



Volume 61 ♦ Number 04 ♦ April 2015 ♦ A monthly newsletter for and by the members of MAGS

Show Off For The Show

Fun, Games, & Prizes

April Program

Come join your MAGS friends for an exciting kickoff to our 36th Annual Memphis Mineral, Fossil, & Jewelry Show, on April 25 & 26. Be among the first to see the world premiere of ***The Earth Wide Open, 1974-2015***. You may see yourself, along with many of our other Members, helping out at every step of putting on this great event.

We will have some of our past Show chairpeople talking about all the fun they had putting the Show together. Idajean Jordan, Alan Parks, W. C. McDaniel, and Jim Butchko, along with some other MAGS Members, will share their experiences.

If a video and Show chairs are not enough, we will have a game or two and lots of prizes. We need your support, so plan to come to our meeting at 7:30 P. M. on April 10. It will be fun for all.

2015 Show

It's time once again to experience the Earth Wide Open at the 36th Annual Memphis Mineral Fossil, & Jewelry Show at the Agricenter International. There will be hundreds of tables filled with high quality minerals, fossils, jewelry, beads, crystals, art and all the pretty rocks. This year Cub Scouts, Girl Scouts, and Boy Scouts can come and meet the requirements for their badges in Geology. We have tons of gems for our grab bags and gem dig (still 25¢ for 3 minutes of mining). New to this year's Show is Steve Arnold and his meteorites. Steve has done shows on national TV showing his space rocks and will be displaying, lecturing, and maybe even selling at the show. Come to see, learn, buy, have fun, and to win the beautifully sculpted bird or one of the hourly door prizes donated by our dealers..

In this issue

Show Off For The Show	P. 1
MAGS And Federation Notes	P. 2
Fabulous Tennessee Fossils	P. 3
Show2015 Speakers	P. 4
Show Hospitality	P. 5
2015 Show Dealers	P. 5
Jewelry Bench Tips	P. 5
February Board Minutes	P. 6
February Meeting Minutes	P. 7
April Birthdays	P. 8
Displays	P. 8
Field Trips	P. 8
Save These Dates	P. 9
Natural Quasicrystal From Meteorite	P. 9
MAGS At A Glance	P. 10

COME SEE THE WORLD PREMIERE OF ***THE EARTH WIDE OPEN, 1974-2015***



MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

2015-2016 MAGS BOARD

President—W. C. McDaniel

2038 Central Avenue, Memphis, TN 38104 ♦ (901) 274-7706 ♦ w.c.mcd@att.net

1st VP (Field Trips)—Charles Hill

1070 Park Swain Road, Grand Junction, TN 38039 ♦ (901) 626-4232 ♦ hunter3006@aol.com

2nd VP (Adult Programs)—Carol Lybanon

2019 Littlemore Drive, Memphis, TN 38016 ♦ (901) 757-2144 ♦ sgcarol@earthlink.net

Secretary—Mike Baldwin

367 North Main Street, Collierville, TN 38017 ♦ (901) 853-3603 ♦ mbaldwin05@gmail.com

Treasurer—Bonnie Cooper

8695 Baylor Road, Arlington, TN 38002 ♦ (901) 444-0967 ♦ rocks4us@hotmail.com

Director (Asst. Field Trips)—John McLane

5346 Kristy Lane, Southaven, MS 38671 ♦ (662) 609-3917 ♦ jmclane5346@att.net

Director (Asst. Adult Programs)—Kim Hill

4755 Royal Elm Cove, Memphis, TN 38128 ♦ (901) 388-7572 ♦ earthsis@aol.com

Director (Youth Programs)—James Butchko

4220 Dunn, Memphis, TN 38111 ♦ (901) 743-0058 ♦ butch513j@yahoo.com

Director (Asst. Youth Programs)—Chris Scott

4220 Dunn, Memphis, TN 38111 ♦ (901) 743-0058 ♦ scottchris4481@gmail.com

Director (Librarian)—Ron Brister

3059 Old Brownsville Road, Bartlett, TN 38134 ♦ (901) 388-1765 ♦ bristerr@bellsouth.net

Director (Membership Services)—Bob Cooper

8695 Baylor Road, Arlington, TN 38002 ♦ (901) 444-0967 ♦ rocks4us@hotmail.com

Director (Historian)—Nannett McDougal-Dykes

♦ 106 Maple Street, Stanton, TN 38069 ♦ (901) 634-9388 ♦ redchesty@yahoo.com

Newsletter Editor—Matthew Lybanon

2019 Littlemore Drive, Memphis, TN 38016 ♦ (901) 757-2144 ♦ lybanon@earthlink.net

Webmaster—Mike Baldwin

367 North Main Street, Collierville, TN 38017 ♦ (901) 853-3603 ♦ mbaldwin05@gmail.com

Show Chairman—James Butchko

4220 Dunn, Memphis, TN 38111 ♦ (901) 743-0058 ♦ butch513j@yahoo.com

MAGS AND FEDERATION NOTES

President's Message

Welcome to Show month.

As we approach or count down toward the opening of the Show, it is helpful to look at Show numbers.

Continued, P. 4

MAGS General Membership Meetings and MAGS Youth Meetings are held at 7:30 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, TN.

MAGS Website: memphisgeology.org

We aren't kidding when we say this is a newsletter for and by the members of MAGS. If an article has a byline the author is a MAGS Member, unless explicitly stated otherwise (we welcome articles by nonmembers). If there is no byline, the article was written or compiled by the Editor (a MAGS Member). Please contribute articles or pictures (everybody likes pictures) on any subject of interest to rockhounds. If it interests you it probably interests others. The 15th of the month is the deadline for next month's issue. Send material to lybanon@earthlink.net.

April DMC Field Trip

WHERE: Hogg Mine, LaGrange, GA (fee site, \$25)

WHEN: April 18, 8:45 A. M.-5:00 P. M.

COLLECTING: Beryl, Star Rose Quartz, Black Tourmaline, and Aquamarine

INFORMATION: Jeff Edwards, (334) 312-0572, thestonehunter@hotmail.com or thegoldennugget@hotmail.com

Links to Federation News

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



Fabulous Tennessee Fossils

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

Astraeospongia meniscus
Roemer, 1854

Kingdom Animalia
Phylum Porifera
Class Calcarea or Demospongia
Order Heteroactinida
Family Astraeospongiidae
Genus Astraeospongia
Species meniscus

Sponges, or porifera ("pore bearer"), are generally considered to be "lower invertebrates" of "cell-grade", meaning they lack the ability to form tissue that can be used to then form organs, so no circulatory, respiratory, or musculature systems like you and I have. Sponges use five different cell types to loosely assemble an organic structure consisting of a layer of amoeboid or flagellated cells that create currents to pull food-laden water through their soft sac-like body. Seawater enters through tiny pores (ostia), and after being filtered of food, the water exits through a larger opening at the top of the sponge (osculum). These filter-feeders are sometimes

referred to as the "kidneys of the ocean" because they can pump large quantities of seawater removing detritus. Most sponges are sessile marine, meaning they attached to the sea floor or as epibionts on another shell. As you might expect, their lack of a mineralized external skeleton, unlike that of corals, brachiopod, bivalves, and other "higher" invertebrates, severely hinders the likelihood of sponges fossilizing, but all is not lost! One group of cells within the walls of sponges does secrete a mineralized hard part—spicules. Spicules are spike-like calcite or silica skeletal secretions that adds some degree of rigidity to the sponge and they can be solitary or fused into a framework, much like the framing of a building. The remainder of the sponge is soft tissue called spongin. Sponges readily decay upon death, so sponge spicules are common microfossils, due to their abundance and very small size, but entire sponges are relatively rare in the fossil record. The porous nature of sponges can enhance their fossilization by allowing mud to infiltrate the ostia and osculum, followed by another generation of mud entombing the entire animal. What results is a special style of preservation called a "cast-in-cast" in which two different generations of mud fill open space and entomb the sponge, which subsequently decays leaving on the overall sponge shape (cup or ball usually) impressions of other features. If spicules are present, then they can be locked into place to make a copy of the sponge shape. So usually paleontologists recognize most fossil sponges by their over-

all shape first, and then find spicules under the microscope. Notice I wrote **most**.

Enter Fabulous Tennessee Fossil *Astraeospongia meniscu* (Figure 1), arguably the most recognized fossil sponge anywhere. *Astraeospongia* literally means "star-sponge", referring to the spicule shape visible on the surface, and meniscus from the Greek for "crescent" or saucer-shape. *Astraeospongia*, was named by Dr. Ferdinand von Roemer using specimens from the "fossil glades" of Hardin, Wayne, Perry, and Decatur counties in West Tennessee. Especially productive is the Brownsport Formation, where the muddy limestone beds from which the sponge easily erodes were termed the "Meniscus Beds" due to the abundance of sponges, and later the Meniscus Limestone, by Tennessee's second State Geologist James Safford in 1861. Indeed, this sponge now has the exalted status of being an Index or Guide Fossil for the Middle Silurian to Middle Devonian in North America. Nearly every paleontology program and nearly all courses on Earth history use this as the distinctive sponge to study because of its easily recognized curved lens-shape and distinctive star-like pattern of large spicules.

Ferdinand von Roemer (Jan. 5, 1818–Dec. 14, 1891; Figure 2) was born in Hanover, Germany, where he developed a keen interest in geology, earning his Ph. D. in paleontology in Berlin in 1842. Soon after, in 1845-1847, Roemer settled in Texas where his abundant and insightful geologic studies were published as the

Continued, P. 4

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

President's Message
Continued from P. 2

- ★ **30000**—square feet of exhibit space
- ★ **18000**—dollars to produce the show
- ★ **6000**—number of tickets distributed in the RockZone
- ★ **5500**—number of postcards for mailing
- ★ **2200**—average yearly ticketed attendance since moving to the Agricenter
- ★ **400**—hours of volunteers
- ★ **325**—number of tables
- ★ **290**—about the number of MAGS Members
- ★ **30**—number of dealers
- ★ **1**—the most important number, and it is **you**

W. C. McDaniel

Fabulous Tennessee Fossils first ever
Continued from P. 3 mono-graph
from Texas on Cretaceous fossils (1852), which later earned him the title of “Father of the Geology of Texas”. He also published his observations on Texas culture...from his German perspective.

Sometime in 1846-47, Roemer visited the fossil-rich Silurian and Devonian beds that had attracted first Tennessee State Geologist Gerard Troost to the region. In 1854, Roemer published a list of his fossils, citing *Astraeospongium* with no other description—technically an invalid taxonomic name at this point. The next year he became a professor of geology and paleontology at the University of Breslau, and in 1860 he published his *Die Silurische Fauna Des Westlichen Tennessee—Silurian Fauna of*

West Tennessee (Figure 3), in which he changed *Astraeospongium* to *Astraeospongia* and provided a full taxonomic description, along with dozens of other fossils. Interestingly, he changed the name ending without commenting on why. Favorable reviews of Roemer’s book in 1861 by Tennessee’s second State Geologist James Safford in a series of articles on the Silurian and Devonian of West Tennessee for the *American Journal of Science and Arts* drew attention to the work; however, the Civil War interrupted serious study. Separate portions of Roemer’s book were eventually translated into English in 1874 by Thomas Vickers and Charles W. Dietrich (Dietrich translated the *Astraeospongia* portion of the book) and published in several issues of the *Cincinnati Quarterly Journal of Science*. Today,

this distinctive fossil sponge is a common occurrence in most geology programs nationwide. It has become the “poster child” sponge for generations of students studying paleontology and historical geology classes. Wards Scientific Supplier has been selling them for nearly 100 years (most recent price is \$9.95 each) and on ebay it can be as much as \$15. One peculiarity of our specimens is that they are often silicified, even though they belong to the calcareous spicule sponges. Hope you “soaked-up” the information about this sponge in this article—sorry, couldn’t resist the pun!

Editor’s note: Do you have a favorite Tennessee fossil you would like to learn more about? Contact Dr. Gibson at mgibson@utm.edu to have it discussed in a future chapter.

Continued, P. 5

Show2015 Speakers

The speakers and scout program will return for the 2015 show. The program will be located in Section A in a curtain room called the Vug. The featured speaker will be Steve Arnold, who appeared in the Discovery Networks *Meteorite Men* TV Shows. Steve is best known for locating the 1,430 pound Brenham, Kansas, Pallasite Main Mass meteorite in 2005.

Saturday, April 25	Sunday, April 26
11:00 am, Dr. Terry Panhorst University of Mississippi— <i>How To Make Gold: The Standard Hill Gold Mine, Mojave, California</i>	1:00 pm, Steve Arnold—From the Science Channel Show <i>Meteorite Men</i>
1:00 pm, Dr. Michael Gibson, University of Tennessee, Martin— <i>“Bite Me, Scratch Me, Bore Me to Death: A Primer on Trace Fossils”</i>	2:30 pm, Scouts, Herb Nicholson P.G.—Geology Program for Cub Scouts and Girl Scouts
2:30 pm, Steve Arnold—From the Science Channel Show <i>Meteorite Men</i>	3:30 pm, Scouts, Alan Parks P.G.—Essentials of the Boy Scout Geology Merit Badge (minerals option)
4:00 pm, Bill Gilbert, MAGS Member—Pyrite, Fluorite Collecting in Spain	

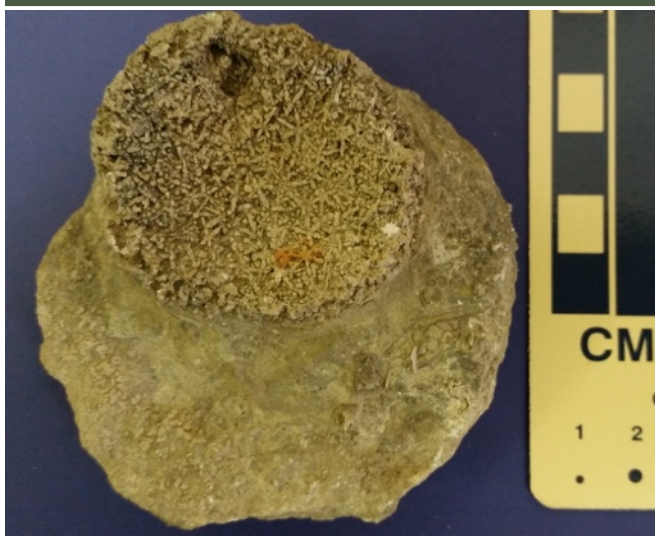


Figure 1. *Astraeospongia meniscus* Roemer. This specimen shows an earlier sponge (lower larger cup) with a budding second small specimen on top, showing well-developed star-shaped spicules (Specimen in UT Martin collection)

Fabulous Tennessee Fossils
Continued from P. 3



Figure 2. Ferdinand von Roemer (photo credit— Digital Library of University of Wrocław)

Show Hospitality

Debbie Schaeffer

All MAGS Members are invited to attend the MAGS Show Dinner. The Dinner will be held Friday, April 24, at 6:30 P. M. at the Agricenter. The Show will provide barbecue, buns, slaw, beans, and barbecue spaghetti for MAGS members and Show vendors. Those MAGS Members attending the Dinner are asked to bring a side dish or a dessert AND a case of water or a 12-pack of a Coke product. Please be on the lookout for an email signup list for the Show Dinner. Hope to see you there!

MAGS provides a hospitality bag to all of the 30+ vendors at our show. Please help out by bringing a donation of individually wrapped chips, crackers, cookies, candy, etc. to the April MAGS Meeting to be used in the hospitality bags.

THANKS!

2015 Show Dealers

Yellow indicates new dealer.

Nature Bazaar
Volunteer Gems
Geode Gallery
Fall Creek
Duncan Lapidary
Shop/Mille

Super Bead Mart

Eagle

Riddle

Rock Barrel

Custom Creations

Stones and Bones

Mineral House

Fantastic Stone

Planetary Parts

Designer Cabs

LK Enterprises

C&N Gifts

Arkansas Gem and Beads

Earthworks

Caveny Creations

Imperial Gems

Javeds

McNeil

JR Rocks

Earthcrafts

MS Enterprise



Crystal Perfection

Amber America

Old Fairview Store

Jewelry Bench Tips by

Brad Smith

DIVIDERS

A set of dividers is a tool I find very useful in laying out the geometry 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 7 mm wide strip of sheet metal. Set *Continued, P. 6*

Jewelry Bench Tips 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 five 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 length of your dividers. After a few tries, the length on the dividers will be the exact distance you need to mark the five 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.

PIECE OF LEATHER

Leather has a multitude of uses in the shop. I often use a scrap of it to avoid scratching the back of a piece of jewelry while setting stones. It's also great for

times when you need to clamp one of your tools in a vise, for instance a drawplate.

Get all 101 of Brad's bench tips in "Bench Tips for Jewelry Making" on [Amazon](#).

February Board Minutes

Mike Baldwin

Meeting called to order at 6:34 P. M. Present: W. C. McDaniel, Charles Hill, Carol Lybanon, Mike Baldwin, Bonnie Cooper, James Butchko, Bob Cooper, Kim Hill, Matthew Lybanon, Nannett McDougal-Dykes, Marc Mueller, Chris Scott, John McLane, Paul Sides and MAGS Member Kathy Baker. W. C. nominated John McLane as assistant field trips. Appointment approved by unanimous vote.

Secretary's Report: January minutes were delivered to Board Members via email earlier in the week. Secretary Mike Baldwin distributed hard copies which were reviewed and approved by unanimous vote.

Treasurer's Report: Bonnie presented the January report. W. C. asked that we defer a CD deposit discussion until Bonnie gets all the treasurer's materials from the previous treasurer. Bonnie reviewed line items for Board Members and provided the Board our January account balance. W. C. reviewed the club and Show checking account structure for new Board Members. Based on reports from Shady Grove we did not pay rent for four months each in 2011 and 2012. Bonnie explained the fee structure for payment of monthly rent to the church and treasury records show that we do owe the church for the time mentioned. Bonnie and W. C. will contact the church to clear up this matter. New checks have W. C.'s address on them so we do not have to change the address on the

checks each time we have a new treasurer. Carol mentioned the standing rule that states the Field Trip Vice President can be reimbursed up to \$50 for field trip expenses. Bonnie will have a budget for 2015 before the March Board Meeting.

Membership Report: Bob told the Board that member ID cards and membership renewal receipts have been mailed to out-of-town Members. A membership directory will be available soon for electronic distribution. Concerning the Institutional Membership which was discussed at the January meeting, W. C. said that Dr. Connolly only wants Chucalissa to be associated with MAGS through membership in order to keep our historic association intact for the future. Chucalissa would pay MAGS \$100 for this dual membership. W. C. suggested that we offer a \$5 discount on MAGS membership to Chucalissa members. A motion was made by Nannett to establish the institutional membership allowing Chucalissa members to become MAGS members for a \$5 discount. Motion carried.

Field Trip Report: Charles is preparing a booklet with information about past field trip locations. He is seeking information on Coon Creek. 2015-16 winter trips will include one to the Ledbetter Farm in Livingston and a return trip to Jonesboro. Upcoming trips include: March 7, Shelby Forest; March 20-23 Ammonite trip to Texas (signup sheets at the February Membership Meeting); March 28, Crater of Diamonds in Murfreesboro, Ark. Charles noted that only Members can go on any MAGS field trip. Paul recommended that we always send a letter of thanks to landowners for allowing us to collect. Several people have signed up for the Texas trip and now Matthew would like to get confirmation from participants. The group may be staying in Gainesville this year, since it has better accommodations and more

Continued, P. 7

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

February Board Minutes food choices
Continued from P. 6 than Valley
View.

Adult Program Report: Carol reported that the February program will be presented by Elizabeth Carranza (University of Memphis), about her adventures in Peru. She will have some specimens for sale and all the proceeds will go to help a very impoverished community in Peru. The March program will be presented by David Hanes from Tupelo, about his dinosaur bone collection. Carol has asked Members to send her pictures from older shows. Kathy Baker needs information several days in advance for press releases of upcoming meetings, which will appear in the Commercial Appeal's Cordova edition. The September program will be presented by Lori Carter from Atlanta, on sand.

Display Report: Kim asked for ideas on gifts for display winners.

Junior Program Report: James reported that he will present the February Junior program on fossil identification. The junior program for March will be magnets with the Lybanons. In April the Juniors will make a banner for the Show. In May, Herb Nicholson will share information about local fossils with the Juniors.

Librarian Report: Marc asked that \$200 be added to the 2015 budget for books and bookends.

Web Report: Mike reported that the MAGS website has been updated for February. The current newsletter is online. Corrections have been made to the Club page.

MemphisGeology.org has been entered in the Southeast Federation Website Contest for 2015.

Newsletter Report: Matthew informed the Board that MAGS did quite well in the Southeast and the American Federation newsletter contests for 2014. Previously we had the certificates for the AFMS. We now have certificates and trophies for the SFMS winning entries. Matthew

stated that the newsletter looks good because of contributions from members. Many thanks and congratulations to Matthew for an outstanding job as the Rockhound News editor.

Historian Report: Nannett reported that MAGS will have a table set up at Shelby Farms on April 4. She will help children make pet rocks. There will be a volunteer signup sheet at the Membership Meeting. Looking at May-June for a rock swap at the home of Jimmy and Hisami McNeil. There will be a field trip on May 9. Nannett will pick a day and coordinate with the McNeils for May 23 or June 20.

Show Report: James reported that all but one dealer space is confirmed. Show Meeting will follow this Board Meeting tonight.

Old Business:

- Magic Springs and Crystal Falls and Water Theme Park in Hot Springs, Arkansas, has informed the Lybanons that MAGS Members (only) can purchase tickets at a discount prices.
- Cleanup and organizing day at the shed will be March 7. Shelf construction information was shared by Charles. He will build off-site and transport to the shed before the shed party. Charles, W. C., Kim, Jim, and Chris will survey the shed at 10:00 on Saturday, February 7.

Meeting adjourned at 7:53 P. M., followed by a Show Committee meeting.

February Meeting Minutes

Mike Baldwin

Meeting called to order at 7:34pm by Charles Hill, First Vice President. 51 members and 8 visitors attended.

Business: Bob Cooper reported that a new MAGS membership directory is in progress which will be updated as new Members join. New this year at the Show: you must present your membership card to get in free. Mat-

thew Lybanon reported that MAGS did well in the AFMS and SFMS newsletter contests. Certificates and trophies were on display on the back table. Matthew stated that the March 20-23 field trip to Texas is in the planning stage. A head count estimate is needed in order to get hotel discount. Matthew also shared information about a Magic Springs (Arkansas) discount rate being offered to MAGS members. Ron Brister submitted an inventory of overdue and missing books. James Butchko said grab bag construction for the show will take place in April. Carol reminded Members of the volunteer signup sheet. Every Member will get an invitation to Sign-up Genius to sign up for the show. If you don't like filling out forms online, call Carol and she will sign you up. Charles Hill reminded members of the field trip to Nonconah Creek this Sunday, February 15. It will be cold and perhaps snowy. Signup available. March: Shelby Forest trip list is full; March 20-23 will be ammonite trip to Texas; March 28 field trip to Crater of Diamonds. May to 20-mile Creek and May 16 to Southaven. June 20 to Turkey Creek with Bob. July to Crow Creek.

Displays: Ten adults presented displays, many of them based on the theme for the month—crystals.

Program: Juniors dismissed to their program. Carol introduced the adult program: "Only you love what you know" with Elizabeth Cruzado Carranza, graduate student at the University of Memphis. She spoke about the history of Machu Pichu, the Chavin culture [one of the first religious centers in Peru], the Moche culture [famous for ceramics], and the Nazca culture [desert dwellers]. Elizabeth worked with Piara Ancash Regional Archaeology Research Project through Hualcayan archaeological site investigations of the formative periods and mapping of the Panchochuco sector. Hualcayan is a

Continued, P. 8

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

February Meeting Minutes Continued from P. 7 modern day community with many problems, including poverty, lack of education, health needs, and family violence. Elizabeth shared her commitment to this community through educational programs which she hopes will cause change and improvements. She is producing a book about the history of Hualcayan, which is due out this summer. Local students and women design and craft jewelry, bags and other items indigenous to the area to raise money for their community. Elizabeth was involved in the design and construction of a cultural heritage center and museum featuring history and archaeology with a 350+ book library, a computer center and a community center. Meeting adjourned at 8:32pm.

April Birthdays

- 1 Carmel Verrier
- 6 Kathy Nagel
- 8 Evie Von Boeckman
- 17 Caleb Bearden
- 21 Emily Neal
- 27 Halley Scott
Lori Carter
Kathy Bullard
- 28 Sonya Suarez
- 29 Luis Ortiz
- 30 David Waddell

Displays

Kim Hill

Well, Rockhounds, in March we had four display (big sigh...sad face). I guess maybe it was the rain that kept folks from bringing their specimens in. We saw a lovely ammonite, so people could see what could be found on the Texas field trip. There was some beautiful green schist with garnets. There were also recent finds of

agates and fossils from Nonconah Creek along with green marbles, and some cool mounted micro specimens, that were actually being given away.

The winner this month was yours truly with my Nonconah Creek finds and green marbles.

Next month, to keep things fun, how about we do something in a Easter theme, say anything egg shaped—either natural or manmade. Also, anything good you bought at a previous MAGS Show. And as always, there is randomness. Whatever may tickle your fancy will definitely tickle ours.

Remember, WE ARE ROCKHOUNDS. We LOVE seeing rocks or artifacts of any kind!! So step up, keep our meetings even more interesting, and bring it in so we can enjoy it too.

THANKS,
Kim

Field Trips

Charles Hill

Hi again to all MAGS Members and others reading this. It is time to talk about the next wave of field trips.

In April we have the MAGS Show, so we have no field trip. On May 9, we start with a trip to 20 Mile Creek hunting for shark teeth and other Upper Cretaceous fossils. This is a place where you are going to get wet. Most of us have been there, I think; but I firmly believe one can never have too many shark teeth.

We will have a small trip on May 16. We are going all the way to Southaven. There is a small

creek that meanders through that part of north Mississippi and holds great promise. Large pieces of petrified wood have been found there, but most important to me are the garnets I found. Also, for whoever is interested, I plan on giving a short class on panning. Panning for heavies is something all rockhounds should learn.

On June 13 we are going to Turkey Creek in northern Mississippi. This trip will be led by Bob and Bonnie Cooper. We will be looking for marcasite, pyrite, and fossils. Bonnie found a mosasaurus vertebra at Turkey Creek the last time the club went there, so be sure to follow her lead.

July is almost always a hot month. Therefore, there is no better time for a wet, shady creek in eastern Arkansas. On July 11 we will be going to Crow Creek, which has a fossilized oyster bed and gravel deposits. One can find everything that is found in local gravel beds and creeks, but the colors are different. You will see fewer gray shades and more reds and yellows. In addition, Crow Creek has some of the most striking banded chert I've seen.

So ladies and gentlemen, here it is. We do this for you with the hope that you will enjoy this as much as we do. Remember, you must be a club member to go to a field trip. I'll see you there.

Charles

Don't forget to volunteer for the Show on



Save These Dates

	April	May	June
Adult Programs	MAGS Show, History and More	Gary Patterson, University of Memphis CERI	Minerals & Fossils: After You Collect Them
Junior Programs	MAGS Show, Make posters	Herb Nicholson, "Fossils common to Tennessee and surrounding states"	Mike Baldwin
Field Trips	None	9: 20 Mile Creek 16: Southaven	13: Turkey Creek

MAGS Meeting Dates: April 10, May 8, June 12

MAGS Show Dates: April 25 & 26



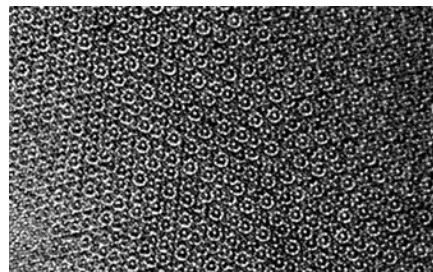
Carol presenting speaker trophy to March meeting speaker David Hanes (photo credit: Kim Hill)

Natural Quasicrystal From Meteorite

We think of minerals as crystalline, but there is another possibility. An article published online March 13 in *Scientific Reports* by a team from Princeton University and the University of Florence in Italy, describes a natural quasicrystal with decagonal symmetry, found in a meteorite that crashed to Earth 15,000 years ago.

The newfound mineral is called a "quasicrystal" because it resembles a crystal, but the atoms are not arranged as regularly as they are in real crystals. "The difference between crystals and qua-

sicrystals can be visualized by imagining a tiled floor," according to a statement by Princeton University in a press release. "Tiles that are six-sided hexagons can fit neatly against each other to cover the entire floor. But five-sided pentagons or 10-sided decagons laid next to each will result in gaps between tiles."



The quasicrystal structure as revealed by an electron beam

This quasicrystal, not yet named, is the second ever found in nature and the first natural decagonal quasicrystal ever found. "When we say decagonal, we mean that you can rotate the sample by 1/10 of the way around a circle around a certain direction and the atomic arrangement looks the same as before," lead researcher

Paul Steinhardt, a Princeton University physicist, said. "So, each layer has this 10-fold symmetry and then the layers are stacked with equal spacing."

The quasicrystal, with composition $Al_{71}Ni_{24}Fe_5$, was discovered in the Khatyrka meteorite. This meteorite was collected several years ago in the Koryak Mountains in Chukotka, Russia. (The first natural quasicrystal formed outside of the laboratory, reported by Steinhardt and his colleagues in 2009, is patterned somewhat like a soccer ball, with 12 pentagons. They found it in the same meteorite.) The newfound quasicrystal is made up of nickel, aluminum and iron—an unusual structure in nature, because aluminum binds to oxygen and prevents attachments to nickel and iron atoms.

Ref: Luca Bindi et al, *Scientific Reports* 5, Article number: 9111 doi:10.1038/srep09111, Received 08 January 2015 Accepted 18 February 2015 Published 13 March 2015

MAGS At A Glance

April 2015

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
29	30	31	1	2	3	4
				Board Meeting, 6:30 pm, St. Francis Hospital		
5	6	7	8	9	10	11
	Show Meeting, 6:30 pm, Agricenter—open to all Members				Membership Meeting, 7:30 pm, "MAGS Show, History and More"	
12	13	14	15	16	17	18
						MAGS Archaeology Interest Group, 10:00 am, Chucalissa
19	20	21	22	23	24	25
				MAGS Show Setup, Agricenter, 9:00 am-, fill grab bags	MAGS Show Setup, Show dinner 6:30 pm	MAGS Show, Agricenter, 9:00 am-6:00 pm
26	27	28	29	30	1	2
MAGS Show, Agricenter, 10:00 am-5:00 pm						

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

