MEMPHIS ARCHAEOLOGICAL AND GEOLOGICAL SOCIETY

MAGS Rockhound News

Volume 62 ◊ Number 06 ◊ June 2016 ◊ A monthly newsletter for and by the members of MAGS

# June Program

*A Late Oligocene Coastal Ecosystem from Wayne County, Mississippi*

***George Phillips is Paleontology Curator, Mississippi Museum of Natural Science, Jackson, Mississippi.***

Although the geology of Wayne County, Mississippi, was detailed rather thoroughly in a 1974 Mississippi Office of Geology publication, a very geographically confined zone of small, thin fossil-rich lenses dating to the Oligocene Epoch was missed entirely. Occurring just outside the city limits of Waynesboro (the county seat), these scarce, intermittent, fossiliferous deposits contain marine organisms reworked from sediments laid down along the margins of the early Oligocene Vicksburg Sea, which stretched from Louisiana to Florida and was a product of the preceding sea level rise. However, unique to these isolated beds are the bones of early mammals and other terrestrial organisms—a rare

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## In this issue



## THANKS FOR YOUR TIME, SHOW VOLUNTEERS

The 37th Annual Memphis Mineral, Fossil, & Jewelry Show is history. It was a great success, thanks to the efforts of all the MAGSters who gave their time.

Show Chair Jim Butchko and Co-chair W. C. McDaniel deserve our thanks for organizing the massive effort. The Show comes and goes in just two days,


but the main ingredient in making it successful is time. MAGS volunteers devote a great deal of time to planning, and then seeing that everything gets done.

"Everything" isn't hard, but it takes time. There are months of meetings, and work between meetings. Here are some of the things MAGS volunteers do

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## 2015-2016 MAGS BOARD



# MAGS AND FEDERATION NOTES

## President's Message

The MAGS Membership Meetings will celebrate the summer of 2016 with added events: *Continued, P. 10*

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.

## June DMC Field Trip

WHERE: Thermal City Gold Mine, Union Mills, NC (fee site)

WHEN: Saturday, June 4, 8:30 A. M.

COLLECTING: Gold

INFORMATION: Angela Valvasori, (803) 419-2923 or (803) 960-6667, thebears@earthlink.net

Check out the latest *Lodestar* on the SFMS website (see link below). Lots of news.

## Links to Federation News

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

*June Program Continued from P. 1* find in a broad coastal plain dominated very largely by marine deposits. The terrestrial mammals include the very fragmentary remains of late Oligocene species of early rhino, a small deer-like hypertragulid, a small 'proto-beaver,' and somewhat common remains of anthracotheres, which would have resembled a very unlikely cross between a deer, a pig, and a pygmy hippo. ***Join George at the June meeting to hear more.***

## Oil-Linked Quakes And Insurance

It may be hard to anticipate the consequences of some action, but that doesn't mean we shouldn't try. The situation described here probably could have been foreseen; it affects Oklahoma homeowners, many of whom now can't get earthquake coverage or have seen their premiums increase substantially. It could affect us.

Nearly 3,000 pages of documents from the Oklahoma Insurance Commission reviewed by Reuters show that insurers and the reinsurers who cover them grew increasingly concerned about exposure to earthquake risks because of heightened frequency of seismic activity, which scientists link to disposal of saltwater that is a byproduct of oil and gas production. ***[Editor's Note:*** *See "Massive Increase In Oklahoma Earthquakes" in the June 2015 issue of MAGS Rockhound News.]*

Even as they insured more and more properties against earthquakes in the past two years, six insurers hiked premiums by as much as 260% and three increased deductibles. Three companies stopped writing new earthquake insurance altogether, state regulatory filings obtained by Reuters show. Several insurers took more than one of those steps. And the insurers would consider suing oil and gas companies for reimbursement in instances where they would have to pay damages to homeowners, according to several sources, including two insurance company officials.

The push to limit earthquake exposure reflects insurers' fear that the surge in small quakes is a portent of a "big one" in coming years. The filings show many insurers explicitly stated they were concerned about exposure to earthquake risk. In late March, the U. S. Geological Survey warned that 7 million Americans were at risk of so-called induced seismicity.

The warning further heightened insurers' and reinsurers' concerns, Oklahoma Insurance Commissioner John Doak said. Because earthquakes were rare in Oklahoma before shale oil and gas production soared in the past decade, very few residents carried earthquake insurance then.

That has changed as the number of quakes of magnitude 3.0 and higher recorded in the state soared from a handful in 2008 to 103 in 2013 and 890 last year, according to USGS. The value of coverage, usually offered as an add-on to a standard homeowners policy, also spiked to $19 million in 2015 from less than $5 million in 2009, according to the Insurance Information Institute, a trade group.

Scientists link the quakes to the injection of wastewater generated from the oil and gas production process deep underground. Volumes of so-called "produced water" have ballooned as horizontal drilling and hydraulic fracturing, or fracking, boosted output in Oklahoma. Monthly injection volumes in Oklahoma doubled between 1997 and 2013, according to a 2015 Stanford University study.

Because Memphis is in an earthquake zone, many of us have earthquake coverage in our homeowners insurance policies. ***[Editor's Note****: Gary Patterson's May 2015 MAGS meeting presentation gave us information about our local risk for earthquakes.]* So we can sympathize with those Oklahomans who now have to pay a lot to get this coverage—or may not be able to get it at all. And we hope that something like that doesn't happen here.

***Related***: A *Houston Press* article cites a statement by a University of Texas scientist that oil companies have known of the link between oil and natural gas activity and earthquakes for decades. A University of Texas and Southern Methodist University study of the matter was published recently in the journal *Seismological Research Centers*. Here is a link to that paper:

www.smu.edu/~/media/Site/News/NewsSources/EarthquakeStudy/earthquake-study-17may2016.ashx?la=en

# Fabulous Tennessee Fossils

*Dr. Michael A. Gibson,*

*University of Tennessee at Martin*

**Biostratigraphy Part 1**

Nobel physicist Ernest Rutherford (1871-1937) once famously remarked "all science is either physics or stamp collecting". There is some truth to this controversial remark. Fossil collectors and professional paleontologists collect fossils as objects of fascination and beauty. We place them on shelves or display them prominently and covet them as part of our collections—much like stamp collectors do. But, even stamp collectors use their stamps to learn about the history they commemorate and the people they honor. Beyond the mere recording of a taxon of organism in the history of life on Earth, what are fossils used for in the scientific world? Obviously they are the only record of life on Earth prior to the time of human occupation, so they are the record of biodiversity. Fossils are not just "stamps" to paleontologists. "Applied paleontology" is the application of fossils to the scientific study of the Earth. For example, paleontologists use fossils to determine the geologic age of the rocks or sediment in which the fossils are contained or they can be used to identify or recognize specific rock layers when tracing them from region to region. Yet other uses are as representatives of the dynamics of the ecosystems in which these now dead organisms lived, which includes such interactions as symbiosis or predation. Also, fossils

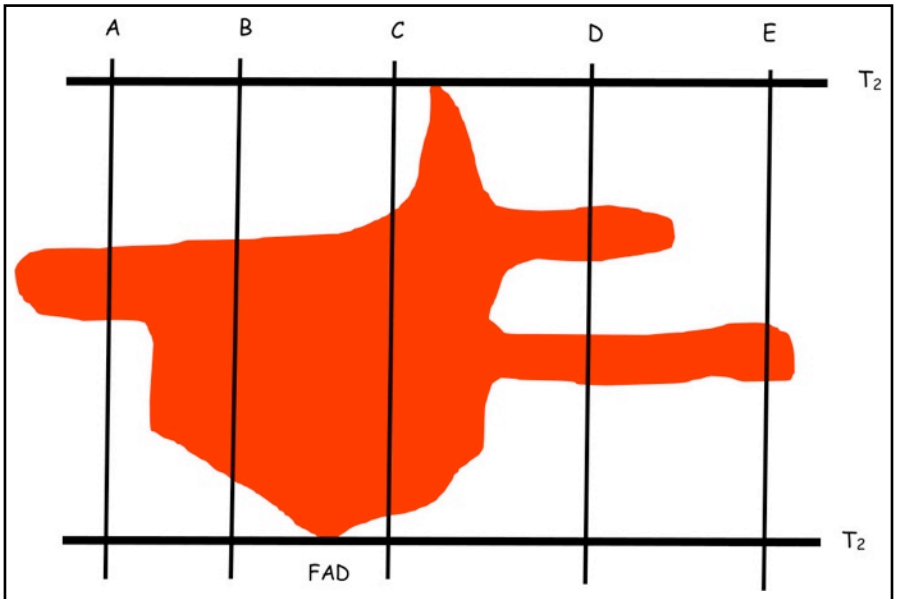


**Figure 1**. Panel diagram depicting the temporal (vertical) and geographic (horizontal) stratigraphic range of an extinct species used in biostratigraphy. See text for details. (Diagram by Michael A. Gibson)

are clues to the overall environmental conditions represented by the sediments the fossils were entombed (marine vs. non-marine, rivers vs. lake, warm climate vs. cold, etc.). In this essay, I want to focus on that branch of paleontology (and stratigraphy) that uses fossils and time indicators. Using fossils as time indicators is a "two-step" process in which the relative position of the fossil-bearing rock is determined first by applying some standard stratigraphic principles. For example, in an ordered stack of rock strata that has not been overturned, the Principle of Superposition would indicate that the lower layers are older than the upper layers due to the order in which they were deposited. Rock layers cut by faults must be older than the actual fault itself that is doing the cutting (Principle of Cross-Cutting Relationships). These principles allow geologists to determine the relative ages, or relative order, of strata containing the fossils. In other words, how old one layer is in relation to another layer. Just as we can determine the order of layers, we can also determine the order of fossils within those layers to see if patterns exist. The fossil-bearing sequence is then calibrated against the "absolute" time scale (this is a misnomer in that the precision of the geologic time scale is constantly being refined and is thus never completely absolute in an "unchanging" sense)

*Continued, P. 5*

*Fabulous Tennessee Fossils*
*Continued from P. 4*

determined by radiometric dating and other techniques independent of the fossils themselves that also establish age in a numerical sense, rather than in a relative sense.

Organisms have evolved through time in a sequence that is readily determined from their position in the fossil record (Principle of Biotic Succession). Species originate (appear in the fossil record), they persist for an extended geologic time range (are "extant") and then ultimately species go extinct (excluding those species today that are still within the process of being extant). This stratigraphic ordering of fossil species does not vary from locality to locality (for example, human fossils are not found lower in the stratigraphic column than dinosaur fossils, and dinosaur fossils are found above trilobite fossils). Over the past 200 years, geologists have constructed a "composite" stratigraphic column of fossil occurrences through time (= ranges of fossils). When the independent technique of radiometric dating was applied to this stratigraphic column, a standardized measuring stick of time emerged. The fossil record becomes an inexpensive and very reliable indicator of geologic age of a rock and an invaluable tool for geologists doing field investigations. Using fossils to age-date or correlate rocks is called biostratigraphy. Over the next several essays, we will explore the numerous aspects of biostratigraphy and how it is a valuable tool for paleontologists, then we will look at some biostratigraphically useful "guide" or "index" fossils from Tennessee.

We will develop a diagram to illustrate the concepts that unite fossils, organic evolution, extinction, biogeography, and taphonomy into a single coherent application of fossils as time indicators. Figure 1 is the complete diagram of a hypothetical distribution in space and time of a fossil species that I will repeatedly use over the next couple of months. I will explain a new part of the diagram each month, and we will continually add new concepts as we progress. Figure 1 is a "panel diagram"—a single slice through something that is actually three-dimensional like a cloud. Think of a panel diagram like slicing through an orange; you see a cross section in side view. The bottom line (T1) represents a specific time marker ("timeline") in Earth history and the top line (T2) represents another timeline in history later than T1 (notice this follows superposition with the oldest on the bottom). For our purposes T1 is the time when the oldest preserved fossil specimen of a new species occurs. T2 represents the point in time when the last surviving member of a species dies out (goes extinct). For example T2 for the extinct Dodo bird would be 1681, when the last individual died, thus terminating that species' genetic code.

The vertical lines (A-E) represent real geographic places and the stratigraphic column of rock at that place that preserves fossils, such as rock outcropping along the interstate across Tennessee (geographic distribution). The rock types are not important for our discussion, only the relative geographic position of the columns. The irregular cloud between the timelines and overlaying the stratigraphic columns represents the temporal (vertical) and geographic (horizontal) distribution of a fossil species—its temporal and geographic range. Remember this is a cross-section of what would be a three-dimensional "cloud". The location in each stratigraphic section is the vertical position in the outcrop where the lowest (first?) fossil of that species is found. The top of the cloud represents the vertical position of the last known fossil of the same species. The vertical range of the fossil in a section is the time interval when the species existed at that particular geographic location.

Paleontologists have determined that most species exist for between 1 and 12 million years duration. Building the diagram sequentially through time, the time representing the first occurrence of a fossil of a particular species is called the "First Appearance Datum" (FAD) and marks the origination of the species as preserved in the rock record (Figure 1). For our Dodo example, this would be 26 million years ago (Oligocene Epoch) and in Mauritius, an island east of Madagascar. Evolutionarily, this is interpreted to be the actual speciation event itself. Obviously the oldest member of a species will occur at the place where the species originates and then there would be a time interval in which the new

*Continued, P. 6*

*Fabulous Tennessee Fossils* *Continued from P. 5* species expanded its geographic location. The likelihood of paleontologists finding the first member of any species is slim. So when a new "older" specimen of a species is discovered, it is scientifically significant in the hunt for the first specimen and geographic location for a new species to arise and usually warrants a publication extending the range of the oldest members of a species. Eventually by finding progressively older and older layers bearing that fossil species, paleontologists "zero in" on the FAD. Keep this diagram handy for the next couple of months as we add new concepts of biostratigraphy.

## New Members

- Stanley Broadway & Kerry Connors and daughter Grace
- Marion Carson
- Theresa & Rommell Childress and grandchildren William, Manny, and Zoe
- John & Paige Christenson and children Andrew, Lily, Laurel, and John Allen III
- David Clarke & Renee Berentsen and children Aidan, Ava, Ethan, and Lucia
- Dotty & Mike Coulson and grandchildren Sierra, Fulton, and Luken
- Justin and Amy Coulson and daughters Brooklyn, Sophia, and Ashton
- Caroline Cox & Galen Gower
- John & Judy Daffron
- Addie Lou Dawson
- Martha & Richard Ervin
- Shelia Evans
- Michael & Rachael Ferri and children Logan, Abby, and Lannah
- Brandy Gull & Blake Farrell and Daughter Reese
- Katie Hinton
- David Hodge and son Ben
- Madra Little
- Dr Brian & Paige Marcantel and children Madeline, Graham, Harrison, and Bennett
- Justin & Amber McGregor and daughters Sarah and Zoe
- Mary Jo Ring & Jim Thornburg
- Barbara & Robert Roy
- Matthew & Kathleen Smith
- Rebecca & John Smrt and sons Jack and Tyler
- Zachary Turner & Monique Hagler
- Aaron Van Alstine
- Katie Burks
- Kathleen Ward
- Sonya Williams & children Tavyon and Tatyana
- Bernita Willis

## May Rock Swap

Jimmy and Hisami McNeil hosted a very successful rock swap at their beautiful home on May 14. The pictures show a little of what it was like.





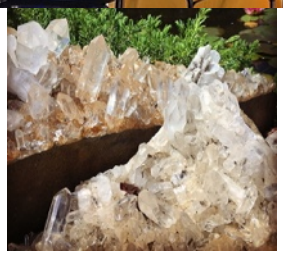
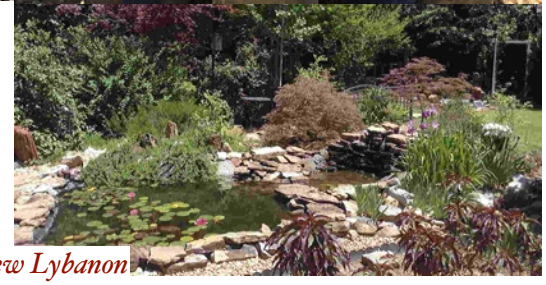

*Photo credits: Leah Gloyd, Matthew Lybanon*

*Thanks For Your Time Continued from P. 1*

to make the show a success:

- ★ Updating the list of names and addresses we send thousands of postcards to
- ★ Setting up the SignUp Genius, to make it easy for people to volunteer to help at the Show
- ★ Sewing grab bags, collecting material to go into them, and packing them
- ★ Organizing the Friday night dinner and other "hospitality" activities
- ★ Having tables and security guards in place when needed
- ★ Getting sponsors, handling finances, and arranging for insurance
- ★ Manning the ticket table, the information table, and the RockZone
- ★ Making sure the ticket table and other locations have the change they need during the Show

This is only a partial list.

Thanks again to all of you for giving your time to make the Show a success.

## Clement Show With Digs

The 11th Annual Clement Gem, Mineral, Fossil, and Jewelry Show With Digs is coming up soon. The dates are June 4 and 5. The location is Fohs Hall, 201 North Walker Street, Marion, Kentucky. The hours are 9:00 A. M. to 5:00 P. M. on Saturday, and 9:00 A. M. to 4:00 P. M. on Sunday. Contact the Clement Museum at (270) 965-4263 for more information, especially about the fluorite mine digs.

## Upcoming Programs

**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; look for more information in the July issue

**September**: Brian Hicks, Director, DeSoto County Museum, "Hernando DeSoto's Travels through Mississippi"

## Jewelry Bench Tips by *Brad Smith*

QUICK CLOSE-UPS

Often when trying to get a close-up photo with your iPhone or Android, you end up with a fuzzy, out-of-focus image. Next time try using your loupe over the camera lens. It works quickly and easily.

LITTLE THINGS CAN BITE

Most jewelers treat motorized equipment with caution. We've all heard stories about workpieces coming loose in the drill press or about getting long hair or clothing caught in the polishing machine. It stands to reason that a machine with a motor of a half horsepower or so is going to win out over its operator. We all know that, and I'm not going to harp on it. That's not the point of this story.

I want to talk about the smaller motor powered machines we often use, the ones with little 3 inch diameter motors. For instance, these small motors are used in flexshafts and micro buffers. They"re so small that many of us forget caution when using them. I'm guilty of it myself sometimes, and believe me it can get you in trouble. Here's what happened to two people I know.

One friend had a polishing bur bend in the handpiece and then whack the thumb that was holding the workpiece so badly that it seemed the bone might be broken. The swelling was substantial, and it took several weeks to regain normal use. A small underpowered motor? I don't think so.

Another friend was using one of the small buffing machines, the kind you can stop when you apply too much pressure to the wheel. Not to worry about such an underpowered beast you say. Wrong, it literally jumped up and bit the hand that feeds it !

Buffer was set on a low table to do a quick polish, so was not mounted or clamped. A buff was installed on the right spindle, no buff on the left. Friend was wearing a tight-fitting, long-sleeved sweater. While buffing on the right wheel, the left tapered spindle caught a thread on the friend's left sleeve and started grabbing more and more threads and sleeve.

*Continued, P. 8*

*Jewelry Bench Tips* *Continued from P. 7* Rather than pulling the arm into the machine, the light buffer quickly lifted off the table and started climbing up the underside of the friends arm. There was no way to get a hand on the on/off switch because the unit was spinning wildly and battering my friend like a club wielded by a madman. Only when my friend could grab the gyrating power cord and yank it from the wall did the mayhem stop.

So when you're in the shop, please think safety. Don't take even those little motors for granted.

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

## Displays

*Carol Lybanon*

Displays are an important part of our monthly meetings. Please bring rocks, minerals, and fossils to show off.

This month it would be fun if we shared our fossil finds from Mississippi. George Phillips, our speaker, is an expert. Bring fossils to "amaze" him and also for him to identify.

## Agate Days and Agate Ways in Moose Lake

*This is a modified version of an article that was first published in the September 2003 newsletter.*
*W. C. McDaniel*

With the finesse and precision comparable to Martha Stewart spreading foie gras on a slice of baguette, the driver of a ten-ton dump truck raised the bed, slowly opened the tailgate, and with a wailing siren police escort drove down a two block section of Elm Street in Moose Lake, Minnesota, spreading gravel containing about 400 pounds of Lake Superior Agates and 1,200 quarters. It only took a few seconds to complete the run as an eager crowd of hundreds stood by, restrained by a long yellow ribbon on each side of the street. Young and old. Large and small. Some with buckets. Others with bags. A few with kneepads. The Agate Stampede was poised and waiting for the signal.

**BOOM!** A recorded cannon blast roared. The ribbons dropped and two city blocks of heads, arms and legs stampeded to the middle of the street. Decorum was gentle. No knocking down of tykes by adults. No cannon ball dives or belly flops into the pile of gravel. No smashing of eager fingers by large feet. Although, I heard of one guy wearing rubber cleats, only to be rebuffed by a stern-faced and determined mother. With their behinds and fannies extended upward or outward, eyes and noses to the pavement, the crowd pursued the treasures of the earth and of the U. S. monetary system. Agates went into buckets and bags. Quarters secretly squirreled away into pockets. The hunt continued for some time as every last rock was closely examined and moved to see what was underneath. Soon the large throng had departed. A thin dust veil was the only visible evidence of this marvelous and enjoyable stampede of rockhounds. A return that evening to the scene of the stampede found no wayward rocks or rolling coins, only a now boring street.

Three blocks from the Agate Stampede a quieter but equally active event was taking place on the grounds of the Moose Lake School, the 34th annual Agate Days, a Gem and Mineral show celebrating the Lake Superior Agate. In just little over a billion years, this colorful agate has moved from a great geological happening to become the Minnesota state gemstone and into the hearts, minds and wallets of many folks. The Agate Days (*July 16-17, 2016*) features three events: the Agate Stampede, a gem and mineral show, and a tailgate show.

The tailgater's *Continued, P. 9*

*Agate Days and Agate Ways Continued from P. 8* section, located in the school parking lot, contains the dedicated and persistent agate hunters and lovers. These are the folks who get up at dawn looking for the farmer plowing the field, checking gravel pits, returning to old and going to new haunts, checking estate sales and some scuba diving into the chilly waters of Lake Superior. They arrive and spread out tailgates and tables full of eye popping agate specimens. Some attendees were observed walking around carrying a briefcase. Was it cash for their day's purchases? A quick flick of the wrist and the case snapped open, to reveal a choreographed display of their agate collection. The briefcases paled when compared to the collector walking around carrying a long gun case; opening to reveal rows of agates nestled in the friendly confines of a crate of foam. His agates, along with many others, have a curious and intriguing association; they have a provenance that includes a name (for the agate), date of discovery, location, original finder, previous owners and current owner. They should publish their own agate cards (i. e. baseball cards).

Two things were evident. First, pricing is not for those who want to hold on to your money as the big specimens (1/2 pound and up) were priced several hundred dollars; the highest single price observed was $1,700. *The prices are 2003 dollars and over the years prices have escalated*. Size, condition, color, location and originality all influence the price. Second, there are two distinct camps of opinions on what to do with these agates. The first camp considers any permanent alteration of the agate through lapidary work a crime against geology and history. This is especially true for the larger specimens. Although many collectors will put baby oil or mineral oil on the agate to enhance their presentation and appearance, this is easily reversed. The second camp are those who change (or as they would prefer, enhance) the agate through lapidary work such as polishing, cabbing or sphere making. Both sides have convincing points of view and beautiful examples to back up their position. It boils down to each agate, its possibilities, and personal preferences of the owner and buyer.

Leaving this field of agate dreams you enter the high school gym, containing the more traditional gem and mineral show. With a good mix of dealers and materials the indoor show could stand on its own without the tailgaters and agate stampede. Another benefit of the indoor show was the agate prices were a little lower than those in the parking lot were. Mineral and fossil specimens and exhibits were somewhat limited in quality and quantity. These three events, coupled with other town activities, make this weekend celebration unique and worth the drive.

Moose Lake is about 1,100 miles from Memphis and is located between St. Paul and Duluth. Agate Days are usually the third weekend of July.

The Lake Superior Agate is reported to be the oldest agate in the world. Formed over a billion years ago in an area rich in iron, the agate's colors and patterns are among the most beautiful in the world. As geological time progressed, great glaciers dispersed the agate over a wide area. Most of the maps and literature show this journey stopping in what is now Iowa and Kansas. However, southern rockhounds who frequent the gravel bars, rivers, and streams along those states that border the Mississippi River know the glacial movement didn't stop distribution of the Lake Superior Agates at the Iowa border. Richardson Landing just north of Memphis continues to produce Lake Superior Agates. While most are in the 1 to 3 ounce sizes a very nice 6-ounce was found in the fall of 2002. It would bring about $50 at Agate Days. My best Lake Superior Agate find was on a gravel bar near Rena Lara, Mississippi, about 100 miles south of Memphis.

***The Lake Superior Agate will be displayed during the MAGS Agate expo on July 8.***

*President's Message*
*Continued from P. 2*

- **June 10**—Auction: rocks, minerals, fossils, lapidary equipment, and surprises. *Among the items up for auction is a 12 pound tumbler.*
- **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. *Exhibited agates will include Banded, Brazilian, Lake Superior, Lace, Washington County, and agates from several locations.*
- **August 12**—MAGS indoor rock swap and picnic. Food, air conditioning, and rocks join for this annual event.

*W. C. McDaniel*

## June Birthdays

1 Michael Austen
3 John Christenson, Jr.
5 Bill Burtch
12 Angeline Heger
13 Martha Ervin
16 Jack Smrt
Ann Williams
17 Evelyn Blodgett
18 Debbie Schaeffer
19 William Kratz
20 Roger Lambert
25 Danielle Schaeffer
Lauren Schaeffer
Doris Johnston
27 Mary Jo Ring
29 Zachary Loyd
Cornelia McDaniel

## 20 Mile Creek

*Kim Hill*

Hi, Folks. I just wanted to remind you about the June 11 field trip. We will be going to a great place, 20 Mile Creek. It is a great place for the whole family to hunt for shark, ray, swordfish, or even mosasaur teeth. Projectile points have also been found; one never knows what you might pull out of the creek. Also remember you will have to get wet to do your hunting. So be prepared, bring a change of clothes, towels, and shoes you can get wet.

The most important things you will need are a shovel or scoop of some kind. I prefer a short handled shovel It makes digging up your gravel easier and can reach under rocks and trunks better. Also some kind of sieve—any kind of kitchen sieve or colander. or you can make one, with a wooden frame and screen. You can attach pool noodles to it to keep it floating, also a rope to keep it from floating away. Try to get the smallest screen, like 1/8 inch, so you can find the smaller teeth. You will also need something to put your treasures in: a pill bottle, plastic baggies, or a pouch of some kind.

The trip takes about 3 hours but is an easy drive. We will meet at 10 :00 A. M. There will be a signup sheet and directions at the June 10th Membership Meeting.

*I hope to see you there; this is a great place and you may even get as addicted to it as I am.*

## Field Trips

Here is the field trip schedule for the remainder of the year. Specific details will follow.

**June 11** 20 Mile Creek. This trip will be guided by Kim Hill.

**July 9** Crow Creek or Jonesboro (if not, then July 16 to Cumberland Furnace).

**August 20 and 21** North Carolina: (ALL FREE SITES) The 19th and 22rd are travel days. A short hunt on the afternoon of the 19th and a short hunt on the morning of the 23rd are possible.

**September 10** (NEW SITE) Arkansas for fluorite (details later). This trip will be guided by Bill Prior.

**October 15** is the DMC trip (NEW SITE) A North Mississippi gravel pit. This site has never been hunted. This trip will be guided by Alan Parks.

**November 19 and 20** The Ledbetter farm in Middle Tennessee on the 19th for geodes. Dale Hollow Lake on the 20th for crinoids.

**December 17** The quarry at Parsons, Tennessee, in conjunction with the North Mississippi Gem and Mineral Society.

***Editor's Note**: Thanks to David Day for tipping us off to the information that led to the article on the top of the next page, which combines two topics of interest to MAGSters.*

## Dinos and Gold

In the middle of the 19th century, thousands of gold-crazy prospectors were flocking west across North America hoping to strike it rich. A few of them found gold, but some of them found something just as good: dinosaurs. Lukas Rieppel, a science historian at Brown University, studies the early history of American paleontology, and has traced the many similarities between the gold diggers and the fossil hunters of the Wild West. Rieppel points out that it's only natural—it's through mining that fossils are often uncovered. "What's a prospector to do if he comes across a pile of old bones instead of gold? Sell to the highest bidder, of course."

How much is a dinosaur worth? The recent sale of a Tyrannosaurus rex named Sue for $8.4 million in 1997 reinvigorated interest in commercial fossil hunting. But what about the 19th century?

Rieppel has written about some of the earliest American fossil finds, and the long, protracted negotiations that followed. American paleontology really took off in 1877, when three major deposits of vertebrate fossils were discovered in different regions. Fossils suddenly became a commodity. The finders of the fossils, though, were at a bit of a disadvantage, since there were really only two people with the means and interest to buy the bones, bitter paleontological rivals Othniel Charles Marsh and Edward Drinker Cope.

Limited space prevents *MAGS Rockhound News* from giving the details, but the PBS show "American Experience" devoted a fascinating episode to the Marsh-Drinker rivalry (www.pbs.org/wgbh/americanexperience/features/biography/dinosaur-rivalry/). And interested MAGSters can find Rieppel's paper on this article's topic, with lots more information, at www.brown.edu/Research/Rieppel/Personal_Website/Publications_files/Rieppel_Prospecting_for_Dinosaurs.pdf.

***Editor's note**: Space limitations again! Because contributors sent us two very long (and very good) articles this month, we don't have room for the April minutes. Look for them next month, along with the May minutes.*

## Reelfoot Lake Field Trip

On May 21 more than 20 MAGSters made the short drive to Reelfoot Lake, in northwest Tennessee. Archaeologist Bill Lawrence ordered perfect weather, and he took us on a boat trip to a secret(?) spot where we hiked through the woods to see a number of Native American burial sites. Bill gave us a good explanation of how and why the burial sites got there. And we got to see some of the still-living residents of the lake.

# MAGS At A Glance

## June 2016

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|---|---|---|---|---|---|---|
| 29 | 30 | 31 | 1 | 2 Board Meeting, 6:30 pm, St. Francis Hospital | 3 | 4 DMC Field Trip, Thermal City Gold Mine, Union Mills, NC |
| 5 | 6 | 7 | 8 | 9 | 10 Membership Meeting, 7:00 pm, "Wayne County, MS, Fossils", + auction | 11 MAGS Field Trip, 20 Mile Creek |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19   | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 1 | 2 |

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