a Cretaceous flower, also from the Denali National Park (see Figure 1, left). On a different sign,

it specifies these leaf fossils are from 70 million years ago. That sign continues by stating, “These deciduous tree leaf and flower fossils are similar to plants found today in the Pacific Northwest where the climate is relatively warmer and wetter than current day Denali.”

Above these two Alaskan leaves is, according to the sign, a plant slab from the Kukpowruk River a field party brought back to the Perot in 2017 (see Figure 2, right). Here is the link to an abstract Tony Fiorello and others wrote on the area: <http://www.searchanddiscovery.com/abstracts/html/2018/ace2018/abstracts/2845159.html>



Figure 2: Kukpowruk River leaf fossil.



Figure 3: Empty display.

The next display is the most interesting because it's *empty!* (See Figure 3, left.) I reached out to the Perot, and the people I contacted didn't have an answer at this time for the mystery. According to signage, it should be Compression Fossil Plants of the Lashly Triassic Formation from [Allan] Hills, South Victoria Land, on loan from Dr. Lauren Michel. The Antarctic leaf fossils are 347-237 million years old. The sign continues by saying, “Antarctica is covered by ice today. This tree leaf and other plant fossils show that polar climates once supported a subtropical forest.” It shows an image of what should probably be in the empty box (see Figure 4, right).

While I did not find much about the fossil online, I did find mention of the Perot in a blog by Lauren Michel on the University of Kansas website, <http://biodiversity.ku.edu/blog-author/lauren-michel?page=2>, including the excerpt, “Once the team was assembled, gear was purchased, dental and medical records were passed, then it was just a matter of getting there. That was a two-ish-day-long trip from wherever we started (the University of Kansas, University of Wisconsin-Milwaukee and the Perot Museum of Nature and Science) to Dallas-Fort Worth airport. Then Rudy Serbet from KU, Erik and I traveled from Dallas Fort-Worth to Los Angeles to Sydney. We had a long layover (9ish hours) where we left the airport and got to be tourists. Then our final leg: Sydney to Christchurch. That's where we are now -- arriving from all over, getting to know each other (it's my first time down here!) and tomorrow getting outfitted with clothing before our next leg to McMurdo Research Station, where we'll get closer to the deep field and fossil plants.”

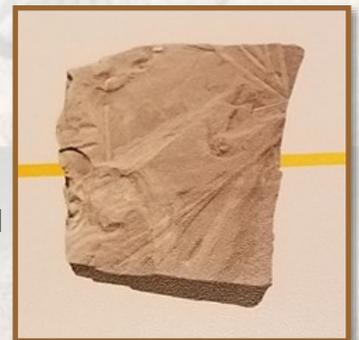


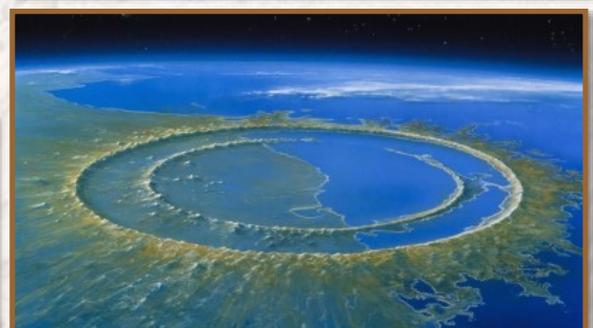
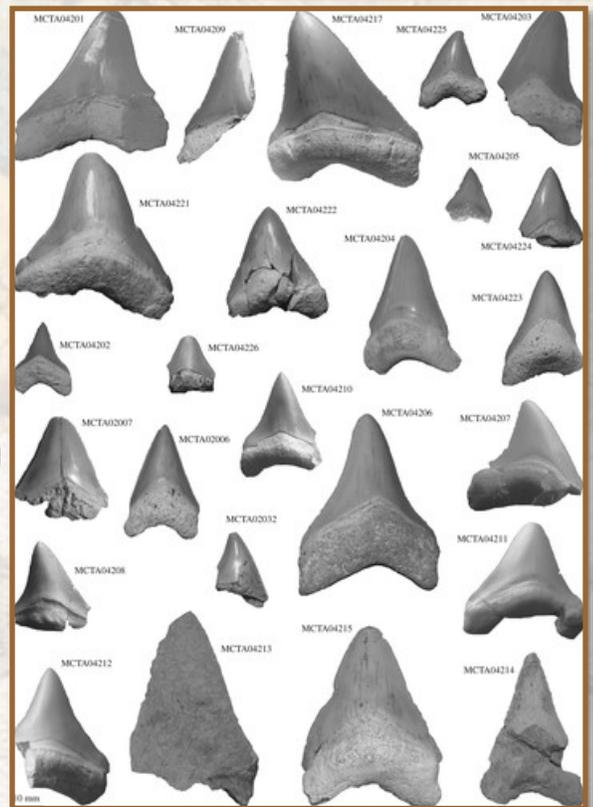
Figure 4: Mysterious leaf fossil.

My thoughts are bouncing from cat burglar film noir scenes to earthquakes shattering the fossil, but I'm sure the mystery is much more logical. It's likely either being photographed and researched in more depth by Dr. Michel or it's in a traveling exhibit on fossils of Antarctica. If you see it back on display or have other details to help me solve the Case of the Missing Plant Fossil, contact me at [vp@dallaspaleo.org](mailto:vp@dallaspaleo.org).

## PALEONTOLOGY IN THE NEWS

Compiled by Andrew “Dino Dad” Stück

1. [The Folding Jawed Shark](#) ([Nature](#)) — Linda Frey et al. have described a new symmoriform shark named *Ferromirum oukherbouchi* from the Late Devonian of Morocco. This shark had a unique jaw structure which folded out when opened, exposing multiple tooth rows at once, allowing for increased grasping area.
2. [Megalo-mom](#) ([Royal Society Publishing](#)) — New assemblages of juvenile *Megalodon* teeth described by Jose Herraiz et al appears to conclusively support previous suspicions that the famous giant shark utilized “nurseries”: protected, shallow-water breeding grounds that allowed their young to grow to maturity in relative safety. The authors further speculate that the loss of suitable nursery sites due to coastline changes may have contributed to the mighty *Megalodon*’s demise.
3. [Unique Beak](#) ([Nature](#)) — A new species of Mesozoic bird named *Falcatakely forsterae* has been described by Patrick O’Connor et al from Cretaceous Madagascar. Unlike most Mesozoic birds, which generally had very evolutionarily conserved beak shapes, *Falcatakely* has a large, curved beak that has been compared to that of a toucan, though with a pair of small teeth present in the premaxilla. This demonstrates a degree of variability previously unknown among Mesozoic birds.
4. [Creation of the Chicxulub Crater](#) ([American Geophysical Union](#)) — A study by Richard Norris involving drill samples of the Chicxulub Crater reveals the likely sequence of events that occurred between the meteorite impact and the final shape of the resulting crater. After the initial explosive excavation caused by the impact, the newly-molten rock sloshed up and down several times, resulting in a ring shaped pattern in the middle that was quickly buried by sediment carried by seawater rushing back into the crater. Subsequent under-sea erosion smoothed out the crater walls, obscuring its visibility on the surface by the modern era.



Reconstruction of *Ferromirum oukherbouchi* and its folding jaws (top right); collection of *Otodus megalodon* teeth (middle right); illustration of the Chicxulub Crater (bottom right); reconstruction of toucan-like *Falcatakely forsterae* (bottom left).

## DINO BO BULLETIN

Series by Beau “Dino Bo” McDaniel

I decided to choose my favorite dinosaur to talk about this month: The fact that it took until the third month for me to mention *Deinonychus* required using an amount of self-control that I wasn't even aware I had. So, *Deinonychus*, that beautiful, awesome little dromaeosaur that roamed the earth in the Early Cretaceous. It lived around 120-100 million years ago and has been found from Montana, all the way down here to the Metroplex.



*Deinonychus antirrhopus.*

*Deinonychus* was a medium-sized dromaeosaur and it was roughly 12 feet long and stood about 3 feet tall at the hip. It was discovered by John Ostrom in the 1960s and the discovery of *Deinonychus* along with Ostrom's observations, led to a dinosaur renaissance of sorts. Upon looking at the bones, Ostrom concluded that this animal appeared to have been agile and quick. This was counterintuitive to the thought of the day, that dinosaurs were cold-blooded, lazy, tail-dragging lizards.

Further evidence gave Ostrom the thought that perhaps this animal was more closely related to birds rather than lizards. After the door on this idea was cracked, the rest was history. All told Ostrom and his crew from Yale found roughly three *Deinonychus* skeletons. So, we can thank Ostrom and *Deinonychus* for leading the way towards our current understanding of dinosaurs. If we still thought of dinosaurs as cold-blooded tail-draggers, *Jurassic Park* would have never been made, the Dinosaur Renaissance never started, and many of us may have never gotten into fossil hunting as a result.

### 3-D TYRANNOSAURUS UGLY CHRISTMAS SWEATER

Product Review by Diane N. Tran

How can you make ugly Christmas sweaters even “uglier”? How about adding a 3-D stuffed *Tyrannosaurus* plush with its head and teeny-tiny arms bursting out from your chest and with its legs and tail from your back?



Made of acrylic, wool, and cotton, this red-and-green monstrosity, with silhouettes of conifers, snowflakes, and roaring *T. rex*-es, has its offensive, if ludicrously happy, “tyrant lizard” attached by safety pins. It is itchy, sweaty, and obnoxious, bumping into things, knocking things over, and being physically unable to sit in a proper chair. It's so *horrific* — that it's *cute*! Available at [UglyChristmasSweaters.com](http://UglyChristmasSweaters.com), retail \$59.99, as well as [Amazon](http://Amazon.com).

### PIN ON THE EDITOR'S HAT

Series by Diane N. Tran

Since joining the DPS, my hat, which is covered with paleo-related enamel pins, has garnered much attention and every month will spotlight a different pin:



Reaching 9 meters (30 feet) in length, *Stegosaurus stenops* (from [Mind-Direct](http://Mind-Direct)) is a Late Jurassic herbivorous thyreophoran easily recognizable for its tiny head, arched back covered in a broad, upright plates, and spiked tail. The first known skeletons were fragmentary and the bones were scattered, so it would be many years before the animal's true appearance, including their posture and plate arrangement, became well understood. Despite its popularity, mounted skeletons of did not become a staple of museums until the mid-20th century, as many have had to assemble composite displays from several different specimens due to a lack of complete skeletons.

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*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](http://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](http://dallaspaleo.org/contact).

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A special PSA from O'Hare International Airport's 72-foot-long *Brachiosaurus* (Chicago, IL): "Wear a mask!"

## CONTENTS INSIDE:

- Livestreaming the DPS December meeting online, starting early at 6:30pm CT!
- Overviews of DPS November meeting, DPS Litter Removal Project, Whiskey Bridge field trip, cleaning museum displays, and the return of the PIT Crew Field Journal!
- Construction of the Upper Trinity Regional Water District (UTRWD) reservoir on the North Sulfur River/Lake Ralph Hall begins and help *The Fossil Record* archives!
- DPS scrapbook of members' North Sulphur River fossil finds, plus "A Peek in the Perot," "Dino Bo Bulletin," "Pin in the Editor's Hat," reviews, updates, news, and more!



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