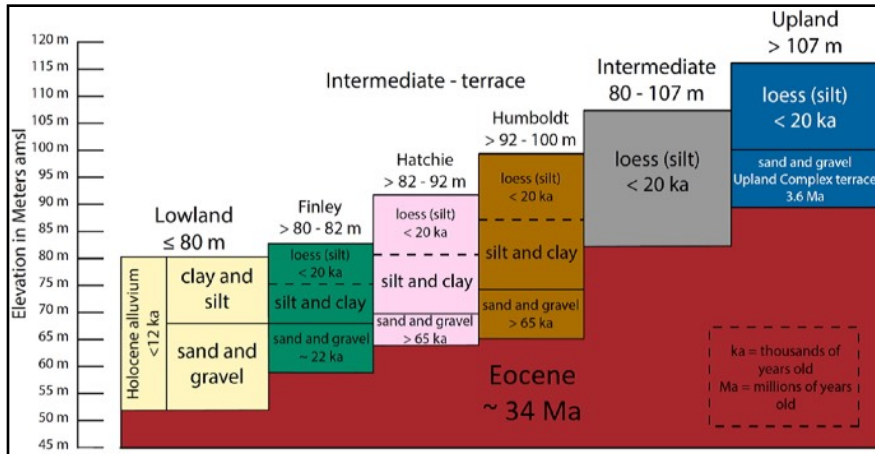




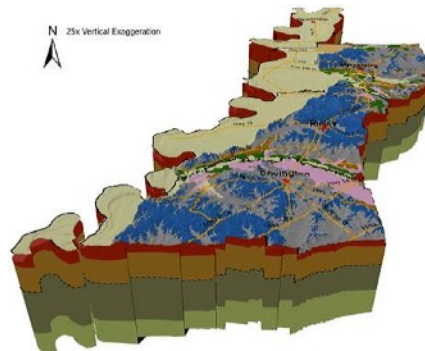
Volume 68 ◊ Number 03 ◊ March 2022 ◊ A monthly newsletter for and by the members of MAGS

Groundwater in Southwestern Tennessee

Dr. Roy B. Van Arsdale, Emeritus Professor of Geology at the University of Memphis
March Program



My presentation is about the geologic history of southwestern Tennessee and its water systems. The major source of groundwater in southwestern Tennessee and surrounding area is the approximately 40-million-year-old Memphis Sand. The Memphis Sand is an ancient river flood plain sand that was deposited during the formation of the Mississippi embayment. Currently the Memphis Sand is at the ground surface in Fayette County and dips slightly to



the west underneath Shelby County where it is covered by younger clay, silt, and sand

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LAST-MINUTE MAGS MEETING CHANGES

Less than 24 hours before the February MAGS Membership Meeting the church still did not have electric power restored, so the Board canceled the in-person part of the meeting. Despite strenuous efforts to notify Members, some people didn’t get the message and showed up at the church.

MAGS meetings may get canceled due to



changes in COVID-19 regulations or bad weather, so Members should look for email blasts and other notifications. Another good place to check is the MAGS website, memphis-geology.org. There will be a meeting update box at the top of the website that gives the latest information. Please check it for possible last-minute changes.

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

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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 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: www.theearthwideopen.com or <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.

March DMC Field Trip

WHERE: Patty Construction Quarry, Summerville, GA

WHEN: Sunday, March 20, 9:00 A.M.-2:00 P.M. EDT

COLLECTING: Summerville Agate formed within Mississippian age chert

CONTACT: Michael Peterson, (251) 786-2583

Links to Federation News

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

Groundwater in Southwestern Tennessee

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layers. Water enters the Memphis Sand directly from rainfall in Fayette County but also by infiltration through strata that overlie the Memphis Sand like river flood plain sands of the Loosahatchie and Wolf Rivers.

Editor's Note: *Tennessee and Mississippi have been fighting over the Memphis Sand since 2006. The case reached the U.S. Supreme Court. The original suit claimed wells drilled in Memphis siphoned off water that belonged, exclusively, to Mississippi. Mississippi officials wanted the U.S. Supreme Court to recognize the state's right to the water and wanted Tennessee to pay \$615 million for the water Tennessee had already consumed. But in November 2020 Judge Eugene Siler, appointed as Special Master on the water suit, recommended that the suit be dismissed and for the states to share the water. And in a November 2021 ruling, Chief Justice John Roberts, writing for a unanimous court, said "The Court rejects Mississippi's contention that it has a sovereign ownership right to all water beneath its surface that precludes application of equitable apportionment."*

President's Message

Show Returns

1,000 days in the geological timeframe is a minuscule blip. 1,000 days without a rock show is equal to an eon. However, the wait is over. Rocks are back and you can be too. So here how and when it comes back.

Thursday, April 21

1. Table vendors move in

2. MAGS moves from storage shed
3. Grab Bag Packing Thursday evening around 5:00-6:00 pm

Friday, April 22

1. Vendors move in
2. Rockzone/exhibition area organize
3. Note—No Show dinner on Friday night

Saturday, April 23

1. Show opens to the public 9:00 am closes at 6:00 pm
 - a. Lots of volunteers needed so be sure to sign up

Sunday, April 24

1. Show opens to the public 10:00 am, closes at 5:00 pm
2. Lots of volunteers needed so be sure to sign up
3. Show breakdown and cleanup

Monday, April 25

1. Monday items back to shed

So, what and how can MAGS Members help?

Promote the Show

1. Post it on all social media
2. Email your friends
3. Distribute postcards/Show announcements

Donations

1. Stamps to offset printing/marketing cost
2. Drinks and snacks

Volunteer

1. Show depends on you helping by volunteering
2. Volunteer schedule is available

Stamps-Stamps

- Please donate stamps for the Show's postcard mailing
- Need postcard stamps, forever stamps, or regular stamps
- Also, will take monetary donations to purchase stamps
- Postcards will be addressed

and stamped at the March meeting

- Bring stamps/donations to the March meeting
- Also, you may mail or drop off to:
W.C. McDaniel
2038 Central Avenue
Memphis, TN 38104
- Checks payable to the MAGS Show account.

W. C.

Zombie Mushroom

Editor's Note: *Thanks, Stephanie Blandin, for tipping us off to this discovery.*

Oregon State University (OSU) research has identified the oldest known specimen of a fungus parasitizing an ant, and the fossil also represents a new fungal genus and species.

"It's a mushroom growing out of a carpenter ant," said emeritus professor of integrative biology at OSU George Poinar Jr., journal article lead author. A mushroom is the reproductive structure of many fungi, including the ones you find growing in your yard, and Poinar and a collaborator in France named their discovery *Allo-cordyceps baltica*. They found the new type of Ascomycota fungi in an ant preserved in 50-million-year-old amber from Europe's Baltic region.

"Ants are hosts to a number of intriguing parasites, some of which modify the insects' behavior to benefit the parasites' development and dispersion," said Poinar, who has a courtesy appointment in the OSU College of Science. "Ants of

Continued, P. 4

Zombie Mushroom the tribe *Camponotini*, commonly known as carpenter ants, seem especially susceptible to fungal pathogens of the genus *Ophiocordyceps*, including one species that compels infected ants to bite into various erect plant parts just before they die.”

Doing so, he explains, puts the ants in a favorable position for allowing fungal spores to be released from cup-shaped ascomata—the fungi’s fruiting body—protruding from the ants’ head and neck. Carpenter ants usually make their nests in trees, rotting logs, and stumps.

The new fungal genus and species shares certain features with *Ophiocordyceps* but also displays several developmental stages not previously reported, Poinar said. To name the genus, placed in the order Hypocreales, Poinar and fellow researcher Yves-Marie Maltier combined the Greek word for new—*alloios*—with the name of known genus *Cordyceps*.

“We can see a large, orange, cup-shaped ascoma with developing perithecia—flask-shaped structures that let the spores out—emerging from the rectum of the ant,” Poinar said. “The vegetative part of the fungus is coming out of the abdomen and the base of the neck. We see freestanding fungal bodies also bearing what look like perithecia, and in addition we see what look like the sacs where spores develop. All of the stages, those attached to the ant and the freestanding ones, are of the same species.”

“There is no doubt that *Allo-cordyceps* represents a fungal infec-



We are saddened to announce the loss of one of our valued Members, Leo Koulogianos. Many of you remember Leo’s generosity, smiling face, and good humor. You probably know of his skill at finding agates on Nonconnah Creek, and making jewelry, but you may not know that he was also a talented dancer, active in the Memphis dance community. Our condolences to his wife Jan and to his family and many friends. He will be missed.

MAGS is creating a memorial for Leo. Appropriately, it’s an agate display that will be shown at our annual Show and on other occasions. We hope to have it ready for this year’s Show.

tion of a *Camponotus* ant,” he said. “This is the first fossil record of a member of the Hypocreales order emerging from the body of an ant. And as the earliest fossil record of fungal parasitism of ants, it can be used in future studies as a reference point regarding the origin of the fungus-ant association.”

Ref: *George Poinar, Yves-Marie Maltier, Allo-cordyceps baltica gen. et sp. nov. (Hypocreales: Clavicipitaceae), an ancient fungal parasite of an ant in Baltic amber, Fungal Biology, Volume 125, Issue 11, 2021, Pages 886-890, ISSN 1878-6146, <https://doi.org/10.1016/j.funbio.2021.06.002>*



WILDACRES Spring Session

If you have had Wildacres on your bucket list, the Spring Session of Wildacres (May 16-22) is open for you to register. Wildacres, sponsored twice a year by the Eastern Federation of Mineralogical Societies (EFMLS), provides room and board, classroom instruction with a small number of students, lectures by the Speaker-In-Residence, a tailgate with a chance to buy or sell hobby related items, an auction, a chance to meet old friends and make new ones, the camaraderie of being with others in the hobby, to name a few perks of attending Wildacres sessions—all this for a very reasonable fee.

Why not join the thousands who have attended Wildacres, made lasting friendships, took home new skills and knowledge, and much more. This is saying nothing about the bond of friendship and fun while being on top of the mountain.

EFMLS WILDACRES HISTORY

In 1973, the Eastern Federation began a new venture—Wildacres. Located just off the Blue Ridge Parkway near Little Switzerland, North *Continued, P. 5*

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

WILDACRES Spring Session *Continued from P. 4*

Carolina, Wildacres is a non-profit facility dedicated to the betterment of human relations. The first session was held in August 1973 and several years later the second session was added—years of providing excellent instruction in new and old areas of the hobby!

SPRING SESSION, MAY 16-22, 2022

The Speaker-In-Residence will be Dr. Nathalie Brandes.

Classes—Whether looking to learn a new aspect of the hobby or just wanting to improve your knowledge and skills in an area

Show Volunteers

Look for an email that tells you how to sign up on SignUpGenius to work at this year's Show.

December Board Minutes *Mike Coulson*

Called to order 6:30. Present: W.C. McDaniel, Mike Baldwin, Carol Lybanon, Matthew Lybanon, Bonnie Cooper, Bob Cooper, Nannett McDougal-Dykes, Mike Coulson, Melissa Koontz, Kathy Baker.

New Business:

1. 2022 meeting policy: All meetings held in person with the presentation at the beginning; Zoom presentation online. Exceptions for Health Department rules, inclement weather, facility issues.
2. Regular and consistent publication of scheduled events/programs.
3. Develop a more detailed calendar which includes the current month plus 2 future months. Content: Meeting Dates/Information, Adult Programs, Junior Programs, Field Trips, Rock Swaps, Special Events.

you already know, with eight (8) classes to choose from, there is sure to be a class for anyone. More information on class offerings will be published in later issues.

Registration—Fill in and follow the instructions on the Registration Form to register. Note that single rooms will be available for an additional fee.

FALL SESSION, SEPTEMBER 5-11, 2022

More information on the Fall Session to be announced.

QUESTION?

If you have any questions, concerns, etc. for either session, you can contact:

4. Print business cards.
5. 2022 MAGS Membership cards have been updated.
6. Gather up MAGS T-Shirts, sell what we have, consider new design.

Show: Dates are April 23-24 with move-in on April 22. Jim Butchko is 2022 Show Chairman. Agricenter contract has been signed. 10-12 vendor contracts in. Some vendors from past shows have pulled out for various reasons. There are two possible door prizes petrified wood bowl and Angel Wings.

Secretary: Minutes distributed via email to the Board. Minutes approved.

Treasurer: Report submitted and approved. Interest on the club's CDs added to balance. Checks written to cover expenses for Holiday Party.

Membership: No new Members. Another renewal notice has been sent out via email. Quite a few renewals by mail and at the Holiday Party. After an uncertain year for MAGS Members due to COVID, the MAGS board voted to reinstate annual dues for 2022. The 2022 annual member-

Steve Weinberger, Chairman of the Wildacres Committee, (cscrytals2@gmail.com)

Suzie Milligan, Registrar—for info regarding registration (smilligan@stny.rr.com or (607) 687-5108)

Mark Kucera, Director—for info regarding classes and instructors (mark_j_kucera@yahoo.com or (914) 423-8360)

P.S.: The Speaker-in-Residence, Class Schedule, and Registration forms are also available on the EFMLS website—www.efmls.org.



ship is from January 1 to December 31 and should be paid before January 1, 2022. Since in person Membership Meetings have been inconsistent, mail renewal dues (check payable to MAGS) to: Bob Cooper, 8695 Baylor Rd., Bartlett, TN 38002. Dues: Individual \$15, Family \$25.

This year's early renewal prize has been selected—a very nice polished geode with druzy quartz in the center. People who renew MAGS membership will be entered into a drawing for the prize. As an incentive to renew early, any Member who renews before the end of November will receive an extra chance in the drawing. End of December 2021 deadline to be in the drawing. When you renew, make sure that Bob has a good address and phone number.

Field Trips: No field trips planned for the remainder of this year.

Adult Programs: January 2022: George Phillips. Mississippi Museum of Natural Science, important new discoveries.

Junior Programs: November / December: Combined

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December Board Minutes Holiday Party for adults and youth.

Continued from P. 5 **Library:** 9 new children's books, other books donated.

Rock Swaps: Will revisit opportunities in April or May.

Editor: Combined November/December newsletter published and distributed. Please send reports, articles, pics, recipes, book reviews, by or before December 20.

Web: Website updated, latest newsletter posted.

Adjourned 7:15

Fabulous Tennessee Fossils

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

FTF 85

Ricky's Devonian Bryozoan



I write this essay on an almost complete palindrome—Twosday, 2/22/2022. Probably the only time I will ever write that sentence. We host a public day at the UT Martin Coon Creek Science Center every third Saturday of any month, prior reservation required. On that day the site is open to individuals and families for visiting, fossil collecting, and academic programing about the site. This past Saturday, West Tennessee amateur fossil collector Ricky Waters was one of our patrons, and as so many of our visitors do when they visit, he brought along some of his recent fossil finds from elsewhere to share with us and get our opinion and identifications. Ricky likes to collect from outcroppings of the Silurian – Devonian shales and limestones that crop out along the Tennessee River and its tributaries. Ricky does a very nice job of stabilizing his friable fossiliferous shale specimens after cleaning (Figure 1). The two prepared slabs he showed us this past weekend were from the Devonian Ross Formation, probably the lower Rockhouse

Member. Of the two slabs of interbedded fossiliferous shale and limestone he shared with us, the slab in Figure 1 caught my eye, but not for the beautifully cleaned strophomenid brachiopod that was most obvious on the surface.

Figure 1 depicts the underside of the rock, broken in such a way as to expose two different layers within the rock in a stairstep fashion. Roger removed the strophomenid brachiopod from the underside surface and cleaned it well, along with much of the flaky shale chips on the surface of the slab. He then preserved the surface from further flaking and replaced his strophomenid in its original spot and orientation, using glue to adhere the brachiopod into its previous place. It now stands-out beautifully as it permanently rests in its original concave-up life position.

What excited me about the rock, however, was the nearly complete and prone bryozoan colony exposed on the second step of the overturned rock (so the bryozoan would have been

anchored in the layer above that which the brachiopod was probably living in (Fig. 1). Associated fauna within the layer with the bryozoan include just a few disarticulated stem columnals of a stalked echinoderm (probably crinoid). Other than that, the bryozoan-bearing shale layer is less fossiliferous than the overlying shale layer with the strophomenid brachiopods, more abundant crinoid debris, one small *Leptaena* brachiopod, one small rhynchonellid brachiopod, and broken bryozoan fragments. The intact bryozoan colony is positioned prone on a single shale bedding plane and shows very little breakage of the branches, except in a few places where fragments within the shale must have plucked out either during exhumation and collecting, or cleaning. Some of the distal tips of the colony branches are missing due to the same plucking. Portions of the right side of the colony continue under the overlying slightly more grainy shale, which affords us the opportunity to evaluate the burial characteristics and

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Fabulous Tennessee Fossils reconstruct the portion of the slab that used to cover the colony (now removed to expose it for us to see). The entire preserved colony is just under 8 centimeters long from base to the tip of the longest preserved branch. Many of the branches are dichotomously branching (two even branches), with a few that are alternating. Some branches are overlapping due to compaction of the sediment.

Bryozoans are notoriously hard to identify to genus and species level without cutting the specimens and making thin-section microscope slides in several orientations to study the microstructure of the colony and of the individuals (called zooids) in the colony (called a zoarium), which we have not done on Ricky's specimen at this point. The primary features visible without thin-section study are the branching pattern details described above and rounded slightly protruding zooids arranged in a serial pattern on one side of the branch (although a few may be biserial). None of these features is diagnostic enough to place the specimen within a previously recognized bryozoan taxon from the Ross Formation in Tennessee. Importantly, these features are very different from any already recognized taxon in the Ross. To be fair, the bryozoan biodiversity of the Ross, which is considerable, has not been systematically studied by anyone, including me. However, the reported taxa of bryozoans from the Ross is nearly exclusively dominated by stick-like to branch-



Figure 1. Undersurface of Ricky Waters' fossiliferous shale slab from the Devonian Ross Formation. Note the bryozoan zoarium to the right, preserved on a separate bedding plane above the brachiopod-bearing surface. This colony was quickly buried by obrution and demonstrates some flexibility because the colony branches are intact and not broken. (Photo by MAG, no scale—bryozoan zoarium ~ 8 cm long).

ing trepostome bryozoan taxa (often called the "stony bryozoans" because of their rigid calcified skeletons). Additionally, Ross Formation bryozoans are almost always fragmented and incomplete, forming part of the bioclastic sediment grains that made up the Ross substrate along with mud. The only except to this are cup-shaped lacy fenestrate bryozoan colonies that were clearly smothered in placed (see explanation for this below).

Even though we don't have a taxonomic identification for this specimen at this point, the colony occurrence provides insight into the ecology of this taxon and the environmental conditions by which it was preserved so complete and unbroken (i.e., its taphonomic history). The specimen is not broken or fractured into fragments even though the individual branches have all collapsed down onto a single bedding

plane. This is unlike the lower shale layer of the same slab (Fig. 1) which contains mostly fragmented bryozoans from different taxa. Many of the branches of this specimen overlap one another without breakage across the overlap. Keep in mind that in life, our colony was a 3-dimensional bushy shape. Assuming even dendritic branching, the zoarium was probably 4-6 cm wide. The zoarium was toppled and covered by soft mud as evidenced in cross-section of the slab by a single layer of shale that encloses the colony. Compaction of the zoarium without fragmentation indicates that the colony was not rigid. Rather, it had some flexibility to bend during compaction. This is not a trait normally associated with the "stony" trepostome bryozoa. It is entirely possible that we have the first representatives of a different class of bryozoan in the Ross. Additionally, we may have evidence of a more

Continued, P. 8

Fabulous Tennessee Fossils variable structure and taphonomy within the trepostome bryozoa.

A second significant aspect of this occurrence is the observation noted above that the entire zoarium is enclosed within a single thin layer of shale that can be seen in cross-section to pass below, through, and over the prone and compacted colony (except where the some of the lower shale is removed in Fig. 1 to expose the zoarium). This type of occurrence is common in the Ross Formation and is the result of a process called obrution. Obrution is when a quick pulse of sediment, usually from a passing storm, has mobilized mud, perhaps uprooting the zoarium, and then during the waning of the storm, is re-deposited on the seafloor rapidly and thickly enough to smother non-mobile fauna in place. In the Ross Formation, beds of entire favositid corals can be found toppled with shale drapes above and below the colony. Usually, most bryozoans in these beds are fragmented, attesting to their usually rigid skeletons. Many obrution beds occur in the Ross and in some of my early publications I argued for the Ross to be a "disturbance-driven ecosystem" to account for the preponderance bedding that has these features. Frequent storms and obrution events helped to drive the overall rules of assembly of the ecology of the Ross Formation.

In the case of Ricky's bryozoan, we are seeing a slightly pliable bushy bryozoan colony that was toppled by the passing storm

and smothered by the mud it deposited. Nether the storm energy itself, nor subsequent compaction broke the non-rigid colony, but did compact it onto a single bedding plane thickness within the obrution mud deposit. It might even be current-aligned, providing some idea of the current direction of the storm event. With the taphonomy of the specimen now determined, providing us a clue to the rigidity of the colony, the remaining task is to identify the bryozoan taxon, which I suspect will be a first reported occurrence from the Ross. This specimen may be significant also in that it offers insight into the rigidity of bryozoa zoaria characteristics in general, suggesting that not all "stony" bryozoa were actually so "stony"!

March 19: Blue Springs
April 9: Nonconnah Creek day trip
May 21: Frankstown day trip

🎵 **New Members**

Virginia & Jeff Pierce
Laura Sanford & John Clower
Edmond & Angie Childers & children Addison, Anna Kate, & Asher

🎵 **March Birthdays**

3 Debi Stanford
11 Nancy Folden
14 Danny Baker
17 Bob Cooper
18 Laura Brem
30 Jim Collins
Hisami McNeil
31 Hunter Hill

🎵 **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 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, *Continued, P. 9*



🎵 **Adult Programs**

March 11: Dr. Roy Van Arsdale, "Groundwater in Southwestern Tennessee"

April 8: MAGS Show

May 13: Lionel Crews, Meteorites

🎵 **Junior Programs**

Juniors will join adults until Juniors attendance picks up.

🎵 **Field Trips**

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

MAGS Notes minerals, fossils, *Continued from P. 8* 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.

January Board Minutes

Mike Coulson

Called to order 6:30. Present: W.C. McDaniel, Mike Baldwin, Carol Lybanon, Matthew Lybanon, Bonnie Cooper, Bob Cooper, Dave Clarke, James Butchko, Mike Coulson, Melissa Koontz, Kathy Baker.

New Business:

1. Formal policy for donations to Members on the death of loved ones.
 - Should it be for active Members rather than family members who don't belong to MAGS?
 - In lieu of flowers a monetary gift to a charity or just send a card of condolences?
 - Let's think about this and revisit.

Show: Dates are April 23-24, move in, April 22. Jim Butchko is Show Chairman. Matthew appointed Treasurer. 25 vendor contracts in, 2 on the way, 1 or 2 additional openings. Possible reduction of vendor tables. Cooper's dinosaur exhibit will not be displayed due to Covid concerns. Reduce Show expenses: Fewer tables and chairs (keep crew to set up tables), change invites to email, analyze and optimize mailing list, no Friday night dinner. Retain three main games, Rocks Around the Clock, Geode Bowling, Gem Dig. Carol has around 1,000 prizes for games. Locate Security Company of our choice. Bonnie volunteered to update the Show website. Kathy will design Show postcard.

Secretary: Minutes were distributed

via email and summarized to the Board. Minutes approved.

Treasurer: Treasurer will file the club's 2021 taxes soon; deadline in May. The SFMS charges for each Member so need to update the status (living/no longer living) of Life Members. Bonnie listed 10 Members who have not renewed and asked if anyone knows whether they will renew.

Membership: 1 new Member. As of today we have 17 Life Members, 56 renewed memberships, 54 memberships who have not renewed. One final renewal reminder will be sent out to advise those who are listed as not renewed.

Field Trips: February 19: DMC is hosting a trip to Lost Creek, Gruetli-Laager, TN, for Fern Fossils.

Adult Programs: January 14: George Phillips, important new discoveries (in person). February 11: Jason Schein, Dinosaur Paleontology in the Bighorn Basin (Zoom). March 11: Dr. Roy Van Arsdale, Groundwater in Southwestern Tennessee. April: Show.

Junior Programs: January 14: Processes of Geology and Careers in Geology. February 11: Fluorescent Minerals. March 11: Native American Heritage and Customs. April 8: Show.

Library: 9 new books for the Children's area. Other books have been donated.

Rock Swaps: Will revisit opportunities in April or May.

Editor: January newsletter has been published and distributed. Please send reports, articles, pics, recipes, and book reviews, anything you can think of.

Web: Website has been updated. Some difficulties have arisen due to upgrades at ATT making uploading difficult.

Adjourned 7:40.

January Meeting Minutes

Mike Coulson

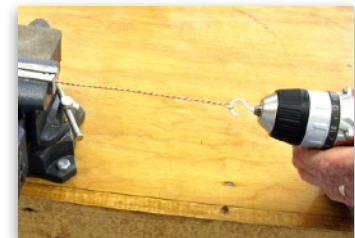
In-person program by George Phillips. Mississippi Museum of Natural Science, Origin of Decapod Remains (crabs, lobsters, etc.) occurring in the "nodular layer" of the Upper Cretaceous Coon Creek beds at Blue Springs, Mississippi.



Jewelry Bench Tips by Brad Smith

TWISTING WIRE

Twisting wire can be done with an old hand drill but goes much faster with a power tool. My preference is to use a screw gun, although a Foredom should do well.



Just make a little hook out of coat hanger wire (or use a screw-in cup hook) and chuck it up in your screw gun. Grip the free ends of the wire in a vice and slip the looped end onto your hook. Keep a little tension on the wires as you twist.

Note that a power drill is too fast a tool for this unless you have one with variable speed.

Smart Solutions for Your Jewelry Making Problems

amazon.com/author/bradfordsmith

MAGS At A Glance

March 2022

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
27	28	1	2	3 Board Meeting, Zoom, 6:30 pm	4	5
6 Show Committee Meeting, 6:30 pm, Agricenter	7	8	9	10	11 Membership Meeting, 7:00 pm, "Groundwater in Southwestern Tennessee"	12
 13	14	15	16	 17	18	19 Field Trip, Blue Springs, MS
20 DMC Field Trip 	21	22	23	24	25	26
27	28	29	30	31 April Board Meeting, Zoom, 6:30 pm	1	2

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