

MAGS  ROCKHOUND NEWS

Volume 69 ♦ Number 10 ♦ October 2023 ♦ A monthly newsletter for and by the members of MAGS

October Program

Tour De Rocks, Guided By MAGS Members



Tour de France is the most famous multi-stage bicycle race in the world, and Tour de Rocks is the biggest rock-centric event in the history of MAGS meetings (this is a commercial, so we get to exaggerate).

The Earth is nearly all rock.

There's almost no limit to what you can do with rocks. At our October Membership Meeting (Friday, October 13, 7:00 P.M.) MAGSters will help you experience the world of rocks.

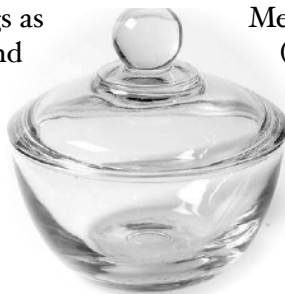
You can read more details in the President's Message on P. 3.

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DONATING SUPPLIES

We always try to use interesting things as table decorations at our holiday parties and rock swaps. We are asking for donations for this year's Holiday Party decorations. We need clear glass bud vases and sugar dishes or short jars with lids. See the pictures attached to this article. To donate, bring them to the October



Membership Meeting or call Carol Lybanon at (901) 493-6700. We need them ASAP. Help decorate for our holiday brunch. Thanks for your help. We could always buy what we need but your help will save us money, and we can have more variety. We need a minimum of 12 of each type.

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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 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.org

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 lybanon@earthlink.net.

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
- ➔ SFMS: <https://www.southeastfed.org/>

President's Message
MAGS October Program for Everyone
Tour De Rocks

<i>MAGS Members</i>	
RockStop	Tour Activity
Rock1	Check out making a rock magnet.
Rock2	Check out hand polishing a piece of agate.
Rock3	Check out discovering what is inside rough amber.
Rock4	Check out making a rock pendant.
Rock5	Check out metal detecting, with Lou White.
Rock6	Check out artifacts, with Park Noyes.
Rock7	Check out lapidary equipment, with David MacAlister
Rock8	Check out tools of beading, with Cornelia McDaniel
Rock9	Check out wire wrapping, with Deedee Gossens
Rock10	Check out wire wrapping, with Theresa Childress
Rock11	Check out Fun Table with MAGS themed puzzles and drawings.
Rock12	Check out silent auction bargains.
ROCK13	You will need to come to the meeting to find out.

W. C.



MAGS Rock Swap and Rock Tour

Last one for 2023

Sunday, October 15, 1:00-4:00 P.M.

McDaniels, 2038 Central Avenue, two blocks west of Cooper

Rocks and minerals

Fossils, geodes, petrified wood

Jewelry and beads

Bring your own drinks and snacks.

Bring your own tables and chairs.

Sell or swap.



Fabulous Tennessee Fossils

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

FTF 104

John Alfred Fagerstrom



I have written earlier that many famous American paleontologists have worked on fossil deposits in Tennessee and that many of these paleontologists are Tennesseans themselves. Tennessee can also claim to be the birthplace of numerous people who became influential paleontologists as well as the place where influential paleontologists did the official academic training and study. This past month, only August 20, 2023, we lost John Alfred Fagerstrom after a nine-year battle with Alzheimer's. "Al" Fagerstrom was best known as an invertebrate paleontologist/paleoecologist who worked on fossil reefs. He was born in Michigan January 4, 1920 and attended Oberlin College in Ohio where he earned his B.S. degree in geology in 1952. There are few published details about his formative years, and though I dined at some of the same Paleontological Society dinners held at the annual GSA conferences and recall seeing him there, I never actually met or talked to Fagerstrom, so I do not know how he became interested in geology or his childhood upbringing. We also do not know what brought Fagerstrom to the University of Tennessee at Knoxville from Ohio, but he did come to Knoxville to pursue his master's degree in geology. Interestingly, his master's at UTK was not related to paleontology! Fagerstrom's thesis was "The Geology of Short Creek Township, Harrison County,

Ohio", was completed in 1953, and later published as "The Meigs Creek coal "Lower Split" in Short Creek Township, Harrison County, Ohio" in 1954 in the Ohio Journal of Science. Fagerstrom's UTK master's degree was a straightforward mapping of stratigraphy associated with a Pennsylvanian-age coal seam that split geographically into two seams and appears to have been associated with the fieldwork for the Ohio Geological Survey. Also at this time, Fagerstrom married Marilyn Landis of Worthington, Ohio. There was no mention of paleontology in the Ohio study, so where and when does his future focus on paleontology arise?

There are few available records of Fagerstrom's time at UTK, but he must have sparked some interest in Paleozoic limestones and fossils as he would present a study on some unusual desiccation (mud) cracks from the Benwood limestone (a member of the Late Paleozoic Monongahela Formation) in eastern Ohio at the Geological Society of America meeting in 1954. I believe that his time at UTK with geologists that were deeply involved in mapping and carbonate studies of fossiliferous limestone-rich strata of the Valley and Ridge of Tennessee must have influenced him to some degree. UTK had several geologists who would combine carbonate studies and paleontology, in-

cluding possible exposure to Harry Klepser, Paris Stockdale, James Walls, and paleontologist Lee Collins; however, there is no record of precisely who influenced Fagerstrom at UTK.

After leaving UTK, Fagerstrom went on to the University of Michigan where he earned his PhD from the University of Michigan, a school well-known for the paleontologists who studied there, where his research became focused on carbonates, reefs in particular, and paleontology. Fagerstrom worked on Devonian-age reef structures and the fauna that constructed those reefs. Unlike modern reefs where coral is so conspicuous, Devonian reefs in the Great Lakes region were often dominated by an extinct and problematic group called stromatoporoids, often grouped with sponges. In the 1950s though 1970s, paleoecology as a subdiscipline of paleontology was in its formative years, especially what we now call "paleocommunity" studies. Paleoecology was following suit with the early expansion of ecology by modern biologists. Many of the 1960s and 1970s paleontologists made their mark by applying the newly emerging concepts of community ecology to paleoecology. A perusal of Fagerstrom's publications during this time indicates that he was interested in community paleoecology of reefs in particular.

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Fabulous Tennessee Fossils Fagerstrom
Continued from P. 4 took a teaching position at the University of Nebraska in Lincoln upon finishing his PhD at Michigan. He remained there for the next 30 years continuing his interests in reef paleoecology and other areas of invertebrate paleontology (conducting field studies in over 30 states). Fagerstrom's research on reef paleoecology took him to such far-away places as Tahiti, Galapagos Islands, Australia, and Moorea to study the ecological structure of modern reefs and made him an expert on reef ecology. In 1987, Fagerstrom published his most influential work, which is one that influenced my career path. Fagerstrom combined his study of modern reef structure with his knowledge of the evolution of reef organisms through geologic time, and importantly, his knowledge of sediments and rock-forming processes, to write a seminal book entitled *The Evolution of Reef Communities*. His book was important as it provided the geologic context, and integration, of geological processes that shape reefs through time. It was written based upon a series of lectures he had given at Nanjing University in China. He devised a simple diagrammatic approach to understanding reefs that allows the reader to easily understand the numerous interacting factors that all work in concert on varying scales of time and space to create and maintain the ecosystem we refer to simply as "a reef" (as if reefs are really "simple", which they certainly are not). I used this diagram (Figure 1) as an organizing

tool for my own lectures on fossils reefs in my paleontology and paleoecology courses right up to my retirement this past May.

When *The Evolution of Reef Communities* was published in 1987, I was beginning my last year as a PhD student at UTK (I had no idea that Fagerstrom had attended UTK at this point – I did not learn of it until he passed last month). My own UTK studies were heavily involved with the ecology and paleoecology of modern and fossil reefs and this book came out at a critical time in my writing of my dissertation for I was attempting to understand a rare type of fossil reef – bryozoan mudmounds. I eagerly purchased a copy of the book and read it cover to cover immediately. His synthesis of the biological and geological underpinnings of modern and ancient reefs was instrumental in helping me to formulate my hypotheses about the Devonian bryozoan reefs of West Tennessee (you have probably collected bryozoans from these reefs that are exposed in the Vulcan Materials Quarry in Parsons, Tennessee). I recall sitting-in on several of his talks at the Geological Society of America meetings during those years. Near the end of his career, he retired and moved to Boulder, Colorado, where he continued his interests in the study of reefs at the University of Colorado.

So, when I read of his passing this past week, I was proud to learn that one of the professional paleontologists that I looked at for inspiration and whose work shaped my own work was also a UT alumnus! But it turns out that

I crossed path with J.A. Fagerstrom twice during my early academic career, not realizing it until putting together this essay and reminiscing about my first paleontology professor. My first paleontology professor was Gerald H. Johnson at The College of William and Mary in Williamsburg, Virginia. Sadly, he passed away last week and I have spent some time reminiscing about him and his influence on my career. It was "Jerre", or Dr. J. as we called him then, that gave me my first paleoecology class in 1977 (which solidified my interest in all things paleoecological). Upon learning of Jerre's passing, I pulled-out my old class notes from that paleoecology class and was thumbing through it with fond memories when I came across a reference list of papers that I had used in a course project, and guess what? Yes, there was a paper by Fagerstrom! In 1961, Fagerstrom published an article in the *Journal of Paleontology* on a species of lightning whelk *Busycon (Busycon) tritone* from the (then considered) Miocene-age Yorktown Formation from Yorktown, Virginia. I still have all of my notes from all of my classes "back-in-the-day", which also includes a "mimeograph" copy of this short five-page article neatly folded in half in the back of my notebook. Fagerstrom had collected his specimens in 1956, not long after his work at UTK. Why he was in Yorktown and collected these fossils I have no clue, but his description of the collecting site "from the bluffs on the York River, approximately one-mile southeast of the Yorktown-Gloucester Point highway bridge"

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Fabulous Tennessee Fossils struck me immediately for it was one of the many places that I would do my own fossil collecting nearly 20 years later as a student at William and Mary. I do not recall whether I learned of this site from Dr. J or from Fagerstrom's paper, but I do recall collecting there. I do love serendipity! RIP fellow Vol and paleontologist John "Al" Fagerstrom and to Gerald "Jerre" Johnson, my mentor and friend.

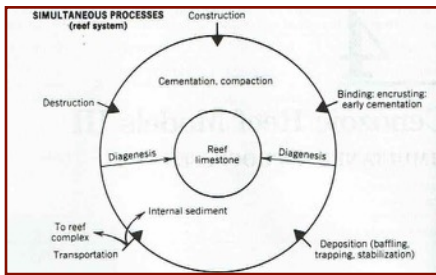
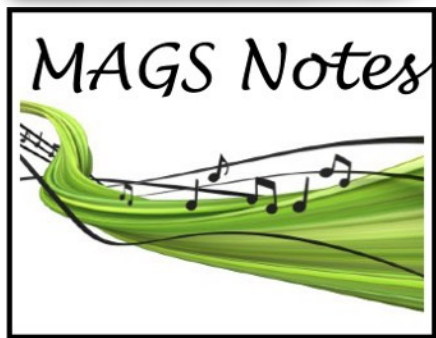


Figure 1. The late J.A. Fagerstrom's 1987 Figure 4.1 Reef Development Model diagram from this author's copy of *The Evolution of Reef Communities* (Wiley Interscience, page 122).



Adult Programs

October 13: Tour de Rocks
 November 11: Josh Anderson, TBA
 December 9: Holiday Party

Junior Programs

October 13: Puzzles night

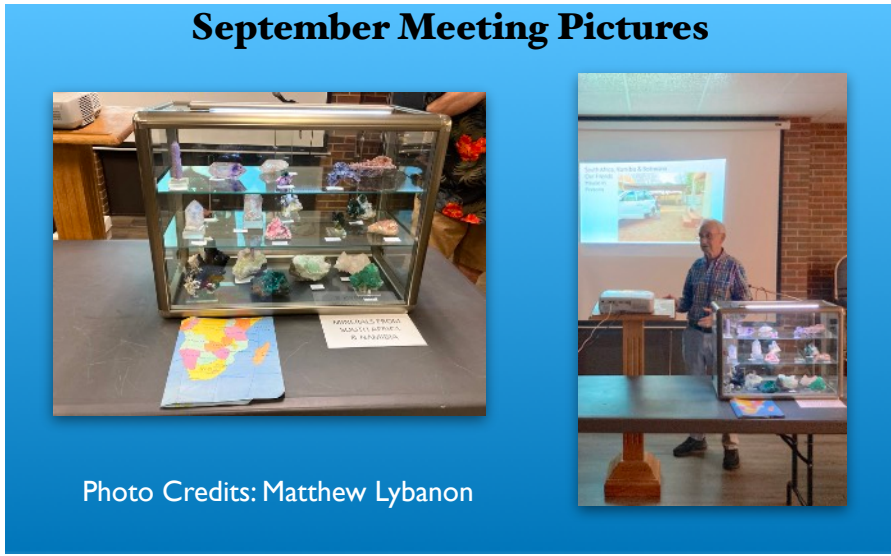


Photo Credits: Matthew Lybanon

November 11: Building things with rocks

December 9: Holiday Party

Field Trips

October: Geodes, Dale Hollow
 November: Creek Collecting, TBA
 December: No field trip scheduled

Schedules change. Contact field trip chair Jim Butchko for the latest information.

October Birthdays

- 1 Gail Karr
- 2 Bill McManus
- 5 Matthew Lybanon
- 7 Alan Jacobs
- 9 Charles Hill
- 12 Mary Katherine Stout
- 13 Michael Baldwin
- 14 Kates Parish
- 14 Patty Herman
- 23 Tommy Walls
- 24 Keith Riding
- 24 Ann Austin
- 29 Lucas Ward



Rock Swap

October 15, 1:00-4:00 P.M.
 McDaniels, 2038 Central Avenue.
 Details on P. 3.

New Member

Grace Benz

Special Events

October 28: MAGS at MOSH (Pink Palace)
 October 28: MAGS at Memphis Botanic Garden

George And The Dragon

Matthew Lybanon, Editor
 No, not Saint George. George Phillips, curator of paleontology at the Mississippi Museum of Natural Science (well-known to some MAGSters). And not exactly a dragon. But close.

What happened was this. George Phillips recalls he was standing in a creek near West Point, Mississippi, hollering for his wife to join him, when he found what

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George And The Dragon amounts to a prehistoric sea monster. “I looked down ... only to be amazed at what I had just stepped across—the broken remains of a mosasaur’s skull and neck,” he said. The skull was about 4 feet long, with its teeth still attached.



The biggest known specimen of mosasaur is estimated to be about 17 m (56 feet) long. Based on the size of the skull, Phillips estimates the mosasaur whose skull and neck he found was about 30 feet (9 m) long when it died. That’s still a big, scary beast.

The skull is “amazingly well-preserved,” according to James Starnes, director of surface geology for the Mississippi Office of Geology.



“Most all of the teeth seem to be there except one that was found loose near the skull,” Starnes said. “There is a piece of the skull where you can see the underlying teeth erupting and cycling into the jaw.”

The rest of the mosasaur is likely there, too, buried in “several feet of limestone.” However, retrieving the fossil without damaging the ancient remains is not feasible at this time, Starnes said. “We had noticed while we were there salvaging the toothy jaws, that other elements of the skeleton were also present, fossil vertebrae and ribs scattered about nearby.”

It will likely never be known what killed the mosasaur Phillips found, but the carcass came to rest atop the shells of an oyster bed and was quickly covered with mud. The sea dried up and the mud hardened to stone in the tens of millions of years that followed. That rock is today known as the Mooreville Formation, dated to be about 82 million years old.



The discovery was kept secret for more than a year. It was only made public in August of this year after a team spent more than two weeks removing the 1,000-pound

block containing the skull. The project included building a 5-foot dam to hold back water, which collapsed on one occasion, Starnes said. Phillips predicts it could be years before the skull is in a suitable state for display at the museum.

August Board Minutes

Josh Anderson

Zoom meeting called to order 6:30 pm. Present: W.C. McDaniel, Christine McManus, Joshua Anderson, Nannett McDougal-Dykes, Melissa Koontz, Jim Butchko, Carol and Matthew Lybanon, Bonnie Cooper.

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

New Business: None.

Treasurer: Report approved.

Membership: One new Member.

Field Trips: August 12th, Crow Creek. September, Hot Springs. Jim needs a volunteer to lead. October, Geodes, Dale Hollow. November, Creek Collecting, TBA.

Youth Programs: July, Review—World tour of archaeological sites went well. August, Rock Swap September, Painting. October, Puzzle Night.

Library: No new additions.

Newsletter: Need info for September newsletter. Note: Michael Gibson retired, however, still sending articles.

Rock Swaps: August, Membership Meeting—pot luck. September, Labor Day Rock Swap/Sale—Lou White.

Adult Programs: August, Midsummer Night Rock Swap. September, Jimmy McNeil, TBA. October, Lapping and learning w/ MAGS. November, Josh Anderson—TBA.

Show: Reservation made for 2024 Show. Needs: contract and deposit for 2024. *Continued, P. 8*

August Board Minutes B-space flexibility discussed:
Continued from P. 7

MAGS booths/activities will utilize this space to fit into newer smaller, footprint.

Old Business: Revisited website issue:

- Domain name discussion—change or keep and add wixsite.
- Bonnie will review with Patrick concerning archived material.
- Issue tabled for further discussion.

Adjourned 7:16.

August Meeting Minutes

Josh Anderson

The August 11 Membership Meeting was the annual MAGS Indoor Picnic and Rock Swap.

October 28 Events

MAGS has been invited to participate in two events on the same day: Saturday, October 28. Here are some of the details.

MUSEUM of Science & History

“Fluorescence Frenzy” is the name that the Museum of Science and History (MoSH—you know it as the Pink Palace) has given to the opening of a new gallery of fluorescent minerals. MAGS is joining a faculty member from the University of Memphis Earth Science Department to meet visitors to the new exhibit and help them get a better understanding of the rocks and minerals that they want or have. MAGS will host a “rock meet and swap” where folks can trade specimens that they have with each other, or even get some freebies from MoSH.



Another event is a not-so-spooky celebration featuring friendly Halloween characters, music to boogie-man down to, and some hair-raising fun at the Memphis Boo-tanic Garden (MBG, the Memphis Botanic Garden). Halloween Hike is a safe, daytime alternative to traditional door-to-door trick or treating with stops for treats, hands-on activities, learning opportunities, and more. MAGS will be at one of those stops.

Federation Field Trips

MAGS Members have been invited to participate in two federation-level field trips for October—a DMC field trip and an SFMS field trip. The distinction is somewhat arbitrary. Here’s an attempt to clarify.

MAGS is a member club of the Southeast Federation of Mineralogical Societies (SFMS), a regional umbrella federation comprising over 80 clubs in seven states (Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee). SFMS is one of seven regional federations that make up the American Federation of Mineralogical Societies.

The Southeast Federation of Mineralogical Societies sponsors federation-wide field trips and provides field trip support for clubs in the SFMS. The SFMS also

has a field trip sharing program called the DMC (originally the Dixie Mineral Council). Clubs in the program take turns sharing one of their field trips with other clubs in the program. This increases the number of field trips a club can offer their members, and members enjoy a variety of field trips all over the southeast.

There’s one of each kind of federation field trip for October. Actually the October DMC field trip was on September 30. It was one day early due to the availability of the location. The SFMS field trip will take place on Saturday, October 14. It is open to members of any SFMS club—but you must be a member to go on this field trip.

This article doesn’t give details about either trip because they are only open to members of an SFMS club, and the SFMS doesn’t want to broadcast the details to non-members. Every MAGS Member with email has already been sent the announcements for these two field trips, with full details. Anyone who now wants more information about the October 14 SFMS field trip needs to contact Charles Carter, SFMS Field Trip Chair, (770) 998-1127 or fieldtrips@southeastfed.org.

Jewelry Bench Tips by *Brad Smith*



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Jewelry Bench Tips
Continued from P. 8

PRE-MADE BEZEL CUPS

As a general rule of thumb I assume it's going to take me 15 - 20 minutes to make a bezel for an ordinary cabochon, so for some projects buying pre-made cups can save a lot of time. But if you go this route, keep in mind three things. First, try to get cups made from fine silver, not sterling. Fine silver is softer and burnishes over the stone more easily.

Second, you may have trouble matching the shape and size of the stone with the shape and size of the bezel cup. Purchased cups can only be found in a limited number of standard sizes. You may have to adjust your choice of gemstone to match the cup. The other consideration is that pre-made cups often have fairly low side walls. While these are fine for low-dome stones, they're not dependable for stones with steep side walls.

Lastly before setting, check the fit of your gemstone in the cup, particularly around the bottom. The bottom corners of a stamped cup are much more rounded than a bezel you would fabricate yourself. This causes a problem with stones that have a sharp edge around the bottom. Burnishing the bezel over one of these stones will place a lot of stress on the stone and may cause it to crack. To avoid this, I round off the bottom edge of the stone with a diamond file (or use sandpaper on soft stones).

DIVIDERS

A set of dividers is a tool I find very useful in laying out the geom-

etry of a piece I'm making. It has two needle-like tips with an adjustment to set the spacing between them.

They can be used to transfer a measurement. Let's say you need a 7mm wide strip of sheet metal. Set the spacing between the divider tips to 7 mm on the ruler. Then lay the sheet on the bench, put one tip against the edge, and run the dividers down the edge scribing a line parallel to the edge.

Dividers can be used to mark equal segments of a line or arc. For instance, assume a line between A and B that might be straight or curved, and you want to divide it into 5 equal lengths. Set the dividers to an estimate of the distance. Starting at Point A, use the dividers to mark off five lengths along the line. If you end up short of Point B, lengthen the distance on the dividers. If you end up overshooting Point B, shorten the



2023 Grand Prize!

50th Annual Central Arkansas Gem, Mineral & Jewelry Show

October 7th & 8th, 2023

Saturday - 9:00am-6:00pm
Sunday - 10:00am-5:00pm

Veteran's Park Event Center, 508 North Lincoln Street, Cabot, Arkansas 72023

Gems, Minerals, Fossils,
Jewelry, Beads, Kids
Dig, Demonstrations

Admission: \$3.00 (Kids under 12, Boy Scouts in uniform are free!)

Sponsored by: Central Arkansas Gem, Mineral and Geology Society

For more information, contact cagmags@gmail.com
www.centralarrockhound.org



length of your dividers. After a few tries, the length on the dividers will be the exact distance you need to mark the 5 segments.

Dividers can let you quickly find the center of a circular disk. With one tip of the dividers at the edge of the disk, set the other tip to an estimate of where the center might be. Fix one tip of the dividers at the 3 o'clock position and scribe an arc with the other tip near the center. Do this again from the 6 o'clock, 9 o'clock, and 12 o'clock positions. The arcs at the center will form a small four-sided box. The center of the box is at the center of the disk.

Smart Solutions for Your Jewelry Making Problems

amazon.com/author/bradfordsmith

MAGS At A Glance

October 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5 Zoom Board Meeting, 6:30 P.M.	6	7
8	9 	10	11	12	13 Membership Meeting, "Tour de Rocks," 7:00 P.M.	14 SFMS Field Trip
15 Rock Swap & Rock Tour, McDaniels, 1:00-4:00 P.M.	16	17	18	19	20	21
22	23	24	25	26	27	28 MAGS at MoSH & MBG
29	30	31 	1	2	3	4

Memphis Archaeological and Geological Society
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