



Volume 61 ♦ Number 08 ♦ August 2015 ♦ A monthly newsletter for and by the members of MAGS

# Indoor Rock Swap/Picnic

August 14 MAGS Meeting—Food, Fun, Prizes, Things to Buy



**MAGS Indoor Picnic and Rock Swap**

The annual MAGS Indoor Picnic and Rock Swap will take the place of the August 14 Membership Meeting. The picnic will be potluck. To make sure we have a good variety of good food, please bring a dish based on the initial letter of your last name:

**A-G ☆ Appetizers or Side Dishes**

**H-N ☆ Entrees**

**O-Z ☆ Desserts**

This event will also be a rock swap, so bring your own table if you have things to sell or swap.

*Continued, P. 3*

| In this issue                            |       |
|------------------------------------------|-------|
| Indoor Rock Swap/<br>Picnic              | P. 1  |
| Citrine Pictures                         | P. 1  |
| MAGS And Federation<br>Notes             | P. 2  |
| Upcoming Field Trips                     | P. 3  |
| Free Online Courses                      | P. 3  |
| Summer Schedule                          | P. 3  |
| The FOSSIL Project                       | P. 4  |
| Jewelry Bench Tips                       | P. 5  |
| Fabulous Tennessee<br>Fossils            | P. 5  |
| August Birthdays                         | P. 7  |
| New Library Book                         | P. 8  |
| June Board Minutes                       | P. 8  |
| OESC Show                                | P. 8  |
| June Meeting Minutes                     | P. 9  |
| Clement Museum 2015<br>Annual Show & Dig | P. 9  |
| Canal Creek Field Trip                   | P. 11 |
| MAGS At A Glance                         | P. 12 |

CITRINE PICTURES W. C. MCDANIEL

They say a picture(s) is worth a thousand words. These three pictures provide good evidence that commercially sold "citrine" is heat treated amethyst.

**Editor's Note:** A Google search for "is citrine heat treated amethyst" turns up quite a few articles on this topic.



# 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

### President's Message

The dog days of summer have arrived. However, for the rockhounds of MAGS we don't take a vacation, we adjust and keep on rockhounding. We move from the hill-sides to creeks for our field trips and move our rock swaps indoors. The August Membership Meeting will be our annual Mid-Summer Indoor Rock Swap and Picnic. Check out the details in the newsletter.

*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](http://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 by-line 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](mailto:lybanon@earthlink.net).

### August DMC Field Trip

WHERE: Willis Mountain Kyanite Mine, Dillwyn, VA

WHEN: Saturday, August 22, 9:00 A. M.-1:00 P. M.

COLLECTING: Mostly white w/some rare blue kyanite

INFORMATION: David Callahan, (540) 297-1853 or (540) 874-5201, [dbc11@aol.com](mailto:dbc11@aol.com).

### 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)

# MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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*Indoor Rock Swap/Picnic* There will be plenty of door prizes. There will also be a silent auction.

Food, friends, prizes, and generally a good time. If you like fun, this will be the place to be. See you there.

## Upcoming Field Trips

*Charles Hill*

Hello again. Here is an updated schedule of field trips. Signup sheets will be provided at the club meetings. If you can't make the meetings, call me or e-mail me before each trip for details: Phone # (901) 626-4232 or (901) 626-4233, E-mail [hunter3006@aol.com](mailto:hunter3006@aol.com).

- **Date:** August 15th **Location:** Twenty Mile Creek, Mississippi **Time:** 10 A. M. **Collecting:** Upper Cretaceous fossils and an abundance of shark teeth. One can never have too many shark teeth. I can't wait.
- **Date:** September 12th **Location:** Halle Stadium Site on Nonconah Creek **Time:** 10 A. M. We haven't been there in years! We will be collecting the same rocks and minerals we always find around here, but as always, some differences in color and variety will be seen.

See you there,

*Charles*

**Editor's Note:** The following article was written by someone very familiar to those MAGSters who

have gone on any of the MAGS field trips to Texas. He's the leader who takes us to the sites where we find ammonites and other fossils. People in North Texas know "Fossil Bob" as someone who gives presentations on fossils at schools, libraries, and similar locations, as well as leading great field trips. The article was originally written for *The Fossil Record*, the newsletter of the Dallas Paleontological Society.

## Free Online Courses

*Bob Williams*

I have taken some online classes through Coursera. They are free and anyone can take them online and work at your own pace. There is usually a week for each module within a course with video or text lectures and a multiple choice quiz at the end of each. If you do well on the tests you receive a certificate of completion, and if you score a 90 or better it comes "with distinction". For a fee you can also get a verified certificate which carries more weight because your identity is confirmed.

There are hundreds of courses and I found a few that apply to paleontology. New offerings are added frequently, so have a look on their website, [www.coursera.org/courses](http://www.coursera.org/courses). Below are the ones I have taken so far.

- ✓ "The Dynamic Earth: A Course for Educators". This 4 week course explores the origin and evolution of the earth. It is offered by the American Museum of Natural History and the next class is on January 4th, 2016.

- ✓ "Evolution: A Course for Educators". This 4 week course explores the history of evolution theory and is also presented by the AMNH. A class starts on August 9th, 2015. Anyone can benefit from the ones prepared for educators.
- ✓ "Dino 101: Dinosaur Paleobiology". This 12 week undergraduate course teaches a comprehensive overview of non-avian dinosaurs and comes from The University of Alberta. One starts on September 1st, 2015.
- ✓ "Origins—Formation of the Universe, Solar System, Earth and Life". From the University of Copenhagen, this course looks at 12 different areas of prehistory, one per week. I just finished but it's not officially over until July 28th. After that a date will be posted for the next offering.

These are very well put together and offer an online discussion forum where you can ask the presenters for help or just chat with students from around the world about the material. There are also sources listed for further study. Happy learning!

## Summer Schedule

*W. C. McDaniel*

**August 6:** -Board Meeting

**August 14:** Membership Meeting, Mid-Summer Night Annual Rock Swap and Indoor Picnic

**August 15:** Field trip to 20 Mile Creek (shark teeth, fossils)

**August 22:** Museum trip to The Hemingway-

Pfeiffer Museum *Continued, P. 5*

*President's Message* Ron Brister, MAGS Director, Librarian, has resigned effective August 1 due to health reasons. Ron has been an exceptional member of MAGS and his wisdom and commitment to the club are greatly appreciated. One of the best ways to recognize and acknowledge his work is just to quote Ron. "I have roughly doubled the number of books in the library over the past decade, developed comprehensive collections of local archaeology and geology books, and replaced the five older AV cabinets with more appropriate book cabinets. The inventory, now catalogued by topic and up to date, is recorded on a zip drive which I can give my replacement." Ron's replacement will be Marc Mueller.

The club still has an opening for an Assistant Director for the Juniors program. Later this year, pending membership approval, we will have a new position, Assistant Director, Library. If interested contact W. C.

*W. C. McDaniel*

## **The FOSSIL Project and a Proposal**

### **The FOSSIL Project**

With the goal of promoting life-long learning, University of Florida researchers have used a four-year, \$1.97 million National Science Foundation grant to create a nationwide network of amateur and professional paleontologists. The FOSSIL (Fostering Opportunities for Synergistic STEM\* with Informal Learners) project is cultivating a networked community in which amateur and professional paleontologists collaborate in learning, the practice of science, and outreach. FOSSIL includes opportunities to: (1) communicate electronically and socially; (2) engage in training and development; (3) attend meetings and workshops; (4) conduct outreach to underserved audiences; (5) contribute to and have access to the growing digitized collections in U. S. natural history museums; and (6) create and share personal digitized fossil collections. The inaugural FOSSIL project meeting took place in conjunction with the 10th North American Paleontological Convention in Gainesville, Florida, in February, 2014.

FOSSIL includes research to better understand how this approach supports the development of a community of practice and impacts participation in science. FOSSIL will build upon ongoing national "big data" initiatives that over the next decade will make millions of digitized fossil specimens available to diverse stakeholders, including fossil clubs and amateur paleontologists. The knowledge gained from FOSSIL will enlighten informal and formal STEM\* educators about how to effectively engage the public with scientific data.

\*STEM: *Science, Technology, Engineering, Mathematics*

### **Creating a National Amateur/Avocational Fossil Organization Association**

*Linda McCall*

The FOSSIL Project is a wonderful and well-thought out creation and I think it will be perfect for its intended purpose, to bring professional and amateur paleontologists together for the purpose of sharing paleo-related outreach with the broader community by communicating electronically through the website, engaging in training and development, attending meetings and workshops and by digitizing collections, both personal and institutional, for public use. That is its focus and is appropriate.

It is also clear that the research is correct when it indicates that we in the Amateur/Avocational fossil community are not well networked. In studying that I have come to realize that our community needs to have a voice, and that voice need to come from us.

We are a valuable and overlooked resource in the field of paleontology and the more we can unite and demonstrate to those in the professional community and the government just what that value is, the better off we will be.

To that end I intend to create a National Amateur/Avocational Fossil Association, modeled in part after the American Federation of Mineralogical Societies, to be the hub for the Amateur/Avocational community, providing a forum for concentrating our efforts while keeping abreast of current events, gathering and disseminating information relevant to our world and unifying our voice in politi-

*Continued, P. 5*

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*FOSSIL Project* cal matters and other arenas.

*Continued from P. 4* We feel this new organization will live on well beyond the mandate of FOSSIL, and want it to be a complement to the FOSSIL Project, not a competitor. I believe that if structured correctly the two entities could be symbiotic, partnering together for the greater good of both.

I will be in contact with each member organization of FOSSIL soliciting feedback and I look forward to and would appreciate any guidance, advice and insights you might have as we move forward with this process.

**Editor's Note:** Linda McCall is President, North Carolina Fossil Club, and a Research Fellow, University of Texas at Austin. She can be reached at (512) 422-2322 or [ldmccall02@yahoo.com](mailto:ldmccall02@yahoo.com). MAGS is a member of the American Federation of Mineralogical Societies (referred to in Linda's article).

*Summer Schedule* and Educational  
*Continued from P. 3* Center in Piggott, Arkansas.

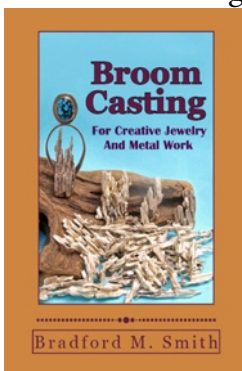
It has a mineral collection of over 1400 specimens. Lunch will be provided. In conjunction with the Arkansas Gem and Mineral Society.

## Jewelry Bench Tips by Brad Smith

**Editor's Note:** This month Brad sent a tip that he used recently: Small Parts Containers. It's a good tip, but you can see it in the June 2015 issue of *MAGS Rockhound News*. Following are Brad's other tips for August.

### NEW RELEASE—Broom Casting Book

I'm pleased to announce the publication of "Broom Casting for Creative Jewelry and Metal Work", one of the techniques that puts the fun into metal working.



Discover the rush of pouring molten silver into a common straw broom to get marvelous icicle-like shapes that make elegant pendants and earrings. Now available on Amazon at [www.amazon.com/dp/0988285835/](http://www.amazon.com/dp/0988285835/) or search for "Broom Casting."

### TRY A TOOTHPICK

The round, stronger toothpicks have a multitude of uses on the jewelry bench. I use them for mixing epoxy resin, for applying paste solder, and with Zam for polishing in tight spots. Toothpicks are also handy for holding a stone while stone setting. Just break off the sharp tip, mold a little beeswax over it, and press it onto the table of your stone.

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



## Fabulous Tennessee Fossils

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

### Beekite Preservation of Fossils

What are fossils? Just as minerals are defined, in a practical sense, as naturally occurring inorganic solids with definite crystal structures and chemical compositions, a practical definition of the word fossil (from the Latin word *fossilis* meaning "to dig up") consists of a small number of basic concepts. First, a fossil represents evidence of past life (distinct from artifact, which is an object formed or used by humans). The evidence can be either a *body fossil*: that is, an actual part of the original plant or animal (e. g., shell, tooth, bone, skin), or *trace fossils*, which are indirect evidence (e.g., a footprint or burrow that was not actually a part of the animal or plant, but does indicate its existence and behavior). Another type of indirect evidence would be molecular fossils (e. g., DNA, oil, coal, urine, blood). The term *past* is quite vague in itself so we generally restrict it to an arbitrary time length prior to the present.

For our purposes, *Continued, P. 6*

*Fabulous Tennessee Fossils* we will say  
*Continued from P. 5* that evi-  
 dence of  
 past life older than ~10,000 years  
 (the beginning of the Holocene  
 Epoch of geologic time and in-  
 cluding the newly proposed An-  
 thropocene Epoch) potentially  
 qualifies as a fossil.

The most common aspect of fossils is that they have been preserved for us to find. Several processes are known that will preserve fossils over millions of years. Paleontologists refer to these processes as *modes of preservation*. *Mode of preservation* must be determined for all fossil finds before they can be scientifically studied, because the mode of preservation usually results in slight changes to the fossil from its original living form, hence can affect scientific interpretation. To evaluate modes of preservation, we must first know something about the skeletal mineralogy of the original organism. Organisms themselves secrete mineralized skeletons (*biomineralization*) which enhances their chance of preservation. Often, the original skeleton (or soft body) becomes altered to a different mineral composition than originally secreted. The likelihood of preservation and quality of detail preserved depends greatly on the mode of preservation. Common minerals and organic compounds used by organisms to form hard parts include is given in Table I. You should be able to readily identify each of these minerals at sight.

There are many modes of preservation for fossils including recrystallization, replacement,

**Table 1.** Common skeletal mineralogies for living and fossil organisms. Organisms can secrete their hardparts using these minerals, or these minerals can later replace the original skeletal composition during the fossilization process.

**COMMON SKELETAL MINERALOGIES FOR LIVING ORGANISMS AND FOSSILS**

1. **QUARTZ (SiO<sub>2</sub>)** Silicon dioxide; used mostly by some groups of microfossils and some sponges; Mohs hardness = 7, fracture - no cleavage.
2. **APATITE Ca<sub>5</sub>(PO<sub>4</sub>)<sub>3</sub>(F,Cl,OH)** Calcium phosphate; found mainly in vertebrates (bones & teeth) & conodonts; Mohs hardness = 5; does not fizz with acid.
3. **CALCITE (CaCO<sub>3</sub>)** Calcium carbonate; found mainly in invertebrate shells; Mohs hardness = 3, 3 cleavages not at right angles (rhombohedral); fizzes with acid.
4. **ARAGONITE (CaCO<sub>3</sub>)** Calcium carbonate; found mainly in invertebrate shells; Mohs hardness = 3, needles to scalenohedra, fizzes with acid. Less stable than calcite
5. **DOLOMITE (Ca, Mg)CO<sub>3</sub>** Calcium-magnesium carbonate; rarely found in shells and other skeletons of marine animals and plants; Mohs hardness = 3.5-4.0; only powdered mineral fizzes in acid.
6. **OPAL (SiO<sub>2</sub> · nH<sub>2</sub>O)** Hydrated silica; found in the skeletons of a small number of marine animals and plants; Mohs hardness = 5 - 6.5; does not fizz with acid.
7. **CHITIN [(C<sub>32</sub>H<sub>54</sub>N<sub>4</sub>O<sub>21</sub>)<sub>x</sub>]** Complex polysaccharide that forms long chains of ectoderm origin.
8. **CHITINOPHOSPHATE** Similar to chitin, only richer in PO<sub>4</sub>.
9. **AMBER/COPAL** Hard yellow to brownish translucent tree resin.

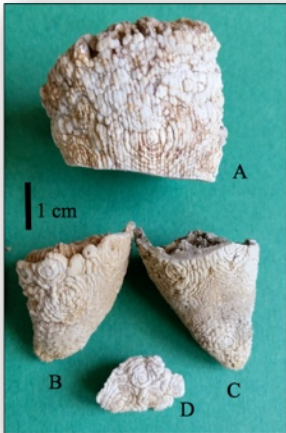
Note: Calcite and aragonite have similar chemical compositions and physical properties but differ in their orderly internal arrangements of atoms. The most reliable way to distinguish them is by X-ray methods.

molds and casts, permineralization and more, which I will expand on in future articles. One common mode of preservation is called *replacement* and occurs when solvent action of ground water coupled with the simultaneous or later deposition of other mineral substances in the voids. Literally, the

original shell mineral is replaced by a new mineral, which may be the same or different chemical composition as the original shell. Four replacement minerals are common in fossils: (1) *Calcification*—original shell replaced with newly grown calcite (difficult to distinguish from

*Continued, P. 7*

*Fabulous Tennessee Fossils* recrystallization mode of preservation), (2) *Silicification*—original shell replaced with quartz or opal, (3) *Pyritization*—original shell replaced with pyrite metal, and (4) *Dolomitization*—original shell replaced with dolomite.



**Figure 1.** Rugose corals from Mississippian strata west of Nashville, Tennessee, showing extensive beekite ring formation (UT Martin Vanderbilt Fossil Collection). A. Beekite rings occur on the outer surface of the fossils as microcrystalline chalcedony replaces the original calcite epitheca of the coral. B. & C. Complete rugose corals with extensive beekite replacement. D. Portion of outer surface of rugose coral epitheca that has separated from a fossil; note the breakage around the beekite layers.

In this installment I want to focus on a type of *replacement* that results in *beekite* rings (Figure 1). Beekite rings are named for their English discoverer Henry Beeke (1751-1837) who had collected fossils preserved in this distinctive way. Beeke was not a geologist, his background was in divinity, but

Beeke became the Regius Professor of Modern History at the University of Oxford where he cultivated his interest in fossils and botany. Beekite (sometimes written as beekite) occurs when silica-rich waters percolate through fossil bearing strata, usually limestone, and substitute for the calcareous original shell of a fossil. Beekite is found mostly in Paleozoic fossils; it is fairly common in the cherty portions of West Tennessee Devonian strata, such as the Camden chert and Ross Formation exposed near Camden and Parsons and in some Mississippian limestone strata exposed in the Western Highland Rim. As shown in Figure 1, beekite occurs as concentric rings on the surface of the fossil. Beekite rings are composed of chalcedony, which is microcrystalline form of quartz (SiO<sub>2</sub>), making the mode of preservation *replacement by silicification*. Beekite ring formation can progress to the point that most of the original structures of a fossil become obscured by the ring structures themselves (Figure 1). Beekite is resistant to later erosion, so this is a particularly good form of preservation. The actual chemical mechanism of beekite ring replacement is poorly understood, but most sources cite the gradual replacement of carbonate with a limited amount of silica percolating through the fossil such that little centers of nucleation form and expand outwards, much like waves on a water surface during rain. Beekite rings are usually a surface phenomenon with the interiors of fossils being more massive chert or partially original calcite shell (Figure 1A-C). Viewed in

three dimensions, the rings look more like flattened concentric donuts. Sometimes the rings break off of the surface of a fossil during weathering and are found as separate grains in the sediment residue (Figure 1D). There is little research on the end-state of beekite replacement, but presumably the grooves making the rings eventually completely silicify as more silica moves through the system, the fossil becomes nearly pure chalcedony or chert and the rings themselves are probably recrystallized and the ring structures are lost. Beekite replacement produces a unique surface texture that obscures taxonomy for the paleontologist, but enhances beauty of the fossils for collectors.

**August Birthdays**

- 3 Jane Brandon
- 4 John Spencer
- 8 Jeff Siems
- 11 Paul Sides  
Konrad Von Boeckman
- 12 Ron Brister  
David Murray
- 13 George Krasle
- 16 George Loud  
Letitia Brister
- 20 Dana Armstrong
- 21 Howard Bromley
- 22 Idajean Jordan
- 25 Ellie Hsueh  
Sherri Baldwin  
Lenora Murray
- 27 Ricardo Ortiz  
Donald Leighton
- 28 Iris Leighton  
Beth Day
- 31 Frank Schwartz  
Thomas Neal

# MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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## New Library Book

A recent library acquisition will help you brush up on geology fundamentals. *Understanding Earth* by John Grotzinger is the textbook for the (free online) MIT course, "Introduction to Geology." (See "Free Online Courses" on P. 3 of this issue for information on more of these courses.)

## June Board Minutes

Mike Baldwin

Meeting called to order at 6:32 pm. Present: W. C. McDaniel, Charles Hill, Carol Lybanon, Mike Baldwin, Bonnie Cooper, Kim Hill, James Butchko, Ron Brister, Bob Cooper, Nannett McDougal-Dykes, and Matthew Lybanon.

**Secretary:** May minutes approved with a minor revision.

**Treasurer:** Bonnie reported that MAGS has replaced all existing CDs with new ones. She distributed May bank statements and IRS Form 990-N for review by the Board. Bonnie will keep financial documents on file to pass on to the next treasurer. She gave an update on rent to the church, and stated that the church is fine with any payment schedule for future rent payments. W. C. recommended we pay the rent for the rest of the year. Discussion about the number of hours needed for meetings followed. Consensus: our current 7:00 to 9:30 works well.

**Membership:** Bob reported that we have two new Members since the May meeting. The new membership directory will be published on June 15. Bob has tracked down some lifetime MAGS members, the Chrismans. We now have address information. They have been added to the hardcopy newsletter list.

**Field Trips:** Charles canceled the Canal Creek trip due to high water and rescheduled it for July 18. The trip to Cumberland Furnace included a side trip to Dickson to collect coral. Charles would like to schedule a two-day trip to Dickson, Cumberland, and Dale Hollow in the late fall. Matthew contacted Michael Gibson; he will write an article on Dickson coral for *Rockhound News*. A trip to Turkey Creek is set for June 20, with 20-Mile Creek and Crow Creek trips coming up soon. W. C. mentioned an invitation from the Arkansas club to join them to visit the Piggett Museum (former home of Ernest Hemingway) in August. The Arkansas club will collect pyrite at Magnet Cove on June 13.

**Adult Programs:** Carol reported that the June Membership Meeting will be different—a show and tell program by MAGS members. Kim Hill will pinch hit for Carol, who will not be at the meeting. Members will be able to par-

## GEM, MINERAL, & FOSSIL SHOW

August 22 & 23, 2015

Sat. 9 A.M. - 6 P.M. Sun. 9 A.M. - 4:00 P.M.

**New Location!**

BAXTER COUNTY FAIRGROUNDS, (Educational Bldg.)

1507 Fairgrounds Drive  
Mountain Home, AR 72653

(Traveling South on Hwy. 62, turn left onto E. Wade St.)

Gems, Minerals, Fossils,  
Unique Jewelry & Crafts,  
Educational DVD Presentations  
Games, Geode Cracking



Free Door Prizes,  
Concession available &  
Provided by the Clarkridge  
Fire Department

### GRAND PRIZE

Large Polished Amethyst Geode Slab-34.54cm (13 1/2") x 21.84cm (8 1/2")

Admission: \$2

(Each paid admission will receive one ticket for grand prize—additional tickets are available for \$1. each)

(Active military with ID, Scouts in uniform, & Children under 12 yrs. **FREE**)

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For more information call:

Sharon Waddell 417-274-8712 or 870-425-1311 (conferej@yahoo.com)

ticipate in hands-on magnet-making projects. The July program will be with Jimmy McNeil about quartz mining and how he got into selling. Our Annual Indoor Picnic and Rock Swap is set for August. In September, Lori Carter will present the program. In October James Hardin will talk about Israel. Mike Baldwin, Bob Cooper and Alan Schaeffer will present the November program, on fluorescence. December will round out the year with our annual holiday party.

**Youth programs:** James reported that the June youth program will be Native American culture with Mike Baldwin. The July program will be on weapons throughout human history with James Butchko. In August the youth will join the adults for the indoor picnic. Carol will do the November program.

**Rock swaps:** Nannett stated that the rock swap at Jimmy McNeil's went well. She is also working on the August picnic and programs for Shelby Farms. Discussion followed on whether or not these outreach programs for youth are valuable to MAGS. Would we need to provide financing or projects or both? Consensus was that these Shelby Farms projects are very valuable. Nannett is developing a fossil game that requires bowls and paints. A motion was made and carried to fund Shelby Farms project

*Continued, P. 9*



# MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

*June Board Minutes* materials in the amount of \$100.00.  
*Continued from P. 8*

**Library:** Ron stated that he needs help in getting 30 bookends. Mike will check with International Paper to see if there are any surplus bookends available. Thank you to Marc for pinchhitting while Roger was away.

**Web:** Mike reported that the June newsletter is online and the website has been updated with new calendar entries and homepage articles. A discussion followed about ideas for bringing more field trip photos online. Matthew suggested that we leverage Flickr. The board agreed and Mike committed to establishing and maintaining a Flickr photo gallery. Mike suggested that the Tennessee fossil articles written by Michael Gibson for *Rockhound News* should be monthly feature articles on the website.

**Newsletter:** Matthew made his monthly plea for articles and information, and that information be given to him on time. More articles and on-time submissions make the process of publishing the newsletter much easier. He would like to include book reviews in the newsletter.

**Show:** James stated that we are still in wrap-up phase. He has labeled some things in the shed for next year's show. Matthew shared the income and payout for this year's Show, and gave a reasonable estimate of the 2015 show profits. We have already paid the down payment to the Agricenter for the 2016 show and purchased the grand prize for 2016. We will wait until August for the final distribution of funds to the club. All but two member tickets have been paid. Bonnie is over half way through mailing list input.

**Old business:** [01] The board needs to write a job description for the assistant librarian and start the process to add that position as a director. [02] The board needs to continue the discussion on Chucalissa/student mem-

berships and establish ground rules. [03] A discussion concerning cell phone usage precipitated a need to announce at club meetings that cell phones should be on silent during the meetings and personal conversations should be taken outside.

Meeting adjourned at 7:45 pm.

## June Meeting Minutes

*Mike Baldwin*

Meeting called to order at 7:30 pm. There were 25 members and 6 visitors. W. C. announced that, as a courtesy to all Members present, cell phones should be placed on silent during the meeting and that personal conversations be taken outside.

**Membership:** Bob Cooper announced that the 2015 Membership directories will be distributed the week of June 15.

**Field Trips:** Charles Hill announced that Bob will lead the June field trip to Turkey Creek. A sign-up sheet and specimens from Turkey Creek are on the table near the exit. July 11 field trip will be to Crow Creek, AR. The August field trip will be to 20-Mile Creek. There's a display here tonight of materials collected on the recent field trip to Cumberland Furnace and Dickson, TN.

**Show:** W. C. stated that there will be a 2015 Show wrap-up at the August meeting. Work on the 2016 Show begins in September.

**Displays:** Kim Hill introduced the displays for this evening. 4 adults participated, showing a variety of specimens, including: petrified wood from Arizona, Utah and Mississippi; glass from Nonconnah Creek, sharks' teeth from 20-Mile Creek, slag from Cumberland Furnace, and coral from Dickson.

Youth were dismissed to take part in their program.

**Adult program:** Tonight's adult program included talks and demonstra-

tions by five MAGS members: Bill Gilbert [making cabochons], David McAlister [tumbling techniques], Ron Brister [effective specimen labeling and cataloging], W. C. McDaniel [cleaning crystals], and Mildred Schiff [wire wrapping].

**Youth program:** Mike Baldwin presented a night of Native American culture and storytelling. Mike told stories from his youth, centered around his paternal grandmother's Cherokee heritage. He told a bit of Cherokee history, including the Trail of Tears, Cherokee name meanings and ceremonies, asked the youngsters to tell about themselves and then presented each with a unique Native American name. The youth then made honor feathers [duck feathers, beads, sinew and clips] and finished the evening with a round of Native American dances.

Meeting adjourned at 8:30 pm.

## Clement Museum 2015 Annual Show & Dig

*James Johnson*

For the past few years, I have driven down to Marion, Kentucky, to assist Tina and her staff [*Tina Walker is museum director*] with the Ben E. Clement Mineral Museum's Annual Gem Show and Fluorite Digs. This frees them up to take care of other responsibilities. I hosted the Eureka Mine both days for them. The first year of that required me to get up early each morning and drive to the mine to start the pump, pumping water from the pit so that rockhounds showing up after the 9 am start each day would have easier access to dig in the pit of the mine. I would also open the gate on my way in and then open the gate to the parking

*Continued, P. 10*

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*Clement Museum Show & Dig area*  
*Continued from P. 9*

in the cow pasture across the road. While the pump was pumping water from the pit, I always made a walk around the tailing piles and edge of the pit to see if I could spot anything promising, so that when the diggers arrived I could point out the promising areas to them and then would help them throughout the day to find some beautiful crystals there.

This year, I didn't have to rise so early as the old water-filled pit was no longer being used; a group of us had been there a few weeks ago and helped them dig out a new pit area that was not water filled for the most part. After stopping off at the museum on my way to the mine Saturday morning, and visiting with Fred, one of the board members, and Tina's husband Brad, wishing him a Happy Birthday, and Bill Frazer, who gave me a key to the gate, I drove on down to the Eureka Mine. I then opened the gate to the parking area and made my walk around the tailings piles and new pit to find the promising areas to point out to the diggers once they started arriving.

This is what the mine area looks like these days. The old pit on the left side where the trackhoe operator is cleaning out a bit on the south side when we were there in May, and the new tailing piles to the right and behind Alan Schaeffer and me. I was pointing out the bench of fluorite to Alan. It runs right up through the new pit area and is chock full of pockets of beautiful cubes of fluorite.



The new pit turned out to be a very promising area where a lot of pretty cubes came from this past weekend by many diggers.



There were also some areas further up the road on the right side where we had Danny, the trackhoe operator, stir up some old tailings in the woods. Some folks found some nice cubes lying on top up there during the day too. By midday on Saturday, there was a family with four little gals that showed up brimming full of enthusiasm and ready to tackle anything. Their parents sat down up above the new pit and watched their girls go at it, working on the tailing pile removed from the shaft area.



Mary, one of my favorite friends, traveled up for the annual show again and is seen below on the far side of the old pit checking out one of her favorite digging areas there, while a young family dug into the slope below her.



Some were simply content to dig into the softer dirt of the tailing piles above us where one can find some nice plates and chunks of cubes dug up by the excavator. You just have to be willing to stay and dig till you find them in there, and willing to withstand the temps as they rise throughout the day. Once you find a good spot to dig in though, some bring umbrellas and park themselves there for the day.

One of the little blonde gals decided she needed more tools, so she returned to Mom and Dad to get them, and then had to cross the muddy trough between them. Despite my warnings to them and everyone else that the mud there could be quite soft and deep, she decided to cross there anyway—much to everyone's amusement. And after getting stuck and extricating herself from the soupy mud there, not an easy feat especially after you have been digging there awhile, she decided to do the long jump across it—and flew over it like a graceful deer.

*Continued, P. 11*

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## Clement Museum Show & Dig Continued from P. 10



Their Dad told us all on their arrival that this was his work crew; he was going to let them do the manual labor. But later as they became tired, the tables turned, and Dad had to get down into the mud to show them what hard rock mining was all about, to extricate the pretty stuff.



There was another young Dad there, this one from the Mayfield, Kentucky, area, who had the be-

ginnings of a baseball team with him—four nice young lads who proceeded to walk around and check out the entire place.

And this Dad had no problem getting down and tackling the hard rock mining in the pit either, while his youngest boy discovered there was not only water in the creek next to the mine, but tadpoles as well and for a few minutes, the focus of his boys shifted from pretty crystals to tadpoles.



By 2 pm even more diggers had shown up to embrace the unusually high temps for so early in the season, and dig in. Some left and went to check out the other three mines offered for the weekend, and some even returned in

the afternoon to the Eureka Mine, which holds the most promise for finding nice cubes. I always take a few flats of older material from my collection over the years of digging there, to give to the rockhounds who either strike out and don't find anything at all or find just a little stuff. I always like to see folks leave there happy ... 'specially the little ones.

And about 2 pm, a young couple walked up to me as I was standing on the road over the pit,. They introduced themselves as Cody and Misty. I had talked to them the week before on the McRocks board website. They are a husband-wife team of geologists who moved to the Jonesboro, Arkansas, area to teach geology at the local state college there, and came over to have some fun and find some cubes of fluorite as well.

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**Editor's Note:** Want more? You can read more of the story and see more of the pictures from the Clement Museum Show & Dig—and see them bigger—along with pictures from other rockhound trips, on James Johnson's website, [www.jwrocks.com/](http://www.jwrocks.com/).

## Canal Creek Field Trip, July 18, 2015

### Agates



### Fun



### Petrified Wood



# MAGS At A Glance

## August 2015

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY                                          | FRIDAY                                                     | SATURDAY                                                                       |
|--------|--------|---------|-----------|---------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------------------------|
| 26     | 27     | 28      | 29        | 30                                                | 31                                                         | 1                                                                              |
| 2      | 3      | 4       | 5         | 6<br>Board Meeting, 6:30 pm, St. Francis Hospital | 7                                                          | 8                                                                              |
| 9      | 10     | 11      | 12        | 13                                                | 14<br>Membership Meeting, 7:30 pm, Indoor Picnic/Rock Swap | 15<br>MAGS Field Trip, 20 Mile Creek/ Chucalissa Vol. Day/ Newsletter Deadline |
| 16     | 17     | 18      | 19        | 20                                                | 21                                                         | 22<br>Museum Trip, Hemingway-Pfeiffer Museum/DMC Field Trip, Dillwyn, VA       |
| 23     | 24     | 25      | 26        | 27                                                | 28                                                         | 29                                                                             |
| 30     | 31     | 1       | 2         | 3                                                 | 4                                                          | 5                                                                              |

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