



Volume 68 ♦ Number 01 ♦ January 2022 ♦ A monthly newsletter for and by the members of MAGS

# January Program

*“Recent Published Discoveries from the Blue Springs Fossil Locality”*



MAGS member Mike Baldwin holding a bonefish toothplate found by his wife Sherri on a 21 Nov 2009 trip to Blue Springs. MMNS paleontology curator George Phillips ran into them that day and asked if the Baldwins would be willing to donate it. To this day, it is the only one like it ever recovered from the Blue Springs Fossil Site.

**The January 2022 program will be presented by George Phillips, Paleontology Curator, Mississippi Museum of Natural Science**

Numerous, notable fossil discoveries have been made at the Blue Springs Fossil Site across from the Toyota Plant between New Albany and Tupelo since the big borrow pit was dug there back in 2007-08. The vast majority of these discoveries have been made

by collectors, not professionals, and without support from the avocational community, reporting these new discoveries would not be possible. Many important, publishable specimens have been donated to MMNS (and other institutions) so that

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## MAGS IS BACK IN BUSINESS

Here’s the new normal. We’re back to having in-person Membership Meetings on the second Friday of each month, with both adult and junior programs. There will be field trips and rock swaps. We’ll have a show at the end of April. We’ll observe all necessary precautions to protect your health and safety, but our



activities will look a lot like they used to. See the President’s Message on P. 3 for details.

Schedules are still being developed. We’ll notify you as details become available.

DMC field trips are back, also. Lori Carter’s article about the DMC program for 2022 and future years is on P. 4.

# 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](http://memphisgeology.org)

MAGS Show Website: [www.theearthwideopen.com](http://www.theearthwideopen.com) or <https://earthwideopen.wixsite.com/rocks>

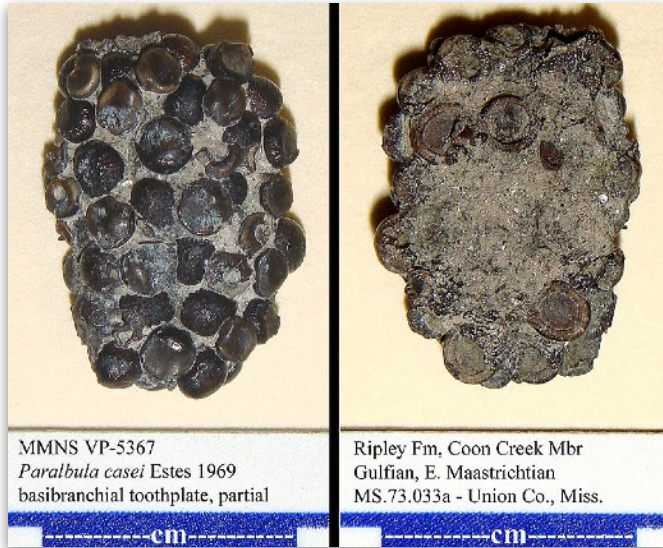
We aren't kidding when we say this is a newsletter for and by the members of MAGS. An article with a byline was written by a MAGS Member, unless explicitly stated otherwise. If there is no byline, the article was written or compiled by the Editor. Please contribute articles or pictures on any subject 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](mailto:lybanon@earthlink.net).

The first DMC field trip of 2022 will take place on February 19. Details in the next issue. See P. 4 for more information about DMC field trips. The next MAGS-sponsored trip is currently scheduled for October 2024.

### Links to Federation News

- ➔ AFMS: [www.amfed.org/afms\\_news.htm](http://www.amfed.org/afms_news.htm)
- ➔ SFMS: [www.amfed.org/sfms/](http://www.amfed.org/sfms/)
- ➔ DMC: [www.amfed.org/sfms/dmc/dmc.htm](http://www.amfed.org/sfms/dmc/dmc.htm)

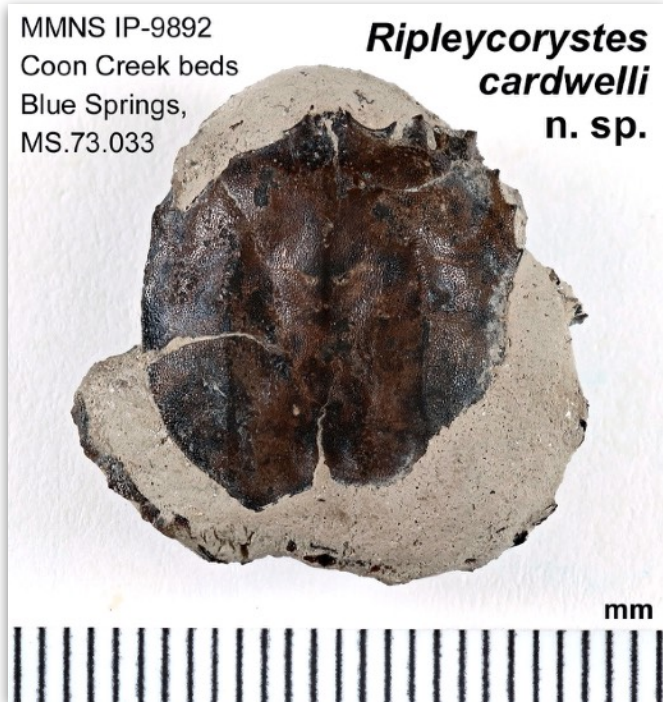
*January Program* these findings could be officially recorded in the scientific literature. Join George Phillips as he reviews these published discoveries but also have a look at some of the items that remain to be reported.



MMNS VP-5367  
*Paralbula casei* Estes 1969  
basibranchial toothplate, partial

Ripley Fm, Coon Creek Mbr  
Gulfian, E. Maastrichtian  
MS.73.033a - Union Co., Miss.

Close-up of the aforementioned bonefish toothplate found by MAGS member Sherri Baldwin.



MMNS IP-9892  
Coon Creek beds  
Blue Springs,  
MS.73.033

***Ripleycorystes  
cardwelli***  
n. sp.

A new species of crab donated by a Texas collector and named in honor of his stepfather.

MMNS VP-5189 ***Vorhisia vulpes*** Frizzel  
Coon Creek beds - Cretaceous, Maas.  
Blue Springs, Union Co., Mississippi



utricle  
otolith

mm

Example of a fish otolith (ear 'stone') —a mineralized structure possessed by all bony fishes (Actinopterygii) and used in hearing and balance. This specimen belongs to a species of extinct marine catfish.

### President's Message

As the club enters into 2022, we are hopeful and committed to make the new year as safe, active, and normal as possible. Here are some plans:

#### Meetings

1. The club will return to in-person meetings and events. Masks will continue to be required for our church meetings
2. Meetings will be cancelled or postponed for any of the following reasons:
  - Health Department restrictions/limits on meetings
  - Inclement weather
  - Church/building issues

#### January 14 meeting

1. Adult and Junior programs will be presented.
2. Bring those exhibits.
3. Holiday Party Leftovers/snacks and drinks (no left-over pizza) and holiday gifts (limited number of gifts still available for those who did not attend the November Party).

#### Future events

1. February 11 Membership Meeting
2. March 11 Membership meeting *Continued, P. 4*

# MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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*President's Message*  
*Continued from P. 3*

3. April 8 Membership meeting
4. April 22-24 Memphis Mineral, Fossil, Jewelry Show

W. C.

## DMC Field Trips 2022

DMC field trips are returning in 2022!

Clubs are encouraged to establish COVID-19 policies for their field trips. If you need help determining policy, please let me know.

The DMC Schedule page is

here: <https://www.southeastfed.org/sfms-field-trips/dmc-field-trip-program/dmc-field-trip-schedule>, where you can check to see if your club is scheduled to host in 2022. If you are scheduled to host in 2022, please get an early start on preparing for your trip.

The DMC field trip notice, (the document with details of your field trip), is the same, but now there is a new form for submitting the notice. The trip notice template and the submission form are on the new website here: <https://www.southeastfed.org/sfms-field-trips/dmc-field-trip-program/dmc-field-trip-form>.

All of the DMC pages are on the new website under SFMS Field Trips: <https://www.southeastfed.org/sfms-field-trips/dmc-field-trip-program>.

Please let me know if you have any questions.

Many thanks to all of the clubs who continue to support the DMC Field Trip Sharing Program. Let's all work together for another great year of DMC field trips!

Stay healthy, stay safe.

*Lori Carter*

DMC Coordinator  
[dmc@southeastfed.org](mailto:dmc@southeastfed.org)

## Holiday Open House



Thanks for the pictures, Nannett McDougal-Dykes.

## Fabulous Tennessee Fossils

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

### FTF 83

#### Importance of Accurate Specimen Labeling



I was perusing some of our fossil collections at UT Martin earlier this past month and came across what I refer to as a “widowed specimen”. I use this term for those specimens that cannot be tied to a particular geologic formation, locality, or time-period. There are many reasons why a specimen may be “widowed”, but most reasons generally can be attributed to collector error (specifically, not doing the follow-up paperwork). One of the most important skills one is taught about fossil, rock, mineral, or artifact collecting is to document the find with the necessary information about the specimen and its collection circumstances to be placed within the context of other finds. The details of the find are what give specimens their scientific value. Widowed specimens are much akin to stamp collecting—the specimen is just a nice example of a thing to look at and say you have one, but has no other use. There are many techniques for cataloging specimens that can involve computer databases or hand-written logbooks as management tools; however, perhaps the most important step is the very first step.

Any specimen that is to be kept in a collection—“curated” is the term we often use—should have a storage container with a label for that specimen that contains the pertinent information associated with that specimen.

There is usually a unique numbering system (often a combination of letters and numbers in a particular format) for the specimen that will be recorded both on the specimen and on the label in the box or container that houses the specimen in the collection. Again, there are many formats for this and each museum, university research lab, or collector can devise their own labels to suit their needs and branding. For fossil specimens, the typical information included would be the specimen’s unique identification number, geologic age, genus and species name, geologic formation, locality, collector, date of collection, and any unusual features that should be noted on the fossil. Some collections of fossils are not intended to be curated. Perhaps they are for teaching purposes in a classroom setting or as “giveaways” when working with the public. If the fossils are not being curated, then labeling can be more cursory.

To illustrate the importance of labeling at a minimum; although labeling with cataloging is highly encouraged, consider the specimen in Figure 1. I came across this specimen in a drawer of our Vanderbilt Collection. The drawer containing the box was identified as containing miscellaneous trilobites, but it actually contained a wide variety of fossils. I will emphasize the “miscellaneous” on the drawer label as being the operative

word. Several things raised my eyebrow when I found this specimen. First, the label indicates that the specimen was in the “Paleontology Collection University of Tennessee”. This is not a label used by UT Martin at any point in time, nor is it a label used in the original Vanderbilt Collection. I recognized the title style at the top of the label along with the collector/identifier areas as having been used at UT Knoxville in some of their older collections (prior to the 1980s). No other labels were in the box. Why would I look for other labels to be in the box? Sometimes when specimens are moved from one university or museum to another (or collection to another), a new label is put into the box by the new owner recording the change and updating the identifying number to the new system. Additionally, if a revision of taxonomy or status occurs for a specimen, it may receive a new updated label to indicate the change. The specimen boxes usually have a record of all changes in the curation history of the specimen. This procedure is more typical of “type” specimens, but in well-curated collections will occur in all of the specimens being held. My box had only one label. Somehow, a UT Knoxville collection specimen ended up in the Vanderbilt Collection with no indication of how or when it was moved.

Another unusual

*Continued, P. 5*

*Fabulous Tennessee Fossils* thing  
*Continued from P. 5* about this  
 label is  
 that the other lines for the information that I indicated above should be on a specimen label are left blank (e.g., collector and identifier). Usually, the collector's name or initials are included. In some cases, a different person may be the identifier, hence that line on the card. All we see on the label is the taxon name (*Arctinurus occidentalis*) with a very specific date of collection (July 4, 1967), but very general location (Nashville Basin) and no other information regarding geologic age, specific location, identifier number, etc.

Can we “forensically reconstruct” the other information? Perhaps, but only with peril. I know for a fact who the paleontologist at UTK was during the 1967 time frame, Dr. Robert MacLaughlin, and I can recognize his handwriting as I knew him personally when I was a student at UTK (I still have samples of his writing), but this is not his handwriting. So, who collected this specimen; perhaps a student conducting research, collection for teaching purposes? The identity of the collector and label-maker remain a dead-end at this point.

Now comes the more curious part. Figure 1 shows the box exactly as I encountered it in our Vanderbilt Collection drawer. The shale rock surface you see is the surface that was “up” in the box. Presumably the specimen was oriented in the box face-up so that the intended taxon was easily visible (not to mention that if you put the fossil-bearing surface face-

down, then you risk damaging the fossil through abrasion in the box). The fossil specimen visible in the small piece of calcareous shale that is in the box is not that of the trilobite *Arctinurus occidentalis*, as the label says! I immediately recognized the primary central fossil in the shale as the upright cup of the crinoid *Eucalyptocrinites*, which is a common and well-known fossil from the Silurian Waldron Shale in the Nashville Basin. Our view is straight downward on the crinoid from the top oral surface with all of the arms disarticulated so that only the lower cup is visible (this is a typical preservation style for this genus). The dark-brown colored calcite shell is preserved as is typical for this taxon. The squarish raised bumps visible around the top of the circular-shaped specimen are the basal attachment points for the now missing arms of the crinoid. Elsewhere on the rock are poorly preserved brachiopod fragments. This is an excellent example of *Eucalyptocrinites*, but definitely it is not a trilobite? Did whomever collected and identified the specimen miss the identification by that much (confusing an echinoderm for an arthropod)? Shame on any UT Knoxville paleontologist for that mistake!

Flipping over the small slab of shale (Figure 2) reveals the rest of the calcite cup, specifically, the basal plates of the cup where the stem would have attached (the hole in the center). This view is looking at the aboral surface of the cup. This surface also reveals the more probable reason as to why that the unknown collector collected this specimen and why it appeared to be misidentified to

me. Notice the large semicircular impression to one side of the crinoid base? The impression is in three parts (three lobes) show a bilateral symmetry with a radiating pattern of grooves and small raised bumps (tubercles) between the grooves. The faint mold impression is the disarticulated pygidium (tail) of a trilobite that was preserved as a mold in the shale and nearly superimposed onto the crinoid cup. You guessed it. This is an impression of the pygidium of the trilobite *Arctinurus occidentalis*.

Even though the trilobite was not the most obvious or well-preserved specimen on the slab, the label clearly indicates that it was the important fossil being collected by that collector in 1967. Why it was the more important fossil to identify we can only guess. Who collected it remains a mystery as well, along with how the specimen ended up at Vanderbilt. As it stands now, this specimen is “widowed” in that it cannot be associated with a project, a collector, or a geologic formation without supposition. As a scientific datapoint, the specimen has lost its value and is now nothing more than examples of two taxa from somewhere and sometime in Middle Tennessee. Always make labels a priority with complete information. Labels should be written with others who may use your fossil in mind. Labels are historical documents in and of themselves.



*Fabulous Tennessee Fossils—Figures*

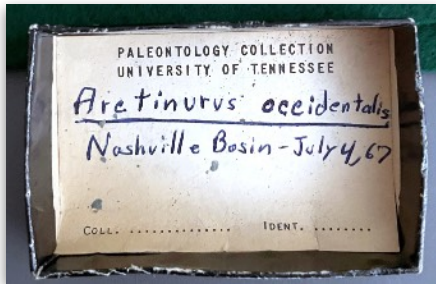


Figure 1.A. Photograph of the UTM Vanderbilt Collection specimen box identifying the trilobite *Arctinurus occidentalis* from the University of Tennessee paleontology collection. B. Specimen of crinoid *Eucalyptocrinites* in the shale slab housed in the specimen box (Photo by MAG; scale in cm). Was the fossil misidentified by the unknown collector? How did a UT Knoxville specimen box get into the Vanderbilt University collection?



Figure 2. Aboral surface of the shale showing the same *Eucalyptocrinites* prominently, along with a less obvious impression of the pygidium of the trilobite *Arctinurus* (Photo by MAG; scale in cm).

**Santa Came Early**



Well, not Santa (very busy). One of Santa's elves (Nannett) delivered Jane Coop's Holiday Open House gift, since Jane didn't make it to the party because of health reasons. Jane was very happy to get her gift. We'll see her in January.

**Long-Distance Geology**

*Matthew Lybanon, Editor*

When we think about what geologists do, fieldwork is a big part of it. But doing geology on Mars is a different matter, at least until there is a manned mission to the Red Planet.

There have been some recent advances in our knowledge of Mars's geology, based on observations made by instruments placed on the surface by NASA missions. Here are two examples.

A new study published in *Nature Communication* details how scientists used NASA's InSight Mars Lander (which touched down on Elysium Planitia near Mars's equator in November 2018) to record vibrations in the ground. This allowed them to map 200 m beneath the surface of the planet.

Here they discovered data that appears to note the existence of stacks of ancient, dried lava flows.

Using Rayleigh waves (a seismic surface wave that causes the ground to shake in an elliptical motion), and the InSight Mars Lander, which NASA sent to the planet in 2018, scientists were able to map below the surface of the planet. They found several layers of lava, as well as a sedimentary layer of rock wedged beneath them. (The Martian vibrations were caused by the wind.)

They used the seismometer from the InSight lander to detect the vibrations, and used that data to map 200 m below the surface. Several meters down, they found evidence that a sedimentary layer of rock was buried between volcanic rocks.

What these findings ultimately mean is still unclear. Sedimentary rock plays a vital part in the makeup of the Earth, so it is interesting to see a layer of it wedged so close to the surface of Mars. By studying it further scientists could possibly determine more about the planet, including a timeline of when the last volcanic eruption happened.

In February 2021 NASA's Perseverance rover landed in Jezero Crater, a 45-km-wide depression in Isidis Planitia, which is itself a 1,200 km plain in the northern Martian hemisphere. About 3.7 billion years ago, Jezero Crater was Jezero Lake—a standing body of water up to 2.5 km deep. Pictures taken from orbit by NASA's Mars Reconnaissance Orbiter show a fan-shaped formation along the

*Continued, P. 8*

*Long-Distance Geology*  
Continued from P. 7

crater's western rim, which was once a broad delta fed by an inflowing river that helped fill the basin. But when the rover touched down, researchers got a closer look—and what they found was stunning indeed.

A team of 39 investigators led by planetary geologist Nicolas Mangold of France's University of Nantes analyzed images taken within Jezero by two of the Perseverance rover's suite of 19 cameras. The team initially focused on a formation dubbed Kodiak butte, a flat-topped hill at the western edge of the crater, about 1 km south of the main fan.

Kodiak was built layer upon layer, as sediment was carried in by periodic rushes of flowing water. Like similar sedimentary formations on Earth, Kodiak features three kinds of layering: A so-called bottomset (horizontal layers at the floor of the crater caused by grains slowly settling out of the water), a foreset layer (loosely sloping sedimentary layers atop the bottomset, transported in by roiling water) and a smooth top set (which, like the bottomset, is caused by a slow settling of grains).

Of all of the layers, researchers are most interested in the bottomset, made of sandstone and mudstone. Any biology that emerged in the Jezero waters would most likely have settled into the mud and sand at the base. "What we observed at Kodiak was our key observation," says Mangold. "If there are signs of ancient life in a



formation like this it would typically be in sandstone, which is the bottomset."

Just as intriguing is the main, western fan north of Kodiak, though less for what it says about Martian biology than geology. Like Kodiak, the western fan was built slowly over time by the deposition of sedimentary layers transported by water. Unlike Kodiak, the fan appears to have had a violent history, as evidenced by two dozen large boulders and hundreds of smaller cobbles embedded in the fan walls high above the crater floor. They were hoisted and tossed by periodic flash flooding powerful enough to move such heavy objects.

The presence of the flooding, the researchers wrote, suggests a warm and even humid Mars, one on which floods could have been caused by rains or snowmelt—though Mangold concedes that, for now, is mere speculation.

**References**

1. *Hobiger, M., Hallo, M., Schmelzbach, C. et al. The shallow structure of Mars at the InSight landing site from inversion of ambient vibrations. Nat Commun 12, 6756 (2021). <https://doi.org/10.1038/>*

[s41467-021-26957-7](https://doi.org/10.1038/s41467-021-26957-7).

2. *N. Mangold et al. Perseverance rover reveals an ancient delta-lake system and flood deposits at Jezero crater, Mars. Science 10.1126/science.abl4051 (2021). <https://www.science.org/doi/10.1126/science.abl4051>.*

**October Board Minutes**

Mike Coulson

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

**Old Business:** None.

**New Business:**

1. The November/December Membership Meetings will be combined into a Holiday Party.
2. Holiday Party date will be Saturday, Nov. 13, 11AM–1PM. It will be an open house held at the church. Members can come and go. There will be snacks, gifts, and prizes.
3. After discussion the Board decided to order pizza since food trucks are expensive and the number in attendance is uncertain.

**Show:** Memphis Mineral, Fossil, Jewelry Show announces its 2022 Show. Dates are April 23-24 with move-in on Friday, April 22. Jim Butchko is 2022 Show Chairman. Agricenter contract signed.

**Secretary:** September minutes were distributed via email to the Board and summarized at the meeting. Approved.

**Treasurer:** Treasurer's report submitted and approved. Moderate CD interest added to balance. Pay church for remainder of 2021. December payment

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# MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

*October Board Minutes* will be for storage room only.  
*Continued from P. 8*

**Membership:** One new Member. The club will return to the membership renewal cycle for 2022, \$25 for a family membership, individual \$15. October newsletter printed and mailed.

**Field Trips:** Missouri trip information and itinerary sent out to Members. November 20-21: Hot Springs, crystal collecting. The club go to Coleman's Mine on Saturday and Wegner's Mine on Sunday. Two future outings not yet scheduled: Memphis Stone & Gravel and Coon Creek. Nannett will look into Coon Creek outing.

**Adult Programs:** Oct 8: Paul Edison-Lahm, Geology of the Portland Basin, Zoom. Nov/Dec: Combined Holiday Party on Nov 13. Jan 2022: George Phillips, Mississippi Museum of Natural Science, important new discoveries.

**Junior Programs:** Oct 8, Water cycle and the Memphis Aquifer. (Cancelled). Nov/Dec, Combined Holiday Party.

Future: Native American Arrowheads and Points, Fluorescent Minerals and How Fluorescence Works.

**Library:** No new books.

**Rock Swaps:** None for remainder of year.

**Editor:** October Newsletter is out. Please send reports, articles, pics, recipes, and book reviews.

**Web:** Website has been updated and *MAGS Rockhound News* posted.

Adjourned 7:28.

## October Meeting Minutes

*Mike Coulson*

Zoom presentation by Paul Edison-Lahm, "Geology of the Portland Basin."



## Adult Programs

*January 14, 2022:* George Phillips, MMNS, "Recent Published Discoveries from the Blue Springs Fossil Locality"

*February & March:* TBD

## Junior Programs

*January 14, 2022:* Mike Baldwin, "Exactly What Is Geology and What Does A Geologist Do?"

*February & March:* TBD

## January Birthdays



- |    |                  |
|----|------------------|
| 1  | Sarah Wilson     |
|    | Jasmin Sloan     |
| 2  | Justin Coulson   |
| 3  | Mary Kratz       |
| 6  | Dan Crowder      |
| 9  | Heidi Browning   |
|    | Leigh Bartram    |
| 10 | Kaiison Lyles    |
|    | Noa Parks        |
| 12 | Greg Bartram     |
| 16 | Mitch Mitchell   |
| 18 | Ricky Waters     |
| 20 | Nicole Smithey   |
| 21 | Brooke Ledbetter |
|    | Richard Gunter   |
| 24 | Dr. Jon Stanford |
| 31 | Teresa Noyes     |

## Want to Be a Member?

To become a MAGS Member, just go to our website at [www.memphisgeology.org](http://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, 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.

## November Board Minutes

*Mike Coulson*

Zoom meeting called to order 6:30. Present: W.C. McDaniel, Mike Baldwin, Dave Clarke, James Butchko, Nannett McDougal-Dykes, Mike Coulson, Kathy Baker.

**Old Business:** Kathy Baker will take over Rock Swaps, replacing Jane Coop.

### New Business:

1. Meeting policy for 2022: Preference for all meetings to be in person but if health conditions deem necessary the meeting will be on Zoom or both in person and Zoom. Will

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# MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

*November Board Minutes* continue with in-person

meetings for 2022 unless shut down by a Health Department directive or weather conditions.

2. Planning for the holiday party: Saturday Nov 13, 11AM-1PM (later changed to 12:30 to accommodate the church). It will be more of an open house. Members can come and go over the course of 2 hours. WC will take care of gifts.

3. Schedule/hours: Helpers will arrive 1 hour prior to the party to set up. Jim Butchko will bring Rocks Around the Clock game.

4. Board Members will help set up and clean up.

5. Food: Pizza was food of choice, possibly Little Caesars. Jim Butchko volunteered to pick it up prior to the party. WC will determine how many based on those responding to his email. The Board figures 12 large pizzas should be enough. WC will order and pick up Chick-Fil-A platter. Board discussed side dishes, dessert, drinks (variety of canned drinks, including regular 12 oz and some of the smaller 7.5 oz cans), utensils, plates, napkins, tablecloths, and other things.

**Show:** Show dates are April 23-24 with move-in on Friday, April 22. Jim Butchko is the 2022 Show Chairman. Contract has been signed with the Agricenter. 10-12 vendor contracts in.

**Secretary:** October minutes were distributed via email to the Board and summarized at the meeting. Approved.

**Treasurer:** Treasurer's report submitted and approved. No checks or deposits. Moderate CD interest added to balance.

**Membership:** No new members. 2022 renewal email sent to the membership and placed in the newsletter.

**Field Trips:** October 23-24 trip to Potosi and Eminence, Missouri, for

Druse Quartz and Calcite led by James Johnson. November 20-21: trip to Hot Springs, crystal collecting. The club will go to Coleman's Mine on Saturday and Wegner's Mine on Sunday. No field trips planned for the remainder of this year.

**Adult Programs:** Presentations will continue to be in person for 2022, possibly with Zoom in addition. November/December: Combined Holiday Party on November 13. January 2022: George Phillips, Mississippi Museum of Natural Science, will talk about important new discoveries. This presentation will be in person at the church.

**Junior Programs:** Next year junior programs should be back to normal. Mike said he talked to a scout troop which generated a lot of interest in MAGS. November/December, Combined Holiday Party for adults and youth. Future presentations: Native American Arrowheads and Points, Fluorescent Minerals and How Fluorescence Works.

**Library:** No new books.

**Rock Swaps:** None planned for the rest of 2021.

**Editor:** November newsletter is out. Please send reports, articles, pics, recipes, and book reviews, anything you can think of.

**Web:** Website has been updated and *MAGS Rockhound News* posted.

Adjourned 7:00.

## November Meeting Minutes

*Mike Coulson*

Holiday Party Saturday November 13, 2021, 11AM-12:30PM. Board Members arrived at 10 to help set up the room. Members started arriving at 11 to eat pizza, Chick-Fil-A, and various desserts. Everyone attending received a gift from the club. Rocks Around the Clock and a Memory Game were available to play, with prizes.

## Jewelry Bench Tips by Brad Smith

### BEZEL CLOSER

A bezel closer is a steel punch that makes quick work out of pushing the metal down over a round stone and burnishing it. It works with regular bezels, with tube settings, and with prong settings. Stones can be set in as little as 30 seconds.

The working end is a concave cavity that fits over the bezel or prong setting and is pushed and twisted to capture the stone. Sets can be purchased but are expensive and contain many sizes you will probably never use. If all you need is one or two sizes, here's how you can make them yourself.

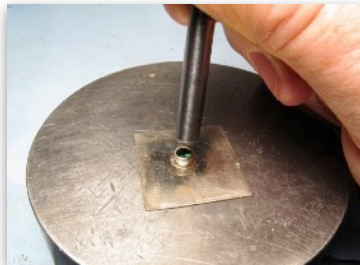
Find a round steel rod or bolt a little larger in diameter than your bezel cup or prong setting. Cut a 5 inch length. File both ends flat. Locate the center of one end, centerpunch a divot, and drill a small pilot hole about 5 mm deep. Remember to use a little oil as lubricant when cutting steel.

Select a ball bur a bit larger than the bezel. Enlarge the pilot hole to a full hemispherical cavity. Test for proper fit with your bezel. Bezel should first contact the cavity about a third of the way in. When the size is correct, polish the cavity using Zam on a length of chopstick in your flexshaft. If the tool is not polished, it will leave scratches on your bezel or prongs.

When using the tool, the first step is to capture the stone correctly. I usually work by hand and push the punch straight down over *Continued, P. 11*

*Jewelry Bench Tips* the bezel or prongs. This causes the metal to start bending over the stone. Next, if it's a small stone, I inspect with a lens to be sure the stone is staying level. This is repeated until the stone is seated on its bearing and can't move anymore.

Next you want to force the metal down onto the stone uniformly all the way around. While this can be done by hand, I often gently tap the punch with a hammer. Finally, I burnish the bezel by twisting the punch around.



**BENCH SHEARS**

When cutting sheet metal, it's quicker and easier to use a set of shop shears as compared with using a hand saw. The cut is not as precise, but many times you don't need that. Shears will easily cut up to 24 gauge sheet, and some will cut 22 or even 20 gauge.

Current prices for shears run from \$13 to \$36 in jewelry catalogs, and the Joyce Chen scissors recommended on some jewelry blogs run more than \$20. But we found a cheaper alternative at the 99 Cent Store—some gardening utility scissors that were only \$1.07

I buy a half dozen of them at a time for use in my jewelry classes. They're great for cutting bezels, trimming around a bezel cup and cutting a piece off a larger sheet.



Learn New Skills with Brad's "How To Do It" Books  
[amazon.com/author/bradfordsmith](https://www.amazon.com/author/bradfordsmith)



**Another Top 10 List**

*Matthew Lybanon, Editor*

There's something about dinosaurs that excites people of all ages, but MAGSters know that there are lots of other kinds of fossils. Here is Live Science's list of the top 10 non-dinosaur fossil stories in 2021.

1. In June, scientists identified a new species of extinct parasitic fungus growing out of the rectum of a 50 million-year-old ant that it killed.
2. Researchers published a study in April describing an incredible fossil from the Jurassic period that appears to show a squid-like creature with 10 arms (a belemnite), with its


crustacean prey still clamped in its mouth.

3. In July, researchers released their findings on a rare fossilized brain (believed to be around 310 million years old) from an extinct species of horseshoe crab that was found at Mazon Creek in Illinois.
4. In April, researchers reported the discovery of ball-shaped fossils of multicellular organisms that are believed to be around a billion years old.
5. In February, scientists announced they had discovered a new extinct species of ancient fish that was as large as a great white shark.
6. In June, researchers revealed they had discovered the remains of a 26.5 million-year-old giant, hornless rhino in China.
7. A new species of "immortal" crab entombed in amber made headlines in October.
8. In September, a new study revealed spiders from the now-extinct Lagonomegopidae family encased in four chunks of amber.
9. In March, scientists described a new species of pill-shaped cephalopod that are the oldest of their kind ever discovered.
10. In March, a new study revealed a bizarre shark with wing-like fins and a wide, gaping mouth that soared through the seas of what is now Mexico about 93 million years ago.

More details: <https://www.livescience.com/coolest-non-dino-fossils-2021>

# MAGS At A Glance

## January 2022

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
26	27	28	29	30	31	1
2	3	4	5	6 Zoom Board Meeting, 6:30 pm	7	8
9	10	11	12	13	14 Membership Meeting, 7:00 pm, "Recent Published Discoveries ... Blue Springs ..."	15
16	17 	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

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