



Volume 62 ♦ Number 05 ♦ May 2016 ♦ A monthly newsletter for and by the members of MAGS

What I Have Done Over The Past 9 Years As Director At Chucalissa

Dr. Robert Connolly

May Program



Robert Connolly will retire as Director of the C. H. Nash Museum at Chucalissa later this summer. He will speak about the changes made at the museum over the past nine years, with a focus on new exhibits and MAGS contributions to that work.

Highlights include the newly refurbished Brister Archaeology Discovery Lab, that includes a recreation of the excavation trench through the installation of sediment peels. He will also discuss the plans for the future at this premier Memphis attraction.

Continued, P. 3

In this issue

What I Have Done At Chucalissa	P. 1
May Rock Swap	P. 1
MAGS And Federation Notes	P. 2
The June Field Trip	P. 3
Contact Us!	P. 4
May Birthdays	P. 4
GMS Rock Show	P. 5
SFMS Workshops for 2016	P. 5
New Members	P. 5
Missouri Field Trip	P. 5
Fabulous Tennessee Fossils	P. 6
Displays	P. 7
Clement Show w/Digs	P. 7
March Board Minutes	P. 7
March Meeting Minutes	P. 8
Jewelry Bench Tips	P. 9
Reelfoot Lake Archaeology Boat Trip	P. 9
APS Hot Tip	P. 9
Upcoming Programs	P. 10
FOSSIL Conference	P. 10
Tully Monster	P. 10
The Earth Wide Open	P. 11
MAGS At A Glance	P. 12

MAY ROCK SWAP

The year's first rock swap will be Saturday, May 14, 11:00 A. M. to 2:00 P. M., at Jim and Hisami McNeil's home. The address is 9869 Taylor Drive, Olive Branch, Mississippi. Phone (662) 890-4126.

POTLUCK DINNER: Please bring a dish. MAGS is providing plates, napkins, drinks and cutlery.

The McNeils will have things to swap. It's more

fun if you have something to sell or trade. Come and look at the magnificent Japanese garden.

Directions From Memphis

From I-240 turn south on Lamar (Hwy 78). Go to Exit 6 in Olive Branch (15-20 miles). Turn on Exit 6 (Bethel Road and Hacks Cross). At stop sign, turn left onto Hacks Cross. Go approximately 0.4 mile to stop light (the cross *Continued, P. 8*)

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)—Kim Hill

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

Director (Asst. Adult Programs)—Debbie Schaeffer

♦ 6854 Corsica Drive, Memphis, TN 38120 ♦ (901) 753-8496 ♦ dayday91@aol.com

Director (Youth Programs)—James Butchko

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

Director (Asst. Youth Programs)—Leigh Scott

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

Director (Librarian)—Marc Mueller

7784 Commodore, Millington, TN 38053 ♦ (615) 491-5110 ♦ skydancer2992@yahoo.com

Director (Asst. Librarian)—Jane Brandon

4384 Castle Avenue, Memphis, TN 38122 ♦ (901) 374-0366 ♦ jjbrandon@yahoo.com

Director (Membership Services)—Bob Cooper

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

Director (Historian)—Leah Gloyd

2151 Dogwood Creek Court, Apartment 202, Collierville, TN 38017 ♦ (270) 847-3170 ♦ leahgloyd@outlook.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

Past President—Paul Sides

1062 CR 739, Wynne, AR 72396 ♦ (870) 400-9060

MAGS AND FEDERATION NOTES

President's Message

The MAGS Membership Meetings will celebrate the summer of 2016 with added events: *Continued, P. 3*

MAGS General Membership Meetings and MAGS Youth Meetings are held at 7:00 P. M. on the second Friday of every month, year round. The meetings are held in the Fellowship Hall of Shady Grove Presbyterian Church, 5530 Shady Grove Road, Memphis, TN.

MAGS Website: memphisgeology.org

MAGS Show Website: www.theearthwideopen.com

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.

May DMC Field Trip

WHERE: Vulcan Quarry and Mineral and Lapidary Museum (Friday) and Treasure Valley (former Lookadoo Gold Mine, Saturday), both in or near Hendersonville, NC

WHEN: Friday and Saturday, May 20 and 21

COLLECTING: No collecting at museum. Gold and native stones at Treasure Valley (fee site)

INFORMATION: Margaret Gilbert, (826) 674-1625 or gilbert3487@att.net

Links to Federation News

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

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

What I Have Done At Chucalissa
Continued from P. 1

The Brister
Archaeology
Discovery Lab

received a facelift recently, with new exhibits and activities designed to give visitors an insider's look at archaeology. Uncovering the Past focuses on the archaeology of Chucalissa and allows visitors to sift, sort, weigh, and analyze artifacts. The Trench Wall exhibit replicates the stratigraphy of an actual trench cut through a Mississippian mound. The Native American Foods exhibit features tools used in hunting, farming, and food preparation.

Working under the tutelage of collections manager (and former MAGS Board Member) Ron Brister and museum director Robert Connolly, graduate assistants Eliza-beth Cruzado and Colleen McCarthy

designed the new exhibits. Museum staff, volunteers, and student interns pitched in to assist with the research, building, and painting.



President's Message
Continued from P. 2

- **June 10**—Auction: rocks, minerals, fossils, lapidary equipment, and surprises.
- **July 8**—Agate Expo/Days, a special display of all things agate. Members will show and display their agates. A July date was selected because two events occur that month. The worldwide AgateExpo, held every four years, will be held that weekend in Cedarburg, Wisconsin, and Agate Days is held in Moose Lake, Minnesota, every year in July. It celebrates Lake Superior Agates.
- **August 12**—MAGS indoor rock swap and picnic. Food, air condition and rocks join for this annual event.

W. C. McDaniel



MAGS Summer 16 of Rocks Photos



The June Field Trip ... Let's Get Wet

Kim Hill

Hey, fellow MAGS Members. It's Kim Hill, your Assistant Director of Field Trips, here to tell you about the June field trip.

Charles Hill, our Director of Field Trips (no we aren't related)

put me in charge of June so he can devote his time to a big family reunion.

Those of you who know me probably won't be surprised at my choice. I chose 20

Continued, P. 4

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

The June Field Trip Mile Continued from P. 3 Creek! On June the 11th, the Saturday after our regular Membership Meeting, we will meet at 10:00 A. M.

Longtime Members know this is a great place to find shark teeth, ray teeth, saw-fish teeth. Even projectile points have been found in the creek; you never know what you may dig up. I have found parts of jaw bones with teeth and other bones.

To our newer Members, this is a great place for the whole family to come, and it is very easy to find stuff, so even the kids can enjoy the hunt and playing in the creek.

Things you will need to bring with you: You will be getting wet, so clothes you can get wet in, water shoes, or something you don't mind getting wet. Dry clothes, shoes and towels. Bring water, drinks, and lunch or snacks. Hunting is hungry work! There are no bathrooms.

Things you will need to help make your hunt a success: There are many different items you can use. Most important is something to seine the gravel through and something to dig up the gravel. A regular colander can be used, a big strainer, or you can make a sieve with a wood frame and hardware cloth, as big or as small as you want; I like big—more chances for finding teeth. You can add swim noodles to help it float and a rope so it doesn't float away. Make sure to get something with the smallest holes you can. To scoop up the gravel, giant



kitchen spoons have been used, or a chicken feed scoop, or a shovel. What I like to use is a short handled shovel. You can reach farther under the water and boulders with it. You will need baggies, small bottles, or some type of pouch to put your treasures in. I have a small camping chair I bring to sit on, in the water.

There are two steep paths down to the creek and they can get slippery when wet. Please take this into account if you are planning on joining us. I can get down and back up the paths by taking my time, so I doubt anyone will have any problems as long as they are careful. Once down to the creek, you wade in and start hunting. You want to look for areas where the current might push things up against boulders, logs, a bank, and you want to look for sand with gravel in it. The gravel will be where the teeth and fossils are. If you are just digging in sand you won't have much luck.

Well I think that's about all. There will be directions and a sign-up sheet at the June 10th meeting. I really hope you will come and join us for a wonderful day of hunting treasures in a creek!!!

If you need to contact me my number is (901) 388-7572.



W. C. McDaniel



The MAGS website receives a lot of requests for information and identification of fossils, rocks and many unknown objects. One of the best in the last couple of years was recently found in West Tennessee. It has been identified as a possible adult mastodon (*Mammut americanum*) molar.




May Birthdays

- 3 Jessica Clark
Thomas Jones
- 9 Carol Lybanon
- 10 Julie Lybanon
- 11 Mary Elliott
- 12 Pam Crumpton
Trace Hartman
- 13 James Butchko
- 14 Philip W. Eglsaer


Continued, P. 5

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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




ROCK SHOW





To help our members educate ourselves and the public in Earth science topics

www.gamineral.org
A Non-Profit Educational Organization




The Georgia Mineral Society's 48th Annual Mother's Day Weekend Gem, Mineral, Jewelry, and Fossil Show





2016

Friday May 6 10 AM – 6 PM
Saturday May 7 10 AM – 6 PM
Sunday May 8 Noon – 5 PM



STATE FOSSIL
SHARK TEETH

EXCITING AUCTION SATURDAY AT 1 PM

Cobb Civic Center
548 South Marietta Pkwy SE
Marietta, GA




QUARTZ
STATE GEMSTONE

Over 30 Dealers!

Door Prizes!

Special Door Prizes for Students!


Win a Great Prize for Yourself and for Your School!



Free Parking!

Free Admission!

Free Demos!



SFMS Workshops for 2016

We have received the schedule for the Federation workshops at William Holland and Wild Acres. If you would like more information or a registration form, check out www.SFMSworkshops.com. Or our Facebook page at www.facebook.com/Southeast-Federation-of-Mineralogical-Societies. You can contact the Registrar for each facility:
William Holland—Heidi Wetzel sfms.wh@gmail.com
Wild Acres — Toni Garland waregistrar2016@gmail.com

Session 1, William Holland, 6/5-11/16			
Beading	Becky Patellis	Mineral ID	Scott Forward
Cabochons	Dave Bergquist	Opals	Carl Talbot
Casting	Bill Harr	Polymer Clay	Sandra Davis
Chain-Maille-Beg & Int.	Kathy Morris	*SW Silver (advanced)	Nancy English
Faceting—Beg. & Int.	Tom Mitchell	Wire Wrap I	Sandra Bergquist
Gem Trees	Jerri Heer	Wire Weaving & Filigree	Jan Stephens

Session 2, Wild Acres, 8/22-28/16		Session 3, Wild Acres, 9/19-25/16	
Fused Chain-Maille	Roy Deere	Chain-Maille 1&2	Roy Deere
*Metalwork Special Proj.	Jeff Sheer	Gem ID	Teresa Polly
Advanced Beading	Self Study	Casting	Bill Harr
Mineral ID	Travis Paris	Flint Knapping	Michael Miller
Chasing & Repose	Tom & Kay Benham	Wire for Beaders	Leslie Wayment
Display Case Building	Danny Griffin	Faceting—Beg. & Int.	Tom Mitchell
Deep Relief Wood Carving	Clancy Smith	Silversmithing	Pattie Appleby
Metal Clay I	Katie Baum	Scrimshaw	Rich Williams
Gourds	Pat Davis	Cold Connec. & Enamel	Debra Mauser
Wire Wrap—Beg.	Rowan Rose-Morgan	*Chasing & Repose II	Tom & Kay Benham
* Advanced Class		*Metal Clay II	Katie Baum

This is a wonderful perk of belonging to the SFMS. Join in and support your Federation.

May Birthdays Continued from P. 4

- 16 Robert Duncan
- 19 J. R. Hill, Joanne Gilmore, Susan Jones
- 20 Michele Robbins
- 21 Geoff Day, Mike Nagel
- 23 Ethan Mueller
- 25 Amber Shields, William Gilbert
- 28 Carl Warren
- 30 Herb Nicholson
- 31 Sherry Bright

New Members

- Stephanie Blandin
- Bill Behnke and Debbie Greusel
- Chuck & Lynn Reed (daughters Claudia and Mackenzie)
- Joseph & Marlowe Blodgett (son Jacob and daughters Evelyn & Emelia)

Missouri Field Trip Pictures

Eminence



Fabulous Tennessee Fossils

Dr. Michael A. Gibson,

University of Tennessee at Martin

Eocaesalpinia herendenii



Kingdom Plantae
 Subkingdom Tracheobionta—
 Vascular plants
 Superdivision Spermatophyta—
 Seed plants
 Division Magnoliophyta—
 Flowering plants
 Class Magnoliopsida—
 Dicotyledons
 Subclass Rosidae
 Order Fabales
 Family Fabaceae—Pea family
 Genus *Eocaesalpinia*
 Species *herendenii*

Sometimes the best fossil finds are accidental and by students. Nearly ten years ago now, one of my geology majors, Callie Dudley, was on a field trip to the clay pits near Gleason, Tennessee. These pits are famous for the white ball clay they produce and for the fossil leaves they preserve. The original work on these pits was conducted by the great paleobotanist E.W. Berry in the early 1900s and restudied by paleobotanist David Dilcher in the 1970s. On her field trip, Callie split open a block of clay to reveal a very small, well-preserved flower. She was excited and so was I!

Fast forward to 2014. I had contacted my colleague David Dilcher, who had moved from the Indiana University to the Florida State Museum, for help in identifying our flower. With a high-

power microscope and a scanning

Continued, P. 7

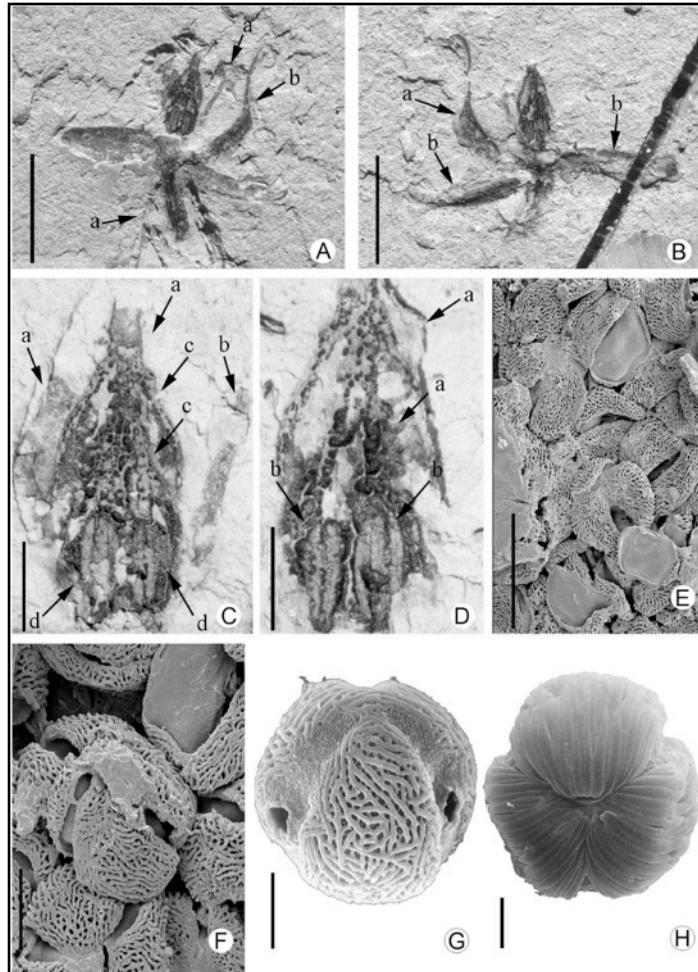


Figure 1. A–F. Flower and pollen of *Eocaesalpinia herendenii* from the Middle Eocene of Tennessee. A. Part. Filaments (arrows “a”); ovary (arrow “b”). B. Counterpart. Ovary (arrow “a”); bracteoles (arrows “b”). C. Part. Sepals (arrows “a”); filament (arrow “b”); petals (arrows “c”); anthers (arrows “d”). D. Counterpart. Petals (arrows “a”); anthers (arrows “b”). E. Pollen clump. F. Pollen with torn colpi membrane. G, H. Extant pollen. G. *Schotia latifolia*

Jacq. H. *Crudia reticulata* Merr. G, H courtesy of Alan Graham. Scale bars: A, B = 5 mm; C, D = 1 mm; E = 10 µm; F–H = 5 µm. Figure and caption taken from Dilcher, D. L., T.A. Lott, M. A. Gibson, & C. Dudley. 2014. Chapter 4: An extinct Caesalpinoid flower from the Eocene of Western Tennessee, In: W. D. Stevens, O. M. Montiel, & Peter Raven (Eds.). *Paleobotany and Biogeography: A Festschrift for Alan Graham in His 80th Year*: Missouri Botanical Gardens, 128:51–63.

Fabulous Tennessee Fossils electron
Continued from P. 6

microscope, David, his research assistant Terry Lott, and I were able to find more than just flower petals in our specimen. The stamen and anthers were present, along with copious amounts of pollen! But what taxon did the specimen belong to? We found nothing in the published literature resembling our fossils. After years of visiting the National Arboretum in Washington, D. C., and scouring collections, we published our own description of what is now a new genus and species of plant in West Tennessee—*Eoscaesalpinia herendeeni*. The name is derived from “Eo”, the prefix used in ancient times for “dawn or beginning” and “caesalpinia”, which is the new fossils subfamily, the Caesalpinioideae. The species name “herendeeni” is in honor of paleobotanist Patrick Herendeen for his work on the fossil history of Fabaceae, to which this flower belongs. *Eoscaesalpinia herendeeni* (Figure 1) is a well-preserved flower with a single gynoecium that resembles an immature pod-like fruit—features resembling the Fabaceae. Our specimen is interesting in that it possesses petals in a semi-open position. Callie had long graduated when we published the paper, but she finally got to see it and see her name as one of the discoverers of a 30 million year old new flower—a Fabulous Tennessee Fossil!

Displays

Debbie Schaeffer

Don't forget that all Adult and Junior MAGS Members who bring

displays to the monthly meetings will be entered in a drawing for a prize that will be awarded at the Holiday Party in December. **The more times you bring a display, the better your chances of winning!**

11TH ANNUAL CLEMENT GEM, MINERAL, FOSSIL, AND JEWELRY SHOW W/DIGS

June 4 & 5, 2016

Fohs Hall

201 North Walker Street
Marion, KY

Saturday, 9 AM-5 PM

Sunday, 9 AM-4 PM

Activities: Vendor tables, hourly door prizes, Kentucky Geological Booth, Indian Artifact Display, FREE children's activities, museum tours*, day and night digs*, and beading classes at 10AM and 2PM*

* there is a charge for the items marked with an asterisk*

For more info:

www.clementmineralmuseum.org
or call (270) 965-4263

March Board Minutes

Mike Baldwin

Meeting called to order at 6:31 pm. Present: Kim Hill, W. C. McDaniel, Jane Brandon, Michael Montgomery, Carol Lybanon, Matthew Lybanon, Bob Cooper, Bonnie Cooper, Marc Mueller, James Butchko, Leah Gloyd, Mike Baldwin.

Secretary: Motion carried to approve minutes with 2 corrections.

Treasurer: Bonnie distributed statement. She asked for budget amounts for 2016. Marc asked for \$200 for library. Jim asked for \$165.20 for Junior Programs. W. C. asked for \$200 for the President. Still have some

outstanding checks. Bank statement is not in yet. Motion carried to approve report.

Membership: 3 new & 7 renewals since last meeting. Latest edition of membership directory distributed via email; USPS copies mailed. We currently have 326 members. Liability insurance check written and forms completed. SFMS dues are \$1.75/person, not \$2.00 as previously told. Have already paid dues, so need a Check Request form for a refund.

Field Trips: Reelfoot Lake trip is Saturday after May meeting. MAGS will pay half the fee for the pontoon boat tour (\$7.50 of \$15 per person). Rain will cause the tour to be by bus rather than pontoon boat. Some hiking involved, so participants should wear appropriate gear. Carol saw the McNeils; they would like to do their swap on April 9. That date is the same as Heritage Days at the Natural History Museum in Tupelo. A potential new location will be part of the agenda, as will as some of our favorite spots for druzu.

Adult Programs: Bill Lawrence in March. Jim and W. C., Show planning, in April. Dr. Connolly in May will talk about his tenure as director. George Phillips in June. Brian Hicks from Desoto Museum will talk about Hernando Desoto's travels in September. July is open. W. C. knows someone with history of 20 Mile Creek. Carol working on speaker for October about Lost Creek, and might call Bill Gilbert about July. Park agreed to do a program but not confirmed yet.

Junior Programs: No programs set after this month. Mike Baldwin will talk about the rock cycle in May.

Library: Marc attended a couple of book sales but found no geology books. Jean has a set of keys for the book cases. Very few checkouts but all are returning. Carol suggested a July program around the library.

Web: Updated pages *Continued, P. 8*

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

May Rock Swap Continued from P. 1



road is MS-178). Turn left on 178 and go approximately 0.6 mile.

Turn left on Dorothy (you should see a brick development sign saying Lees Crossing, Fairfield Estates), go approximately 0.1 mile. Turn right on Loftin and go approximately 0.3 mile. Turn left onto Taylor Drive and go approximately 0.1 mile (second driveway on left).

From Bill Morris Parkway

Take 385 to the Hacks Cross exit. Turn right onto Hacks Cross and travel approximately 5-10 miles. At stop light at Hacks Cross and MS-178, turn right on 178 and go approximately 0.6 mile. Turn left on Dorothy (you should

see a brick development sign saying Lees Crossing, Fairfield Estates), go approximately 0.1 mile. Turn right on Loftin and go approximately 0.3 mile. Turn left onto Taylor Drive and go approximately 0.1 mile (second driveway on left).



March Board Minutes are ready to upload. USPS newsletters have been printed and are ready to mail tomorrow.

Newsletter: Matthew picked up the certificates for the SFMS newsletter awards at the quarterly SFMS meeting. Matthew presented W. C. with his certificate and will present the others at the next Membership Meeting. Our newsletter won 6th place in the country [AFMS].

Show: Update from Show Committee meeting: Jim will print out some club tickets to hand out to friends and family. Board must approve paying contract deposit for 2017 and 2018, which are required to be submitted by March 15. Not very many young people are jumping in to help with Show planning. Carol asked if W. C. and Jim are prepared for the next couple of shows. Jim said we are ready for the next two years, then we need to talk about it.

Discussion with Leah Gloyd about filling the position of Historian. W. C. recommended Leah. Carol moved to appoint her Historian. Bonnie seconded. Unanimous vote of approval.

Motion to pay the \$6400.00 to pay the show deposit carried. Thanks to Bonnie for all the help on the mailing list. Kim is very active on Facebook, giving away tickets. Marc updated Show website. It's too late to add Scouting speakers this year, but discussion followed about the need to keep this up in the future. Scouts in uniform get into the Show free. Jackson Show charges \$6.00. Carol suggested we consider that for next year.

Old Business: Laptop purchase: HP Pavilion for \$245 plus \$100 for Office. Motion to approve unanimous.

New Business:

- Science fair. Cash instead of check for science fair winners. Certificates to be presented.
- Education: Charles knows someone who might be interested in taking over web coordinator position
- SFMS Exec Board Meeting: [1] Scholarship money available for those pursuing earth science degree. Not huge, but worth checking into. [2] Program competition: This year's deadline is April 15. Trying to maintain a library of programs. Looking for new submissions electronically. Thinking Alan Parks Reelfoot presentation would be

good.. [3] Federation is looking for a few officers. [4] Annual meeting will be in Atlanta this fall. [5] Discussion on insurance payments. Matthew will complete the form and submit online. [6] Every check required two signatures. Treasurer was given authority to write checks up to \$350.00 and permission to have a debit card for budgetary items.

Adjourned 7:44 pm.

March Meeting Minutes

Mike Baldwin

Called to order at 7:11 pm by 1st VP Charles Hill.

Membership: 7 visitors and 46 members. Reminder to pay 2016 dues if you have not.

Show: Jim reminded members to log on to SignUp Genius and volunteer. Reminded everyone to pick up Member tickets. Pick up pink tablets which contain Show information. Bebe asked members to sign up for side dishes to go with BBQ, beans and slaw. Also sign up for bottled water or Coca-Cola drinks. Bring single snacks to the April meeting; we will be making up *Continued, P. 9*

March Meeting Minutes snack bags
Continued from P. 8 for the ven-
dors. We are

doing Facebook contests so share the
MAGS Facebook page.

Newsletter: Matthew presented
certificates to winners of the SFMS
newsletter contest: W. C. won (not
present), Kim Hill, 6th place feature
article, Bill Gilbert, 6th in original
adult articles, Dr. Riding not present,
Charles Hill 9th place, original adult
articles, Matthew 2nd place for special
publications, Newsletter Best of the
Best Top 10 in North America (top 3
SFMS and 6th place AFMS).

Displays: Junior winner Paula Cast-
ner presented her rock collection.
Adult winner Kill Hill presented MS
gravel pit collection and creek fossils.

Field Trips: April 2-3 trip to Mis-
souri for dogtooth calcite and druse
quartz. Sign up tonight and receive
information via email. Carol spoke
about postponement of the Reelfoot
archaeology trip to Choctaw Island,
due to high water. A new date will be
set. 15 are already on the list. Carol
will keep us informed.

Juniors dismissed to take part in their
program.

Carol introduced Bill Lawrence,
Prehistoric Archaeologist, the
archaeologist for Reelfoot Lake. He
talked about the prehistoric aspects
of the lake. We will visit this area
when we take our field trip, after the
flood water recedes.

Adjourned 8:36 pm.

Jewelry Bench Tips by
Brad Smith

DRILLING SMALL ITEMS

Small pieces need to be held
securely while drilling to prevent
them from spinning if the drill
catches. Having sliced my fingers
occasionally in my younger days, I
avoid band-aids now by using flat-

jaw pliers or a ring clamp. Pliers
also save you if the piece gets hot.
Put a little tape over the jaws of
the pliers if needed to avoid
scratches.



DRILLING A STONE

One of the things my students
often ask to do is drill a hole
through a piece of gemstone. The
usual thought is to get a diamond
drill, but I've been disappointed
with them. I think the reason is
that the tip of the drill is just piv-
oting in the hole and does not cut
well. When it looks like the drill
isn't cutting, the tendency is to
push with more force. The drill
gets hot, and the diamond grit
falls off.

A much better approach is to
use a core drill. This is a small
hollow tube with a coating of
diamond grit at the business end.
The diamonds easily carve out a
circular arc without undue
pressure or heat buildup.

Core drills are readily available
from lapidary and jewelry supply
companies. They come in sizes as
small as 1 mm and are very reason-
able in price. For instance, a 2 mm
diameter drill is about \$6.

Chuck up the core drill in a
drill press, Dremel, or Foredom
and be sure to keep the drilling
zone wet to cool the tool and to
flush out debris. Also, if you're

drilling a through hole, go very
easy on the pressure as the drill is
about to cut through. Otherwise
you will usually chip off some of
the stone surface around the hole.



Bench Tips for Jewelry Making
and *Broom Casting for Creative*
Jewelry are available on Amazon.

Reelfoot Lake
Archaeology Boat Trip

Carol Lybanon

If you would like to join this
trip, we have four places available.
Call Carol at (901) 757-2144 for
information.

- Remember to bring a display
item to the May Meeting.

APS Hot Tip

The Alabama Paleontological
Society forwarded some informa-
tion from Jim Lacefield, author of
Lost Worlds in Alabama Rocks, con-
cerning the stromatolites of the
Copper Ridge Dolomite. In Jim's
words, "The stromatolites of the
Copper Ridge Dolomite are very
nice...quite a different world back
then."

A stromatolite (literally, 'lay-
ered rock') is a solid structure
formed in shallow water, created
by single-celled microbes called
cyanobacteria
(blue-green algae). *Continued, P. 10*

APS Hot Tip The
Continued from P. 9 cyanobacteria form colonies and trap sediment with their sticky surface coatings. The trapped sediment reacts to calcium carbonate in the water to form limestone.

Apologies to those who receive paper copies of *MAGS Rockhound News*, but Jim's tip consists of links (the links below are active) to articles with interesting information—especially some great pictures.

- Info re [Copper Ridge Dolomite](#)
- [oxygen](#) webpage
- [stroma](#) webpage
- [survivor](#) webpage

Upcoming Programs

May: Dr. Robert Connolly, Director, C. H. Nash Museum at Chucalissa, "What I Have Done Over The Past 9 Years As Director At Chucalissa"

June: George Phillips, Paleontology Curator, Mississippi Museum of Natural Science, "A Late Oligocene Coastal Ecosystem from Wayne County, Mississippi"

July: Dr. Roy Van Arsdale, Department of Earth Sciences, University of Memphis, "Geological History of the Mississippi River"

August: Indoor Rock Swap and Picnic

FOSSIL Conference

Last month's issue of *MAGS Rockhound News* gave information on the FOSSIL (Fostering

Opportunities for Synergistic STEM with Informal Learners) Project's 2016 mini conference, which will be in Cincinnati, Ohio, June 3-5. Those interested can go to the website for details, but the deadline is near—all attendees must pre-register by May 4.

For more information, contact Eleanor E. Gardner, FOSSIL Project Coordinator, Florida Museum of Natural History, (352)-273-1936, egardner@flmnh.ufl.edu, or fossil@flmnh.ufl.edu.

Tully Monster



For decades, fossil hunters combing the soil near a creek in north-central Illinois have been rewarded with the preserved remnants of a prehistoric creature, its wide-set eyes on stalks and a long, arm-like appendage extending from below them with a pincer-like mouth.

There was no doubt that the Tully monster, Illinois' official state fossil, was "very, very bizarre," said Scott Lidgard, a paleontologist at Chicago's Field Museum. But no one could say exactly what the soft-bodied creature was.

A recent publication in *Nature*, by a group of researchers that included Lidgard, concluded the Tully monster had a precursor to a backbone, making it a vertebrate. The origin of vertebrates is still an open question, he said, and there aren't many good examples of

preserved, soft-bodied fishes. It's also personally important for Lidgard, who's long been charged with the museum's collection of 1,800 Tully monster fossils, the largest in the world.

The fossilized remnants of the Tully monster have not been found outside Illinois, only in the Mazon Creek area, about 50 miles southwest of downtown Chicago. About 300 million years ago, the spot was a warm coastal marsh along a long-gone sea near the equator.

The abundant plant life eventually became coal, and eons later, strip mining dug up piles of earth and shale—and fossilized prehistoric life. Paleontologists consider the area a treasure because of plant and animal life that was, for reasons not fully known, set in stone quickly enough before decay could set in.

An amateur paleontologist named Francis Tully unearthed the first Tully monster in 1958. Thousands of other examples have since been found by fossil hunters combing the area, much of it now set aside as Mazonia-Braidwood State Fish and Wildlife Area.

The team of researchers focused on some of the fossils' curious raised areas. "It has a cartilage skeletal system," Lidgard said the group concluded. "It runs along the midline. Beneath it is the nerve cord ... Sort of a precursor to a spine."

Ref: *Victoria E. McCoy et al, The 'Tully monster' is a vertebrate, Nature 532, 496-499 (28 April 2016) doi:10.1038/nature16992*

MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

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

The Earth Wide Open

The 37th Annual Memphis Mineral, Fossil, and Jewelry Show has only been over for a few days. After nearly a year of preparation the Show came and went in five days, including setup and tear-down.

Here are a few pictures from the Show. Many of you went to the Show and took pictures. Please send some of the good ones, for next month's *MAGS Rockhound News* and for the record.



Photos by Robert Duncan, DeeDee Goossens, Michael Montgomery, and Fred Solang

MAGS At A Glance

May 2016

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5 Board Meeting, 6:30 pm, St. Francis Hospital	6	7
8	9	10	11	12	13 Membership Meeting, 7:00 pm, "My Time at Chucalissa"	14 Rock Swap, McNeil residence, 11:00 am-2:00 pm
15	16	17	18	19	20 DMC Field Trip, Vulcan Quarry and Mineral and Lapidary Museum	21 MAGS Field Trip, Reelfoot Lake/DMC Field Trip, Treasure Valley
22	23	24	25	26	27	28
29	30	31	1	2	3	4

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

