



Volume 68 ◊ Number 12 ◊ December 2022 ◊ A monthly newsletter for and by the members of MAGS

You Are Invited

to the MAGS Holiday Party
Friday, December 9, 7:00 P.M.,
Shady Grove Presbyterian Church

MAGS will provide turkey and ham, drinks, tableware, fun, music, and holiday gifts.

Members, please bring appetizers, side dishes, vegetables, and desserts. Consider bringing an appetizer, vegetable, or side dish. We always have plenty of desserts.

Volunteers are needed for setup and cleanup. Call Bonnie Cooper or Carol Lybanon if you can help.

In this issue

Holiday Party	P. 1
Hunting For Megs	P. 1
MAGS And Federation Notes	P. 2
President's Message	P. 3
Early Humans In New Mexico	P. 3
Memphis Stone & Gravel Weekend	P. 5
Fabulous Tennessee Fossils	P. 6
MAGS Notes	P. 8
October Board Minutes	P. 9
October Meeting Minutes	P. 9
Federation News	P. 9
MAGS At A Glance	P. 10

HUNTING FOR MEGS

For those of you who have never heard of Venice, Florida, it is fondly known as "The shark tooth capital of the world." In addition to the abundant shark teeth on the beach, there is a large fossil bed not far off the coastline. Twice this summer I had the opportunity to go scuba diving off the coast of Venice Beach to hunt for mega-



lodon shark teeth (Megs).

So why are there so many shark teeth around Venice?

Millions of years ago, in prehistoric times, the state of Florida was underwater. The sandy beaches we now enjoy in Florida were created over millions of years as the sea level rose and

Continued, P. 4

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

MAGS Rockhound News ◊ A monthly newsletter for and by the members of MAGS

2022 MAGS BOARD

President—W. C. McDaniel

(901) 274-7706 ◊ w.c.mcd@att.net

1st VP (Field Trips)—James Butchko

(901) 921-3096 ◊

2nd VP (Adult Programs)—Dave Clarke

(901) 308-0334 ◊ dclarke@fieldmuseum.org

Secretary—Mike Coulson

(901) 907-9441 ◊ mike.coulson@comcast.net

Treasurer—Bonnie Cooper

(901) 444-0967 ◊ rocks4us@hotmail.com

Director (Asst. Field Trips)—Vacant

Director (Asst. Adult Prog.)—Matthew Lybanon

Lybanon

(901) 757-2144 ◊ lybanon@earthlink.net

Director (Youth Programs)—Melissa Koontz

(901) 650-7095 ◊ melissakoontzphd@gmail.com

Director (Asst. Youth Prog.)—Mike Baldwin

(901) 494-9262 ◊ mbaldwin05@gmail.com

Director (Librarian)—Nannett McDougal-Dykes

(901) 634-9388 ◊ redchesty@yahoo.com

Director (Asst. Librarian)—Jane Coop

(901) 685-8103 ◊ dogsandrocks3@gmail.com

Director (Membership Services)—Bob Cooper

(901) 444-0967 ◊ rocks4us@hotmail.com

Director (Historian)—Kathy Baker

Newsletter Editor—Matthew Lybanon

(901) 757-2144 ◊ lybanon@earthlink.net

Assistant Newsletter Editor—Carol Lybanon

(901) 757-2144 ◊ sgcarol@earthlink.net

Webmaster—Mike Baldwin

(901) 494-9262 ◊ mbaldwin05@gmail.com

Assistant Webmaster—Mike Coulson

(901) 907-9441 ◊ mike.coulson@comcast.net

Show Chairman—James Butchko

(901) 921-3096 ◊ butch513j@yahoo.com

Past President—Charles Hill

(901) 626-4232 ◊ hunter3006@aol.com

MAGS AND FEDERATION NOTES

Memphis Archaeological and Geological Society,
Memphis, Tennessee

The objectives of this society shall be as set out in the Charter of Incorporation issued by the State of Tennessee on September 29, 1958, as follows: for the purpose of promoting an active interest in the geological finds and data by scientific methods; to offer possible assistance to any archaeologist or geologist in the general area covered by the work and purposes of this society; to discourage commercialization of archaeology and work to its elimination and to assist in the younger members of the society; to publicize and create further public interest in the archaeological and geological field in the general area of the Mid-South and conduct means of displaying, publishing and conducting public forums for scientific and educational purposes.

MAGS General Membership Meetings and MAGS Youth Meetings are held at 7:00 P. M. on the second Friday of every month, year round. The meetings are held in the Fellowship Hall of Shady Grove Presbyterian Church, 5530 Shady Grove Road, Memphis, Tennessee.

MAGS Website: memphisgeology.org

MAGS Show Website: <https://earthwideopen.wixsite.com/rocks>

We aren't kidding when we say this is a newsletter for and by the members of MAGS. An article with a byline was written by a MAGS Member, unless explicitly stated otherwise. If there is no byline, the article was written or compiled by the Editor. Please contribute articles or pictures on any subject of interest to rockhounds. If it interests you it probably interests others. The 20th of the month is the deadline for next month's issue. Send material to lybanon@earthlink.net.

December DMC Field Trip

WHERE: Mount Pleasant, SC (fee site, registration required)

WHEN: Saturday, December 3, 8:00 A.M.-12:00 P.M.

COLLECTING: Fossils on Morris Island beach

CONTACT: Ron Ahle, thebears@earthlink.net or (803) 609-7490

Links to Federation News

- ➔ AFMS: www.amfed.org/afms_news.htm
- ➔ SFMS: www.amfed.org/sfms/
- ➔ DMC: www.amfed.org/sfms/dmc/dmc.htm

President's Message

The Rockhound Ballet on top of a gravel mountain

A field trip to Memphis Stone & Gravel provided Members the opportunity to collect rocks, eat a hot dog, and practice their ballet. Here are some results of those moves.



Photo one. The audience arrives early for a standing room only view. It did not last long as they jumped right to work on their own moves.



Photo two. The judges view the mountain and attempt to evaluate the performances. They were easily distracted by the rocks and missed some not so graceful moves.



Photo three. The free style event as Members scattered up and down the gravel mountain. Many moves were hidden under the less than perfect weather. Tutus were replaced with coats.



Photo four. A classic rockhound position. This position has a long, established and successful history. Requires no advance training or skills. Just walk up to a rock pile and do it. Be careful not to overload yourself with rocks. Basic position: Stand upright, bend over slightly forward, feet firmly planted on ground, head tilted, hands free to move rocks, and lastly buttocks pointed upwards and balanced.



Photo five. Every mountain needs a top, and when you get there do your pirouette.

Get Out Your 2023 Calendar And Make Some Changes

We are moving our January and February Membership Meetings from Friday night to Saturday morning. Start time will be 10:00 A.M.

1. January from January 13 to January 14
2. February from February 10 to February 11

W. C.

Early Humans In New Mexico

Matthew Lybanon, Editor

For many years paleontologists thought that the first humans to cross the Bering Strait into what is *Continued, P. 7*

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

MAGS Rockhound News ♦ A monthly newsletter for and by the members of MAGS

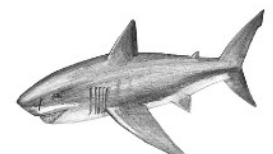
Hunting For Megs fell. As each new layer was deposited the remains of ancient animals were buried in the sediment and over time became the fossilized treasures we hunt for today.

Since there is no steep dropoff point, or shelf break, off the shoreline of the Venice beaches the layer of fossil teeth is gradually eroding and the teeth wash onto the shore. Because the megalodon teeth are larger and heavier, they aren't washed ashore as easily. If Megs are what you are hunting for, you will probably have better luck diving for them. Although you

may occasionally find larger teeth and fossils if you shore dive from the area beaches, the true "Boneyard" is ½ to 1 mile off the beach at a depth of about 30 feet. This fossil bed started about 50 million years ago. In addition to covering the dead marine animals, the remains of land animals also became part of the formation when the sea levels were high. In addition to the Megs you can find a variety of fossils from mammoths, dire wolves, glypodonts, giant ground sloths, horses, and turtles from the Miocene, Pliocene, and Pleistocene epochs in the Boneyard.

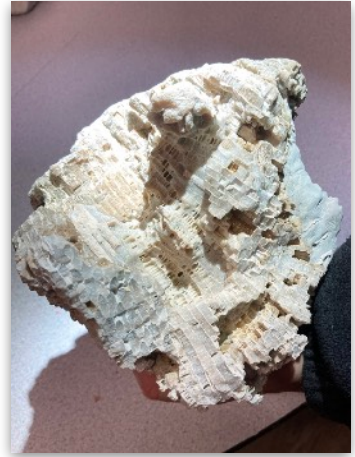
There are dive charters going

out most days with people in search of the perfect Meg. The diving conditions are not great in the area and the visibility is typically less than 5 feet. However, there are lots of fossils to be found. To hunt for the teeth you need to swim close to the bottom. Since you are only diving at a depth of 30 feet., you are able to stay down for quite a while. Even though we did not find the 5 inch Meg we were hoping for, we did find several smaller Megs. We also found fossil shell casts, dugong and whale bones, and a part of a mammoth tooth. I am looking forward to diving again and finding that perfect Meg!

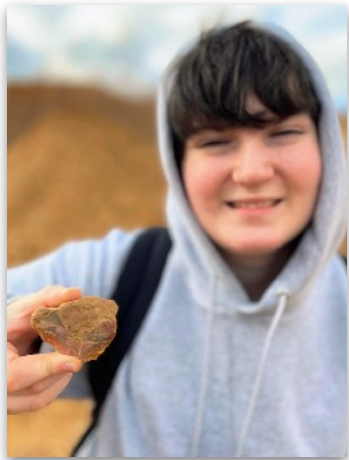


Memphis Stone & Gravel Weekend

Friday Meeting: MAGS Member and Memphis Stone & Gravel Co. VP Alan Parks presented the program, and Members brought some nice specimens to display.



Saturday Field Trip: The morning started out chilly, but that didn't stop over 40 MAGSters from searching for treasures. Of course the best rocks were at the top of the pile.



Luke Ward found a good one.

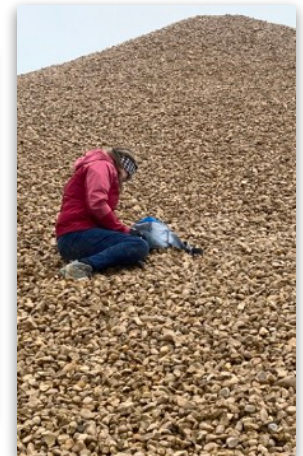


Alan lays out the ground rules.



Photo Credits
Kerrie Rogers
Matthew Lybanon

Lunch



Fabulous Tennessee Fossils

Dr. Michael A. Gibson,
University of Tennessee at Martin

FTF 94

James X. Corgan—APSU Paleontologist



Dr. James Xavier Corgan, Jr. (August 9, 1930–August 20, 2012) was a good friend of mine, a professional colleague with whom I conducted research and published papers, and a mentor during my early career. Corgan was born in Lucerne, Pennsylvania, but graduated from Cardinal Hayes High School in the Bronx of New York (1948). Sgt. Corgan served in the U.S. Army during the Korean War. He then earned his B.A. in Geology from New York University (1955) and worked as a groundwater hydrologist for the U.S. Geological Survey in Long Island, New York. In 1956 he began his M.S. thesis at Columbia University, while also doing field work in Mexico, Guatemala, and Honduras for the American Museum of Natural History, and finished his quantitative analysis of poikilohaline molluscan associations in 1957. He was employed by Sinclair Oil from 1957–1968. Soon after arriving at Austin Peay State University (APSU) to teach their first geology courses, Corgan took an eight month sabbatical to study Quaternary micromolluscs of the Mudlumps Province, Mississippi River Delta, which led to him earning a Ph.D. from Louisiana State University in 1968. In 1972, Corgan established the geology program at APSU, where he remained a faculty member and department chair until his retirement in 1991. Corgan's career interests were broad and his publica-

tions span the fields of paleontology, general geology, meteorites, topography, history of science, history of medicine, history of education in Tennessee from grade school through college, and much more. Corgan was elected a Fellow of the Tennessee Academy of Science in 1977.

Jim Corgan's first contribution to paleontology was to describe and name a new species of brittlestar from the Cretaceous of the Alaska Yukon. He then turned his attention to a paleoecological study of Devonian fauna in the region. This is when he narrowed his primary paleontological interest to mollusks, especially gastropods. Over the next 20 plus years, he collaborated on more than 20 international articles related to modern and fossil gastropods with his most influential contribution being a reorganization of the pyramidellidae. Corgan's contributions to pyramidellid gastropods taxonomy were recognized immortalized with two species named in his honor: *Turbonilla (Terebronilla) corgani* Eames, 1968 (later revised to *Turbonilla corgani Okutai* when he caught a naming error himself) and a monacultid bivalve, *Litigiella corgani* van Aartsen, 1997. Corgan himself described and named over 48 new pyramidellidae taxa.

With respect to Tennessee paleontology, Corgan demonstrated versatility in studying varying

fossil groups and systems. His many papers at the Tennessee Academy of Science and South-eastern Geological Society of America include studies on trilobites, bivalves, crinoids, blastoids, gastropods, worms, trace fossils, some plants, and many vertebrates. He was particularly fond of Tennessee fossil vertebrates resulting in his 1976 Tennessee Division of Geology Bulletin 77, *Vertebrates of Tennessee*, which became one of the most cited and popular sold by the Survey. It was revised in 1996 as Bulletin 84, *Tennessee's Prehistoric Vertebrates*, co-authored with Emanuel Breitburg.

James X. Corgan was also passionate about any type of history, but especially science history and the history of geologic education. He published many articles and papers of biographical nature on geologists, paleontologists, medical doctors, educators, and agriculturalists. He researched entire geology programs in the south and published two books on the history of geology in the south. I had the honor to work with him on Tennessee's first great paleontologist, Gerard Troost, publishing four articles with Jim. We were working on several projects together at the time of his passing. We used Troost's original field books to evaluate Troost's travels. We were able to trace three separate trips Troost made collecting fossils in West

Continued, P. 7

Fabulous Tennessee Fossils Tennessee
Continued from P. 6 and

Northern Alabama. We documented that Troost was probably the first paleontologist to see a fossil from the Coon Creek Formation. Later, I had the honor of being with him on numerous field trips in West Tennessee and Northern Mississippi. We were among the first to visit the now classic Frankstown site in Northern Mississippi before the discovery was public. Of all of the vertebrates that Corgan studied, he was most fond of mastodons. Upon his passing in 2012,

Early Humans In New Mexico
Continued from P. 3

now North America were the Clovis people, who arrived around 13,000 years ago, after the glaciers in Canada retreated. New evidence suggests that humans were here much earlier, when ice sheets still covered much of northern North America.



The Tularosa Basin in southern New Mexico, home to White Sands National Park, is the location of one discovery. In 2009 David Bustos, a National Park Service biologist, came across tracks he thought belonged to ancient humans walking alongside mammoths. Previously he had noticed odd animal footprints that would appear only when the ground was wet. The markings,

he willed his entire library (seven file cabinets full of articles, reprints, and papers along with over 50 books) to me for safe keeping. I have enjoyed perusing the library and reading his copious annotations of everything he read while researching for his writings. He had a wonderful sense of humor and was well-known for his formal, but unique, delivery of his research papers. James X. Corgan was a prodigious scientist who quietly made a huge impact on Tennessee paleontology as well as geology in general.



Figure 1. Photo of APSU paleontologist James X. Corgan, Jr.

which would disappear as the earth dried up, became known as ghost tracks.

The human tracks would also disappear with changes in the weather. Heavy rainfall drowned them; periods of drought dried them up. It would take more than a decade for scientists to agree that these were human tracks.

The research team identified 61 human tracks within multiple levels of earth belowground, and between layers of these tracks were seeds from an ancient aquatic plant. Analyses of these seeds, and the footprints they were embedded within, are now challenging scientists' understanding of when and how people arrived in the Americas.

The team extracted 40 to 60 ditchgrass seeds from every level of footprints in every sample. Radiocarbon dating revealed that the footprints they were embedded within are between 21,000 and 23,000 years old. Archaeologist Joe Watkins (former chief of the

Tribal Relations and American Cultures Program of the National Park Service) says that if the dating of the seeds, and therefore footprints, is correct, "it puts us at 20% older than the dates we have from the rest of America." So ages of other important archaeological sites like Meadowcroft Rockshelter in Pennsylvania, where scientists have found 16,000-year-old evidence of human life, may need to be reconsidered.

Those footprints may predate the Clovis people by 10,000 years. But other research pushes the earliest known date of human occupation of the area even farther back.

Timothy Rowe, a paleontologist and professor in the University of Texas Jackson School of Geosciences, owns property in New Mexico. A neighbor spotted a tusk weathering from a hillside on the property in 2013. When Rowe went to investigate, he found a bashed-in mammoth skull and other bones that looked deliberately *Continued, P. 8*

Early Humans In New Mexico
Continued from P. 3

broken. It appeared to be a butchering site. Thanks to carbon dating analysis on collagen extracted from the mammoth bones, the site has a settled age of 36,250 to 38,900 years old, making it among the oldest known sites left behind by ancient humans in North America.

Running CT scans on several samples from the site revealed 32 bone flakes with noticeable fractures that the team argued could not be explained by geological processes or scavenging. About half of the bone flakes had sharp edges suitable for cutting.

The CT scans also revealed that several of the mammoths' ribs and vertebrae had punctures, invisible to the naked eye due to how bone-colored sediment filled them in. The team believes these punctures may have been to hasten the draining of grease from the bones.

Although the mammoth site lacks clearly associated stone tools, Rowe and his co-authors discovered an array of supporting evidence by putting samples from the site through scientific analyses in the lab. Among other finds, CT scans taken by the University of Texas High-Resolution X-ray Computed Tomography Facility revealed bone flakes with microscopic fracture networks akin to those in freshly knapped cow bones and well-placed puncture wounds that would have helped in draining grease from ribs and vertebral bones.

In addition, chemical analysis

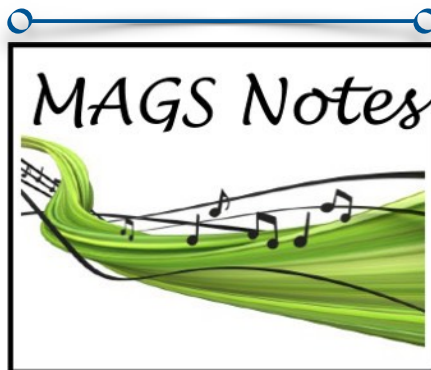


Three mammoth ribs from the site, showing (top to bottom) blunt force trauma, a puncture wound, and evidence of chopping.

of the sediment surrounding the bones showed that fire particles came from a sustained and controlled burn, not a lightning strike or wildfire. The material also contained pulverized bone and the burned remains of small animals—mostly fish (even though the site is over 200 feet above the nearest river), but also birds, rodents and lizards.

References:

- M.R. Bennett et al., *Evidence of humans in North America during the Last Glacial Maximum. Science* 373, 1528–1531 (2021).
- Rowe T.B., et al. (2022) *Human Occupation of the North American Colorado Plateau ~37,000 Years Ago. Front. Ecol. Evol.* 10:903795. doi: 10.3389/fevo.2022.903795.



The December program, for

both adults and juniors, will be the annual Holiday Party. There will not be a December MAGS field trip. The next issue will start listing 2023 MAGS events.

Don't miss the changed January February Membership Meeting dates, detailed in the President's Message on P. 3.

🎵 **New Members**

Cliff & Vicki Caudle and grandson Logan Tucker

Francis "Mitch" Mitchell

🎵 **December Birthdays**

- 5 Juliet Buckholdt
- 6 David McAlister
- 7 Mitchell Childress
- 8 Alan Schaeffer
- 12 Marc Mueller
- 13 Hongbing Wang
- 14 Michelle Rea
- 15 Kathy Baker
Jerry Seamans
- 18 Sarah Duhé
- 19 Paula Gunter
- 20 Wingfield Bouchard
- 21 Sarah Jonkus
- 23 Jim McNeil
- 24 Jocelyn Ashurst
Allen Grewe
- 29 Bebe Buck
- 30 Michael Parry
- 31 Angie Childers

🎵 **Want to Be a Member?**

To become a MAGS Member, just go to our website at www.memphisgeology.org and print out an application form. There is a prorated fee schedule for new Members only. Mail

Continued, P. 9

MAGS Notes the completed application along with the dues payment to the Membership Director shown on the form. If you are unable to print the application, you can pick one up at the sign-in desk at any of our Friday night Membership Meetings, or simply join at the meeting. Visitors are always welcome at our Membership Meetings but membership is required to attend our field trips.

The most important benefit of being a MAGS Member is getting to know and make friends with other Members who have similar interest in rocks, minerals, fossils, and archaeology. All new Members will receive a New Member Packet, a MAGS ID card, and a monthly newsletter via email. Members are entitled to go on our monthly field trips and get free admission to our annual Show.

October Board Minutes

Mike Coulson

Zoom meeting called to order 6:30. Present: W.C. McDaniel, Carol Lybanon, Matthew Lybanon, Bonnie & Bob Cooper, Mike Coulson, Mike Baldwin, Nannett McDougal-Dukes, Melissa Koontz, Dave Clarke, Jim Butchko, Kathy Baker.

New Business: Think about free family membership for those serving on the Board.

Show: Show meeting scheduled for Monday October 10, 6:30pm at the Agricenter. Considering using the Fossil Food Table photo for the post-card design in 2023. 2023 Show will be held at the Agricenter. Final plans are being discussed. Jim Butchko appointed Show Chair for 2023.

Treasurer: Report presented to

Board and approved. Newsletter printed and mailed out.

Membership: Two new memberships, one individual and one family.

Secretary: Minutes submitted via email, presented to Board and approved.

Adult Programs: October 14: Mike Baldwin, Careers in Geology. November 11: Alan Parks, Memphis Stone & Gravel, gravel mining. December 9: Holiday Party.

Field Trips: Jim Butchko. 8-10 people went to Richardson's Landing last month, finding agates and fossils. October 15: Noncannah Creek. November 3-6: Missouri Trip led by Betty Marler. November 12: Memphis Stone & Gravel, specific location TBA. No field trip in December.

Youth Programs: October 14: Youth combined with adults for Mike Baldwin presentation on collecting and careers in geology. November 11: Plant/Fossil activity. December 9: Combined Youth and Adult Holiday Party.

Editor: October newsletter completed and out. Deadline to submit content for the newsletter is the 20th of the month.

Web: Website is updated. Still having issues uploading content.

Rock Swaps: October 8 swap will be at the home of Lou White, 9 am-2 pm.

Library: Library is doing great. Traded some books and picked up several great books from Nashville on Native Americans.

Old Business: None.
Adjourned 7:40.

October Meeting Minutes

Mike Coulson

Mike Baldwin was the speaker at the Membership Meeting and presented on collecting and careers in geology.

Federation News

Most MAGS Members know that MAGS is a part of "the Federation," but some of the newer members may be unclear about the details.

There are actually several Federations. The top level organization is AFMS, the American Federation of Mineralogical Societies. The stated purpose of the AFMS starts off "To promote popular interest and education in the various Earth Sciences, ...". You can imagine the rest.

The AFMS is composed of seven similar regional organizations. MAGS is one of more than 80 clubs in the southeastern U.S. that comprise the Southeast Federation of Mineralogical Societies (SFMS).

The most direct effect of belonging to the SFMS is that the liability insurance that gains us entry to many of the collecting sites we go to on field trips comes through the SFMS. And speaking of field trips, MAGS participates in the SFMS's Dixie Mineral Council (DMC) Field Trip program, which organizes shared field trips with other DMC clubs.

The SFMS also sponsors the William Holland (in north Georgia) and Wildacres (in North Carolina's Blue Ridge Mountains) workshops, a variety of workshops in various facets of the lapidary arts.

Links to Federation websites, and information about each month's DMC field trip, can be found on P. 2 of every issue of *MAGS Rockhound News*.

MAGS At A Glance

December 2022

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
27	28	29	30	1 Zoom Board Meeting, 6:30 pm	2	3
4	5	6	7	8	9 <i>HOLIDAY PARTY</i>	10
11	12	13	14	15	16	17
18 <i>Happy Hanukkah!</i>	19	20	21 <i>WINTER IS HERE!!!</i>	22	23	24
25 <i>Merry Christmas</i>	26	27	28	29	30	31 <i>Bring on the NEW YEAR!</i>

Memphis Archaeological and Geological Society
 2019 Littlemore Drive
 Memphis, TN 38016

