

# MAGS ROCKHOUND NEWS

Volume 70 ♦ Number 06 ♦ June 2024 ♦ A monthly newsletter for and by the members of MAGS

## Meetings Combined

*June-July MAGS Membership Meeting*



MAGS Meetings are taking a brief summer vacation. The June and July MAGS Membership Meetings will be combined because we have been unable to secure a program for June. The combined meeting will be on Friday, July 12, 7:00 P.M., at Shady

Grove Presbyterian Church. MAGS Member Ryan Pudwell will speak about Nonconnah Creek.

The August MAGS Membership Meeting will be the annual summer indoor rock swap. Meetings should follow the regular schedule for the rest of 2024.

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### A VERY SPECIAL PAINTED ROCK

This story starts Sunday morning at the MAGS rock and mineral show. The doors are open and I see a friend with his granddaughter, about 3½ to 4 years old. She walks up to the 901 Rocks painting table and has her grandpa pick her up to see all the painted rocks of dinosaurs and other things. This sweet little girl said "Oh



### NANNETT MCDOUGAL-DYKES

Ms. Nannett, your dinosaurs are all wrong, and they don't have teeth like that and they're all happy on the Dino Train. The dinosaurs all live together and go on adventures on the dino train and work together."

I had no idea what the Dino Train was and what she was talking about, but she was not having my painted dinosaur

*Continued, P. 3*

# MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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## 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 Membership Meetings are at 7:00 P. M. on the second Friday of each month May-October, and 10:00 A.M. on Saturday after the second Friday November-April. The meetings are held in the Fellowship Hall of Shady Grove Presbyterian Church, 5530 Shady Grove Road, Memphis, Tennessee.

MAGS Website: [memphisgeology.com](http://memphisgeology.com)

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



Please contribute articles or pictures on any subject of interest to rockhounds. The 20th of the month is the deadline for next month's issue. Send material to [mlybanon@yahoo.com](mailto:mlybanon@yahoo.com).

Go to <https://www.southeastfed.org/sfms-field-trips/dmc-field-trip-program> for the DMC field trip schedule and other information.

### Links to Federation News

- ➔ AFMS: [www.amfed.org/afms\\_news.htm](http://www.amfed.org/afms_news.htm)
- ➔ SFMS: <https://www.southeastfed.org/>



*A Very Special Painted Rock* rocks  
Continued from P. 1 having  
scary  
teeth and not looking soulful. So, I  
took out my phone and Googled  
Dino Train Cartoon, and sure  
enough there it was.

This little girl said that I had  
to find the right rock and paint a  
Soulful and Happy Dinosaur with  
**NO** scary teeth. She was totally  
serious, and said they would walk  
around and be back. So, off they  
went and I had marching orders.  
So, I go through the buckets of  
rocks looking for the right one,  
and there it was. I started painting  
my Soulful, Caring Dinosaur for  
the next 45 minutes, because I'm  
on a deadline here ... the pressure  
was on.

I finished painting just as my  
friend's granddaughter walked up.  
She was so happy with my Soulful  
Dinosaur, that I received a hug  
and she sang me The Dinosaur  
Train Theme Song.

As this little girl walked away  
after she painted a rock, I smiled  
and thought she may not remem-  
ber this Sunday morning at a rock  
show, but I will for the rest of my  
life. Volunteering at the Show has  
always been special, but this year



it was a little more.

Thanks everyone for the  
buckets of rocks for the 901 Rocks  
table. On Saturday there were 197  
happy rocks painted and Sunday  
91 more. I have six more events to  
set up for the 901 Rocks table this  
year.

Thanks, W.C. and Board for  
the amazing 901 Rocks banner. I  
will take it, to each event and hang  
it. I will also take MAGS Mem-  
bership applications with me.

Thank you,  
*Nannett McDougal-Dykes*  
901 Rocks Painter  
MAGS Member

## From The Show

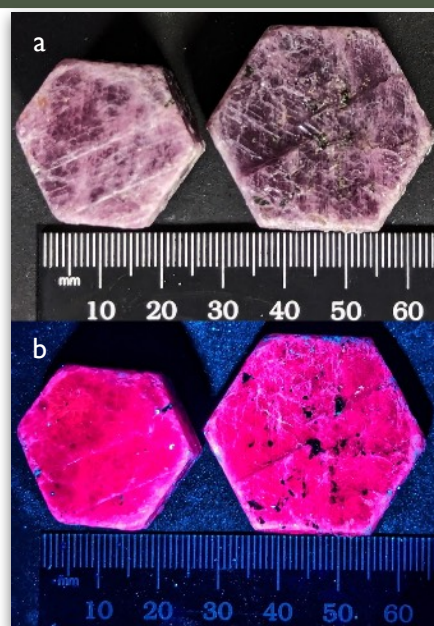
*Michael Howard*



Stephanie Blandin and I visit-  
ed this year's MAGS Show on Sat-  
urday and I found these two fluo-  
rescent specimens which later I  
photographed and added to my  
fluorescent mineral collection, so I  
would call it a successful trip over  
and return to Little Rock! I also  
enjoyed seeing many of my friends  
while at the Show, but unfortu-  
nately I missed seeing W.C., as he  
was, according to his wife, making  
certain everything was running  
smoothly!

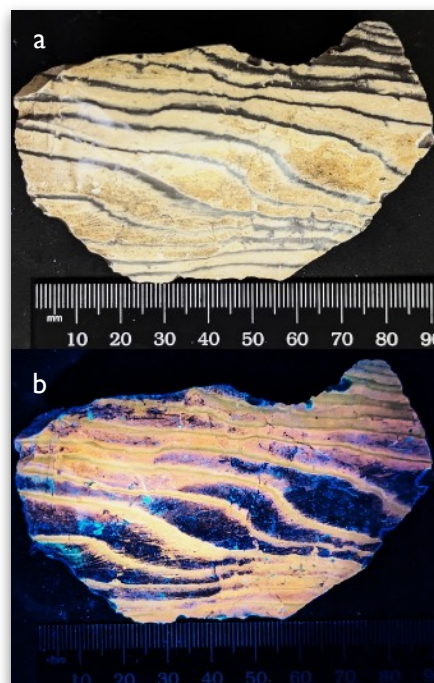
From Jim and Hisami, I picked  
up the two ruby crystals, and from  
one of the centrally located dealers  
I bought the stromatolite speci-  
men!

Enjoy the pictures!



Corundum, var. Ruby, Mysore  
Corundum Deposit, Karnatakan  
State, India

a. Natural Light  
b. LW 365nm



Stromatolite, Zebra, Middle Eocene,  
Green River Fm., Tipton Shale Mbr.,  
Cedar Mountain, Park Co., WY.

a. Natural Light  
b. LW 365nm



# MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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## Show Scenes

Here are a few memories from the 2024 Memphis Mineral, Fossil, Jewelry Show



The top left photo and the one below it show the difference a few minutes made—from a little before the Show opened until shortly after.



Grand Prize Winner

Photo credits:  
Carol Lybanon  
Matthew Lybanon  
Debbie Schaeffer



Many thanks to those MAGS Members who volunteered to help at the Show. It's a big show with vendors, demonstrations, kids activities, booths for universities and other clubs in the area. Setting it up and keeping it running takes people working together. We couldn't have done it without your help. And isn't it more fun to be involved?

**Fabulous Tennessee Fossils**

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

**FTF III**

Mark's *Callixylon*



Most of the time, when collectors, or interested fossil collectors, bring me something to identify, they cannot tell me the exact location of the find. When asked, I get a lot of those southern directions like “near the big rock by the river outside of (put your own town name here), where everyone goes swimming”. Doesn’t help much. It is understandable as many of the people bringing me their specimens found something that is odd to them and do not realize that locational context, especially stratigraphy, is important to fully identifying the fossil organism, especially when the most important identifying features are not present or have been altered by preservation, exhumation, or transportation processes. Just before Covid-19 hit and UT Martin was required to shut-down, I received a call from a local fisherman, Mark, from Springville, Tennessee, not far from Big Sandy Unit of the Tennessee National Wildlife Refuge on the Tennessee River, who collected a large rock that he was pretty sure was a series of attached vertebrae of a mastodon, and wanted me to confirm this. He had no photographs of the specimen or the site to show me, but offered to guide me there sometime, but it would have to be by boat.

Mark met me at UTM one afternoon a couple weeks later with his find (Figure 1). Immedi-



Figure 1. Permineralized *Callixylon* tree trunk collected by fisherman Mark along the Tennessee River, probably from a Late Devonian outcrop long lost to erosion. The longitudinal lines cutting across the specimen are probably infilled shrinkage cracks in the original pre-fossil wood (Photo Credit: MAG).

ately, I could see that he did, indeed, have a fossil find; however, I was not sure that it was vertebrae from a mastodon. It is easy to see why he thought these were vertebrae though: large, heavy, segmented pieces fitting together in a series, and mastodons are certainly known from most of middle and west Tennessee. As with many preliminary identifications by amateurs, the devil was in the details. Beyond the simplified first impressions, the smaller-scale details of the features revealed that the mystery fossil was not vertebrae at all (e.g., segments fit too snugly for vertebrae, composition not typical of bone material, finer-scale internal “grain” texture of each segment did not resemble bone structure, etc.).

Mark’s specimen was collected from “gravel and mud along the banks of a creek that empties into the Tennessee River, at low water”. He had cleaned it well, so none of the enclosing matrix was attached, but from his description of it, the sediment was most likely re-worked slope deposits from the bluff area along the creek that had accumulated at the bottom of the creek valley. Mark’s fossil was the only thing in the deposit like this, although there were large rounded “river rock” in the same sediment, just not this large. Mark could not be sure where on a map where he was when he collected the fossil, so the geologic map of the area was not going to help, unless we did the boat trip to allow me to pinpoint the exact spot from which he collected his fossil. We agreed that I would meet with him sometime soon (I planned on getting the contact information when we set a field date), when the water level permitted, and I could get the time and go fossil hunting at the locality. Then Covid hit and we shut down for over a year. When I was able to do fieldwork with the public again, I was not able to contact him at the phone number he supplied (he also did not have an email). He has not called back in several years now. I did not have enough locality information to find the place and he never provided me his address. Dead end.

*Continued, P. 6*



*Fabulous Tennessee Fossils* As it turns out,  
*Continued from P. 5* Mark's

fossil is a plant. It appears to be the core of a slightly flattened, fossilized tree trunk belonging to the genus *Callixylon*. I base this identification on microscopic structures that are visible in a small fragment of the fossil that I broke-off and polished. Plant cell-structure is present and the pattern most-closely fits this genus. This specimen is "permineralized", meaning that silica has percolated through the cell structure of the tree, preserving the "woody" internal portions of the trunk. The bark and any appendages were either not preserved, or did not get redeposited when this trunk section did. The segmented nature is a typical feature of permineralized *Callixylon* tree trunks and is due to the change in cell structure that occurred in a regular pattern (distance) along the trunk being differentially permineralized and then eroded. There actually is no real segmentation in the plant, but it preserved that way, hence fooling some to think these are vertebrae segments. Microscopically, typical plant tracheids, vessels, xylem, and phloem cells, are visible in permineralized form.

*Callixylon* is the genus term used by paleobotanists for permineralized woody tissue of another genus of plant called *Archaeopteris*. Wait! How can a genus of plant have another genus name too? Linnaean genus and species names are unique, right? You are right. Here is where paleobotany runs into an issue that has plagued it since its inception. I first wrote about this in FTF 16 (2016) when

writing about the fossil root system *Stigmara*. Essentially, as paleobotanists describe new fossil plants, they erected new names for different parts of the same plant, without realizing it. The taxonomic "Law of Priority" stipulated that the oldest name for the plant is the actual "whole" plant name. The other "invalid" genus names are still useful however, because they do convey specific preservation styles or plant parts, so they remain in use. In the case of Mark's fossil, his permineralized trunk belongs to the genus *Callixylon*, which is the plant *Archaeopteris*, the whole-plant genus name because it was named earlier. *Archaeopteris* is identified based upon the foliage (e.g., leaves, etc.). *Callixylon* (and *Archeopteris*) is a "progymnosperms", which later gave rise to modern gymnosperms (e.g., conifers (pine), cycads, and ginkgo trees).

Is Mark's *Callixylon* unusual or unique for the region? It is not "unexpected," however it has rarely been found in West Tennessee. *Callixylon* ranged from Early Devonian – Early Mississippian in age; their heyday was the Late Devonian. There are no Late Devonian-Mississippian or younger Paleozoic rocks exposed anywhere near where Mark found his specimen (this area has Late Silurian – Early Devonian rocks, capped with Neogene reworked gravel terraces from the ancestral Tennessee River (although some Chattanooga Shale outcrops occur further north on the east side of the Tennessee River. Also, the surrounding rock units are all marine paleoenvironments), so that helps confirm the reworked nature of

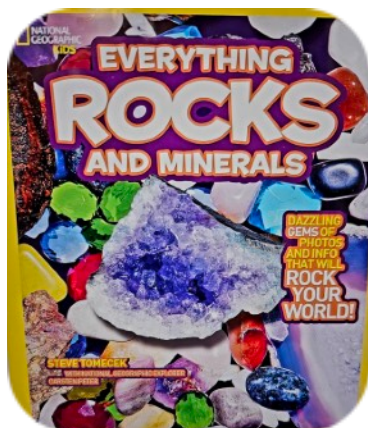
this trunk from a place that did have rocks of this age range, most likely Late Devonian, and correct paleoenvironment. How far away? Well, all we can note is that this is a fairly large clast to be moved by the modern Tennessee River? So, how would a terrestrial tree end-up in marine rocks in West Tennessee. From sites in Kentucky, it is known that *Callixylon* sometime could occur as driftwood logs that floated out to the adjacent seas. This is known because marine "hitchhiker" species (brachiopods, crinoid, bivalves, etc.) were found attached to the fossil wood in those areas. Sadly, Mark's *Callixylon* does not preserve anything like that. So, just where his tree originated, and how and when did it become permineralized, how and when did it later get reworked, and how was it redeposited into the sediments from which Mark salvaged it will remain mysteries for now. Still, Mark's specimen remains one of the only *Callixylon* log segments found in West Tennessee and Kentucky is not that far away. Perhaps we have Kentucky driftwood? Also, folks, do me a favor and be sure to document collecting localities for your finds in a detailed a way as possible. Mark them on a map, get GPS coordinates, and photograph everything on multiple scales (close-up and back far to show surrounding features), with scales in the photo. The surrounding context for fossil finds is often as important as the fossil. Happy fossicking!

**Editor's Note:** The word "permineralized" is the correct term people are seeking when they say something is "fossilized."

## New Library Book

*Nannett McDougal-Dykes*

*Everything Rocks and Minerals*  
by National Geographic Kids  
Everything



This is an amazing fun book for the Junior section of our library.

This book is targeted for those rock-crazy kids. This bold book has more energetic, more visually exciting information than a lot of books I have come across. There are eye-popping photos and layers of information made extra fun throughout the book. There are humor-infused presentation and fun activities to try. This is an amazing fun book that brings science to life for all ages.

## Anthropocene Epoch?

*Matthew Lybanon, Editor*

Last summer, baseball stars Fred McGriff and Scott Rolen were inducted into the Hall of Fame. The two newest members of this exclusive fraternity spoke of their families, thanked teammates, coaches and managers, and tried to put into words what being a Hall of Famer now means to them. McGriff made it on his first

try, but it took Rolen six tries to get into the Hall. Something similar may be happening in the geological world.

After 15 years of discussion and exploration, a committee of researchers has decided that the Anthropocene—generally understood to be the age of irreversible human impacts on the planet—will not become an official geological epoch. In March 2024 the Subcommittee on Quaternary Stratigraphy (a constituent body of the International Commission on Stratigraphy (ICS), the largest scientific organization within the International Union of Geological Sciences) rejected a proposal that would mark the start of the Anthropocene epoch in the mid-20th century, when global trade, nuclear weapons tests, and rampant fossil fuel consumption radically altered the Earth.

Researchers overwhelmingly agree that people have transformed the climate and put ecosystems in peril. But most members of the Subcommittee on Quaternary Stratigraphy felt this “Age of Humans” should not be rigidly defined as an epoch—a stretch of geologic time that typically spans thousands or even millions of years.

“It suggests that all of a sudden, within my lifetime, the changes that are affecting the planet suddenly appeared,” said Philip Gibbard, a geologist at the University of Cambridge who voted against the Anthropocene proposal. “But humans have in fact been influencing the natural environment for 40,000 years.” Yet proponents of the new epoch say

that humans have caused greater changes in the past seven decades than in the thousands of years that came before—and that the geologic timeline should reflect our overwhelming influence.

Though artists, activists, and academics have used the term “Anthropocene” for decades, the debate over its geologic definition didn’t begin in earnest until 2009, when the body that oversees Earth’s 4.6-billion-year timeline appointed a working group to investigate the idea.

In a search that spanned from mountain summits to the depths of the oceans, the Anthropocene Working Group identified more than 100 distinct markers of how human activities have left an imprint on Earth’s geologic record. Some examples: Pollen grains at the bottoms of lakes documented how rising global temperatures were changing the compositions of forests. A host of entirely new substances—microplastics, mine waste, the bones of unnaturally large chickens—could be found in almost every corner of the planet.

The rejection doesn’t mean it’s over. Like Scott Rolen and the Hall of Fame, the Anthropocene Epoch may yet become official. Anthropocene advocates—including two leading members of the panel that just voted—say the decision by the Subcommittee on Quaternary Stratigraphy violated the rules for naming new geologic time spans. Subcommittee chair Jan Zalasiewicz and vice-chair Martin Head called for an investigation into the voting process that could lead to the decision being overturned.

*Continued, P. 8*

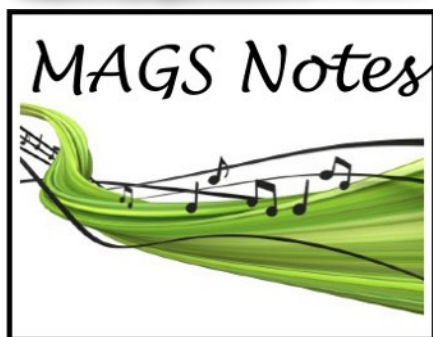
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*Anthropocene Epoch?* Unless the ICS overturns the decision, the subcommission's rejection represents the end of the line for the working group's current effort. Under the rules of geologic time-keeping, researchers cannot submit another Anthropocene proposal for at least 10 years. But that doesn't mean the "Age of Humans" has no place in geology research, said Gibbard, who is also the secretary general of the ICS. He has advocated for the Anthropocene to be defined as a geologic event—a looser term that can describe phenomena that unfold in multiple places at different times.



In order to continue with extra MAGS activities, we need our Members to participate. Do you want field trips and rock swaps? The more of you who show up, the better. MAGS will host a DMC field trip in October. We hope to see lots of MAGSters there.



## Adult Programs

**June 14: No meeting. Combined with July meeting.**

**July 12:** Ryan Pudwell, Nonconnah Creek

**August 9:** Indoor Rock Swap

## Junior Programs

**June-August:** Same as Adult Programs.

## Field Trips

**June:** Chucalissa field trip canceled

**July/August:** Arkansas

## June Birthdays

1	Pat Judd
8	Sharon Fewell
14	Grace Benz
15	Yazsin Boteti
16	Ann Williams
18	Debbie Schaeffer
20	Roger Lambert
25	Doris Johnston
29	Cornelia McDaniel

## April Board Minutes

Josh Anderson

Zoom meeting called to order 6:32 P.M. Present: W.C. McDaniel, Christine Anderson, Joshua Anderson, Nannett McDougal-Dykes, Bonnie Cooper, Matthew Lybanon.

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

**Treasurer:** Report approved. Taxes still to be filed 2024.. Large check written to SFMS.

**Membership:** 3 new Members. Several renewals have come in and more expected at Show.

**Field Trips:** April 20, Earth Day at Chucalissa (MAGS table). • May 4, 20 Mile Creek, joint trip with N. Miss. Club. June 15, Chucalissa; MAGS will have family day event. July/August, Arkansas, Blanchard Creek Cave tour fossil hunting in Sylamore Creek, possible side trip to Leslie. September TBA. • October, DMC, date/site TBA. • November, TBA. • December, no trip.

**Youth Programs:** Position empty, need chair, adults and youths folded together for now.

**Adult Programs:** Need speakers for 2024. Will coordinate with W.C. for possible candidates. • May, Dr. Julie Johnson, U. of Memphis Geology. June, Open. July, Ryan Pudwell, Nonconnah Creek. August, rock swap. September, open. October, Dr. Ryan Parish, U. of Memphis Archaeology.

**Library:** New book: *The Telling of the Earth*, reviewed and book report being submitted.

*Continued, P. 9*



**April Board Minutes** **Editor:** Requests new material and events for newsletter. Ideas for submissions are recipes, book reports, etc. Will update masthead borders on newsletter to 2024 and delist assistant positions.

**Rock Swaps:** No report.

**Show:** Dealers, security, and insurance finalized. Digital Signage, Walnut Grove sign for Agricenter. We are awaiting more information.. Contact information for Show 2024 emailed to Agricenter. Saturday, 4/6: Some to meet at storage facility to pick up material at 9am. Everyone is to meet at church at 10A.M. for grab bag packing for Show.

**New Business:** Matthew needs to reorder checks for the show bank account. 250 checks is MOQ. This amount would last for years. Price is also high. Will research other options.

**Old Business:** None.

Adjourned 7:04 P.M.

## Written In Stone

*Matthew Lybanon, Editor*

If you're a MAGS Member, you probably have rocks in and around your house. Stone is a building material, something to make countertops from, and it has many other uses. But here's a use you may not know.

In the spring of 2020, a man named Graham Senior was pulling weeds in his garden in Coventry, England, when he unearthed a rock with some unusual markings. He didn't know exactly what it was, but he thought it might be something noteworthy.

He was right. The rock was covered in 1,600-year-old markings from an early medieval alphabet known as **ogham**. Ogham,



## May Meeting

Dr. Julie Johnson of the University of Memphis talked to MAGS about "The Crystalline Chronicles," some of the secrets of igneous and metamorphic rocks.



which consists of groupings of parallel lines, was used to write an early version of the Irish language beginning around the fourth century. These markings were usually inscribed in materials such as (you guessed it) stone.



The rectangular rock measures roughly four inches long and weighs about five ounces. Senior, a 55-year-old geography teacher, found it buried about four or five inches deep in one of his flowerbeds. After washing it off, he sent a few photos to a relative—who is an archaeologist.

The relative suggested he contact the Portable Antiquities Scheme, a British Museum initiative that records artifacts discovered by members of the public. Since the program launched in the late 1990s, it's recorded more than

1.4 million items.

The museum consulted a Celtic studies expert at the University of Glasgow, who identified the inscription as ogham. The ogham script was likely carved into the rock sometime during the fifth or sixth century, though the markings may have been made as early as the fourth century. According to the listing in the Portable Antiquities Scheme's database, the rock is probably mudstone or shale.

The inscription reads: "Maldumcail / S / Lass." Researchers aren't sure what "S / Lass" means, but one theory is that it refers to a location. They think "Maldumcail" is a person's name, likely "Mael Dumcail." The stone's purpose is also unclear.

Ogham stones are usually found in Ireland or Scotland, so unearthing one in central England is unusual. The newly discovered artifact may have been transported by early medieval monks or clerics moving around to different monasteries.

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## MAGS At A Glance June 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
26	27	28	29	30	31	1
2	3	4	5	6 Zoom/Email Board Meeting, 6:30 P.M.	7	8 DMC Field Trip
9	10	11	12	13	14 No Membership Meeting 	15 Chucalissa field trip canceled
16 	17	18	19 	20 	21	22
23	24	25	26	27	28	29
30	1	2	3	4	5	6 June/July Membership Meeting July 12

Memphis Archaeological and Geological Society  
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Cordova, TN 38088

