



THE FOSSIL RECORD

JUNE MEETING: PENNSYLVANIAN (AND MORE) ON DISPLAY

By Tom Dill

Our next meeting will be a great one to attend in person, especially for those on the west side of the metroplex. DPS will meet on Wednesday, June 8th, at 7PM Central time, at the University of Texas at Arlington, in Room 100 of the GeoScience Building (also called the Earth and Environmental Sciences building), at 500 Yates St., Arlington, TX. Get directions from Google: <https://goo.gl/maps/ECnP72i5GERd1CNz5>. Billy Williams, who received a DPS Scholarship in 2019 under DPS advisor Dr. Merlynd Nestell, will talk about "Microfossils of the Upper Part of the Salesville Formation (Pennsylvanian) near Mineral Wells, Texas". Billy received his BS in Geology from UTA, and his MS in Geology in 2021.

The location may be unfamiliar, so come a little early to find parking and explore the geology department. From South Cooper Street (prominent exit from I-30), turn east on UTA Boulevard, then turn right (south) on College Street. Since it is a weeknight during a slow summer session, the Faculty Lot F12 is open to visitors after hours. There are also parking meters (coins and cards) on College and West First Streets. If all else fails, parking is free on side streets just north of UTA Boulevard. Bring along a friend to help defray the gas cost and navigate!

There are many cases of fossils and minerals on display in the GeoScience Building. On the first floor are invertebrates from many of our local formations (echinoids and ammonites are prominent), as well as a nice collection of petrified wood and other plant fossils. One case features trilobites from many localities. Check out the large piece of one of the clastic dikes (the infamous "Rock Walls") from Rockwall. On the second



Examples of microfossils collected from the upper part of the Salesville Formation. Shown (not to scale) are foraminifers (spirals), a conodont (gray, on left), ostracodes (D-shaped, in lower right), holothurian sclerites (wheels), and a radiolarian.

floor, are several cases of mineral specimens, and two special cases dedicated to the Arlington Archosaur Site and to Derek Main. Also on the second floor, Dr. Nestell will have many posters of his and his students' research on display. Everyone is invited to bring some of their Pennsylvanian fossils to show and tell. DPS members are requested to bring a food item, such as a vegetable tray, cheese and crackers, chips, cookies or other deserts, or whatever you want to share. The DPS will be providing water and soft drinks.

Lecture hall 100 is very large so we will be able to spread out to help keep everyone safe, and people are encouraged to wear masks when appropriate. We will also webcast the talk on Zoom at this link: <https://us06web.zoom.us/j/83765036222>. The Meeting ID is 837 6503 6222 and the passcode is 618114. But you can't see the fossil displays and the posters unless you come in person! See www.dallaspaleo.org or the Dallas Paleo Society Facebook Page for updates or more info.



Map of part of UT Arlington, showing the GeoScience Building (labeled Earth & Environmental Sciences), College Street and West 1st St (for meters) and the F12 Faculty Lot which will be available to visitors, Parking is free on many of the side streets north of UTA Blvd.

ASH GROVE QUARRY FIELD TRIP – WRAP-UP

By Roger Farish

It had been almost three years since we'd visited this Midlothian quarry. Midlothian and shark teeth have become almost synonymous. We knew that they didn't maintain their shale pits (that exposed the shark-tooth valued 'contact' zone at the base of the Austin chalk). So, we accepted that the shark-tooth collecting would be limited, which it was. It probably didn't help that the Dallas Master Naturalist group had preceded us by two weeks.

Nonetheless, the keen eyes of the DPS troops did come through. Steve Schliesing's nose-to-the-ground technique paid off again (see the two handful shots below). Trip organizer, Sveta Earnest found the only *Ptychodus mortoni*, Shelley Sudderth (one of four attendees from the East Texas Gem and Mineral Society and DPS members) found the largest *P. whipplei* and Kathy Kasper discovered the only *P. atcoensis*. Matthew Hiddleston found a 2" shark vertebra. There was a lot of rock exposed in the quarry but it was virtually all limestone as in Austin chalk. Not even much contact was exposed around the catch basins and drainage canals.

Host Francisco Pinta with the Ash Grove Cement Quarry furnished hi-vis vests but didn't require hard hats. He also had a large cooler of water for those who ran out since it was a warm day but with 30mpg winds. Restrooms were available.

David Hill got to do his Boy Scout duties twice by returning local turtles to their ponds from the roadways.

Midlothian quarry field trips are the most sought-after outings our Society offers because of their high-potential collecting rewards and very restricted number of attendees. We unfortunately had 6 no-shows and several late cancellations for this trip. So, steps are being taken to ensure that this never happens again.

The best ever quarry news of late is that Sveta has obtained a commitment from the MMM quarry people that when they do reopen to outsiders that the DPS will be the first to enter their quarry. They did indicate that this may not be until the fall, though.



WHAT HAPPENS TO OUR FOSSILS WHEN WE DIE?

By Tom Dill

Some advice to our heirs:

Don't Throw Them Away

As much as possible, fossils should not be thrown away. Fossils are a finite resource, particularly as urbanization and privatization closes many collecting sites. If someone took the effort to collect a specimen, even a common or poorly-preserved one, it might have interest to another of like-mind. Upon the death of the collector, fossils should pass somehow to other interested parties.

Fossils should never be tossed in a creek or quarry, where they will just cause confusion, particularly if it is an established collecting location. Although we do not want fossils to go to a landfill, it is better than contaminating a fossil site with fossils from another location.

Go Ahead and Sell Them

It is legal and acceptable to sell common fossils that are not scientifically significant and were legally collected. It is acceptable for the heirs to make money doing so, regardless of the motive and financial need of the sellers (which are difficult to discern, anyway). When the collection is very large, families may want to contact mineral and fossil dealers to examine the collection and appraise its value. The dealers may make a bulk purchase offer or help arrange a sale on consignment.



Donate Them to Educators

If the heirs do not want the trouble of sales, the fossils should be donated. The collector's friends and field partners will be especially interested. Schools and teachers can make use of many common fossils in biology and earth science classes. Contact your local elementary, middle, and high schools biology and earth science teachers, but also don't forget the community colleges and universities.

Documented Fossils Are Better

Fossils should be properly documented with necessary information on a label or catalog. This information is important for a beginner to learn, useful for the collector, and invaluable for a researcher or museum. Labels should stay with the fossils as fossils are disposed.

Donating to Museums and Researchers

Scientifically significant specimens should go to a museum or a paleontologist at a university. Unfortunately, they have little time to come look at your collection to determine if some of the fossils are significant. This is where a catalog kept by the collector, highlighting potentially important specimens, will be very useful. Museums and researchers will probably be interested in a fossil only if it has documentation of where it was collected. Fossils without locations have little value and can cause concerns about whether they were legally collected.

The DPS Accepts Donations

The DPS gladly accepts donations of fossils. The DPS may then give away the common local fossils to kids, educators, and others who are interested; or use them for educational programs. More valuable specimens may be sold in auctions to raise funds for the Society.

What DPS Can and Can't Do

The DPS will not sell fossils for the benefit of individuals, including members, or corporations. It is acceptable for DPS members, on their own, to help a friend or their heirs in disposing of their collections. This may include examining the collection to highlight potential significant or valuable specimens. In the case of long-time members, and those who have been instrumental in the society, the DPS, as a group, may assist them or their heirs in the disposition of their fossils.

Vertebrates

Vertebrate fossils are much rarer than invertebrates and fossil plants, and therefore require extra care. Vertebrate bones and teeth should not be sold because they may contribute to the market of illegally collected fossils. Instead, individuals are encouraged to purchase quality reproductions of museum specimens. Vertebrate fossils should be donated to museums and universities. Bones and teeth from what was probably a single individual animal should not be separated, but should be donated together, since they have much more scientific value that way.

Sharks Are The Exception

Sharks are also vertebrates, but their teeth are exceedingly abundant because they are so numerous in the jaws and are continually replaced through life. Most shark teeth are found individually, which further decreases their scientific value. Most are found in gravels, not in situ in deposits of their age, which then limits their stratigraphic value. So even though sharks are vertebrates, sale of shark teeth is permissible. However, slabs with multiple shark teeth in position in the jaw may be scientifically important, since they can demonstrate how tooth size and shape varies with position in the mouth. These specimens should be in museums.

WOMEN IN PALEONTOLOGY

ALVA CHRISTINE ELLISOR: A REMARKABLE SURVIVOR

By Tom Vance

The ominous darkening sky on Saturday morning of September 8 gave a clue as to what was about to happen. The sun did not appear due to extreme overcast, and wind and rain began to build into a terrible storm. As the barometer crashed, a tremendous hurricane hit the city of Galveston, Texas. The 15–16-foot storm surge swept ashore in advance of the hurricane's vortex. At the time, the highest point on Galveston Island was only 8-9 feet above sea level. During the horrendous cold winds and waves, an 8-year-old black-haired girl and her two baby brothers desperately clung to their mother at the topmost part of the roof of their house. Suddenly, a timber tossed by the monster waves swept the babies away into infinity, but the little girl held on and was saved. Two-thirds of the city, at the time the fourth largest in Texas, was gone. The little girl survived into adulthood and eventually became the first and most distinguished stratigrapher and micropaleontologist of the 20th Century. Alva Christine Ellisor was an unintended witness to the Great Galveston Hurricane of 1900. It remains the most destructive storm in United States history, claiming an estimated 6,000-8,000 lives.



Fig. 1: Alva C. Ellisor's high school graduation photo, 1915.

Alva C. Ellisor (born 1892 – died 1964) was born in Galveston and was the only daughter and oldest among five children. Her father, William Ellisor, Sr., was a sea captain, and her mother, Emma Osterman Ellisor, was an immigrant from Gotland, an island in the Balti Sea off the coast of Sweden. Alva was educated in the public schools in Galveston and graduated as valedictorian from Ball High School. In 1915, she entered the University of Texas and majored in geology where she graduated with honors. Her interest in geology and ability to think through scientific problems were noticed by her professors who helped her to gain a teaching position at Ball High School. A year later, she attended the University of Texas and taught as well. She specialized in geoscience and was working on her graduate thesis, but she never achieved her degree because she never met the language requirements necessary. Her interest involved micropaleontology, and her first of many publications involved the 1918 discovery and descriptions of "Turritella in the Buda and Georgetown Limestones" appearing in the University of Texas Bulletin #1840. The monograph carried so much importance that W. S. Adkins included 14 of her species in "Handbook of Cretaceous Fossils".



Fig. 2: Alva C. Ellisor at her desk working for the Humble Oil Company Micropaleontology lab, 1946.

Alva worked briefly in Ranger, Texas, for the Humble Oil Company, investigating the well cuttings of Pennsylvanian and Permian ages. All indications are that she was the first woman to do this type of work in the oil industry. From 1918-1919, she was instructor of geology at the University of Kansas and became involved with the Kansas Geological Survey. In 1919, Professor Edwin T. Dumble, a former director of the Bureau of Economic Geology and then chief geologist of the Rio Bravo Oil Company, wanted to investigate the connection between macrofossils, such as shells, and Gulf Coast stratigraphy. So, he called the University of California looking for a paleontologist who could spend the summer in Houston conducting research. "We haven't a man. Will a woman do?" asked the head of the department. Dumble responded, "I don't see why a woman couldn't do it better than a man." The conversation began the groundwork of a paleontological renaissance in the oil and gas industry which involved three women, including Alva.

Continued on Page 5

WOMEN IN PALEONTOLOGY CONT'D



Fig. 3: Alva C. Ellisor portrait, date unknown.

Alva returned to Humble Oil Company in 1920 and was sent to the Houston lab to organize and examine megascopic fossils. This led to Humble Oil's first stratigrapher and paleontologist. She noted the difficulty of working with fossil shells because they were often damaged or destroyed by the drill bits used, but she found that a type of microfossil - a one celled protozoan called foraminifera, or forams, proved perfect for stratigraphy, avoiding the drill bit, and that the different species closely correlated with different geological strata. When she informed her supervisor, Humble's chief paleontologist Wallace Pratt, about her discovery, he told her to keep it a secret. But Pratt could not keep secrets and leaked the news to Dumble. The forams had not been discovered in the samples from the Gulf Coast, but Ellisor is believed to be the first person to have noted them in the Humble Well at Goose Creek in 1920. Four years later, Alva and the other two ladies, Hedwig Kniker and Esther Richards, let their research do the talking. They co-authored a seminal paper for the 1925 AAPG Bulletin 9 (1): 19-122 titled "Subsurface Stratigraphy of the Coastal Plain of Texas and Louisiana" that used the forams to unravel the regional geology.

Alva Ellisor was the first person to recognize reworked Cretaceous forams in Miocene strata. Between 1931-1945 she worked in conjunction with J. Cushman in a series of joint papers in which many well-known index fossils of Foraminifera were described and named. Many other papers appeared which were either individually published or coauthored with others dealing with stratigraphy and forams. Finally, her last publication which appeared prior to her retirement was an informal history of the Houston Geological Society titled "Rockhounds of Houston."

Ellisor was a member of the Houston Geological Society and served as vice-president in 1924 and 1930. She also was a fellow in the Geological Society of America and held memberships in the American Association of Petroleum Geologists, Society of Economic Paleontologists, Paleontological Society, and was awarded Honorable Mention in the Desk and Derrick Clubs of North America, the Distinguished Geology Alumni Award from the Department of Geology at the University of Texas. Alva was inducted into Sigma Xi and Chi Upsilon honor societies.

Alva Ellisor worked mainly in the Cretaceous and Tertiary periods of the Gulf Coast. Her research contributions to the petroleum industry cannot be denied. She retired in 1947 and donated over 3,000 volumes and separates to the University of Texas Geological Library. After retirement, she traveled throughout the world and attended numerous conferences. She never married nor had any children. On September 22, 1964, Alva succumbed to the effects of heart disease. According to her wishes, she was cremated. The whereabouts of her ashes are not known.

RESULTS OF THE T-SHIRT CONTEST

by Philip Scoggins

Thanks to those who entered designs. The original 26 designs were pared down to six by the T-shirt committee.

There were 104 total votes. Diane Tran's design won. Plans are to have some limited sized at FOSSILMANIA in October. Online order availability will be announced at a meeting or newsletter in the coming months.



MOSS CREEK FIELD TRIP – AGAIN SATURDAY, JUNE 11

by Roger Farish

There was too much demand for this field trip that we've scheduled another one. Please reread the formal writeup in the May *Fossil Record* newsletter for details.

We'll meet at the Ladonia City Hall at 9 AM and head out to the site. Please print-off, sign and bring a hold harmless agreement with you when you come.

Digital signup via our website <https://www.dallaspaleo.org/EventReg> for the trip will be opened at noon on Monday, June 6 for those wishing to attend. You must be a current DPS Member to register.



FOSSIL HUNTING SPOTLIGHT

Submitted by Virginia Friedman

Thank you to Virginia Friedman for her submission of photos from her fossil hunt in Lithuania. Virginia says "collecting amber in the Baltic was like a mystical experience."

The DPS is looking forward to Virginia's lecture on amber in July. Stay tuned for a more detailed announcement. Do you have photos from your latest or favorite fossil hunt? Submit photos and details to: editor@dallaspaleo.org



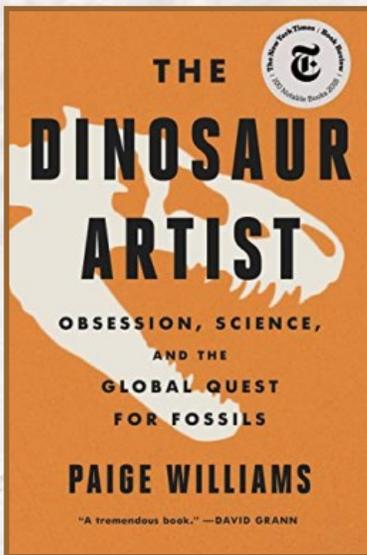
Baltic amber collected (Eocene age).



Above: Howard and Virginia Friedman amber hunting alongside Baltic shore at Karkle, Lithuania in 2019.

“THE DINOSAUR ARTIST: OBSESSION, BETRAYAL, AND THE QUEST FOR EARTH'S ULTIMATE TROPHY”

by Paige Williams
Reviewed by Tom Dill



Paige Williams is a staff writer for the New Yorker, where she covered the story of a *Tarbosaurus bataar* (closely related to *Tyrannosaurus rex*) specimen that was put up for auction by Heritage Galleries, in her article “Bones of Contention” in January of 2013. She decided to dig deeper, which resulted in this excellent book published in 2018. The story is about Eric Prokopi, an amateur fossil collector of shark teeth and mammal bones in Florida rivers. He is mentored by Frank Garcia, the larger-than-life collector and dealer, and Eric starts dealing in the fossils he finds, and then in other common fossils that he purchases. Then he crosses a line, and buys and imports dinosaur bones from questionable sources, and prepares and sells them through a website and auction houses.

Although focused on Eric, this book includes all of the participants in this specimen, and the larger commercial market in dinosaur fossils. There are Mongolian scientists who actually led commercial expeditions to sites in the Gobi Desert. They may regret it now, but it had been done before and widely publicized in the German magazine *GEO*, by Andreas Guhr, a fossil dealer from Hamburg. Tuvshin Maam, a Mongolian fossil hunter, began shipping dinosaur bones out of the country illegally. He was associated with Hollis Butts, an enigmatic dealer who arranges fossil sales from a small town outside of Tokyo, Japan. Eric visits Mongolia to deal directly with Tuvshin,

cutting Hollis out of the succeeding deals. Chris Moore, a fossil collector on the Jurassic Coast of England, the home of Mary Anning, helped with the preparation of the specimen for sale. David Herskowitz, then with Auction Galleries, arranges the sale and lines up previous buyers including Nicholas Cage and Leonardo DiCaprio. But the winning bid went to a New York developer who planned to display the specimen in a former warehouse as a centerpiece of a big nightclub.

Mongolia became known for dinosaur fossils though the American Museum of Natural History in New York. Starting with a questionable theory of the origin of man, they organized the first expeditions to the Gobi and found spectacular dinosaur specimens. Roy Chapman Andrews got the press, since he loved to be a showman, while Walter Granger did the real paleontology. Then Mongolia closed behind the Iron Curtain, and Russian scientists found and named *T. bataar*. Later Zofia Kielan-Jaworowska led a Polish expedition that found a spectacular *Protoceratops* and *Velociraptor* that apparently died in combat. After the Soviet Union collapsed and Mongolia opened to the west, Mark Norell led the return of AMNH expeditions to the Gobi desert. Soon after, a dinosaur tourism industry began in Mongolia, which occasionally crossed into commercial digs. Mark defends commercial collectors who follow the rules and document their finds properly. After all, there have always been commercial collectors and preparators that supply museums with important specimens. But the laws had changed in Mongolia, and fossils could not be legally exported, although the standards of behavior were slow to change.

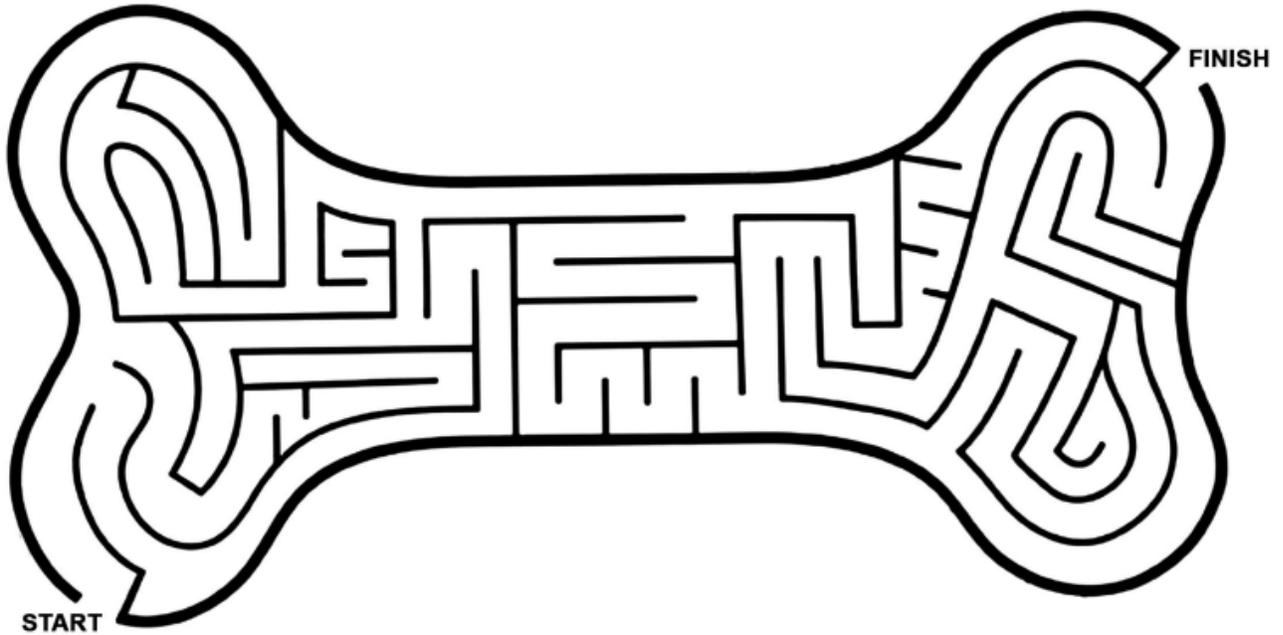
Bolor Minjin is a paleontologist from Mongolia who earned her PhD in the US and then worked a postdoc position with Jack Horner at the Museum of the Rockies. She saw the specimen of *T. bataar* up for auction, and called her government for help to stop the sale. Oyuna Tseveddamba, minister of tourism, brought up the impending sale with the president of Mongolia. This is when the lawyers got involved. Robert Painter, a Baylor grad and Houston-based attorney, had brokered a deal to sell the Mongolians voting machines from a company called Dominion Voting Systems. He was well-connected in George W. Bush’s circle, and called a judge to try to stop the auction. Attorneys of the Southern District of New York of the US Justice Department investigated and prosecuted the case. The dinosaur was returned to Mongolia and Oyuna wrote a popular children’s book about it.

At 432 pages, this book is very thorough (with almost 90 pages of notes at the end) but is still very entertaining. In addition to a great story, it provides a lot to think about how avocational fossil collecting relates to the high-priced world of dinosaur fossils. The earlier *T. rex* “Sue” case led to the Paleontological Resources Preservation Act of 2009, which prohibits the collection of vertebrate fossils from federal lands without a permit. Unfortunately, many people equate all fossils with dinosaurs, which leads to two opposite problems. One is that interested people can be discouraged from hunting and collecting common invertebrates and petrified wood, even though it is legal even on federal land. The opposite is that some land managers think that they have extremely valuable dinosaur fossils, and refuse permission. The Dallas Paleontological Society tries to be a bridge between academic paleontology and fossil collectors. Perhaps this will help to prevent misunderstandings so that we can enjoy our hobby and contribute to the science. But we shouldn’t participate in the commercial trade of vertebrate fossils of questionable legality, which led to the unfortunate downfall of Eric Prokopi.

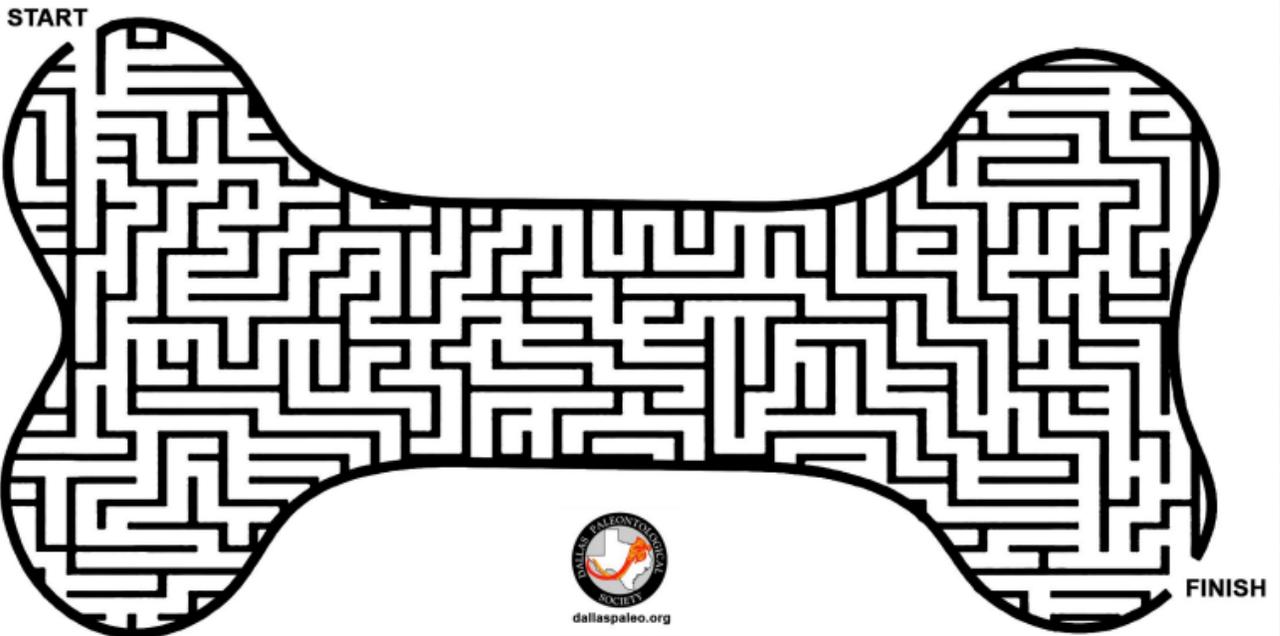
DINOMITE ACTIVITY SHEET

By Diane Tran

While working on the leg bones of a 68-million-year-old *Tyrannosaurus rex*, paleobiologist **Dr. Mary Schweitzer** made thin sections of the bone and, under a microscope, discovered organelle-like structures that resemble red blood cells within the bone, including nuclei and evidence of heme — an essential part of hemoglobin — which is an iron-containing molecule that transports oxygen in the blood and gives red blood cells their color.



Help the **RED BLOOD CELLS** travel through the **DINOSAUR BONE!**



dallaspaleo.org

Art © Diane N. Tran

Facebook: tranination
Instagram: tranination
DevArt: tranination-art

DALLAS PALEONTOLOGICAL SOCIETY OFFICERS, COMMITTEE CHAIRS, AND ADVISORS

Elected Offices:

President	Estée Easley	president@dallaspaleo.org
Vice President	Kate Fenton	vp@dallaspaleo.org
Secretary	Genevieve Freix	secretary@dallaspaleo.org
Treasurer	Pam Lowers	treasurer@dallaspaleo.org
Editor	Laura Peterson	editor@dallaspaleo.org

Chairs:

Education Chair	Joseph O'Neil	education@dallaspaleo.org
Field Trips Chair	Kim Pervis	fieldtrips@dallaspaleo.org
Historian Chair	Bob Williams	historian@dallaspaleo.org
Hospitality Chair	Lucia Smith	hospitality@dallaspaleo.org
Membership Chair	[Group Effort]	membership@dallaspaleo.org
Programs Chair	Tom Dill	programs@dallaspaleo.org
Promotions Chair	Roger Farish	promotions@dallaspaleo.org
Publications Chair	[Group Effort]	publications@dallaspaleo.org
Scholarships Chair	Roland Gooch	scholarships@dallaspaleo.org
Website Manager	Linda Farish	webmaster1@dallaspaleo.org
Social Media Coordinator	Diane N. Tran	

DPS Advisors:

Philip Scoggins, Rocky Manning, Tom Dill, Roger Farish

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.

No portion of these materials may be reproduced in any form or stored in any system without the written permission of the Dallas Paleontological Society © 2022



A handful of shark teeth and assorted fossils collected at the Ash Grove Quarry field trip.

CONTENTS INSIDE:

- Ash Grove Quarry Trip Recap
- T-Shirt Contest Winner
- Women in Paleontology
- And more!



Dallas Paleontological Society
PO Box 223846
Dallas, TX 75222-3846

