

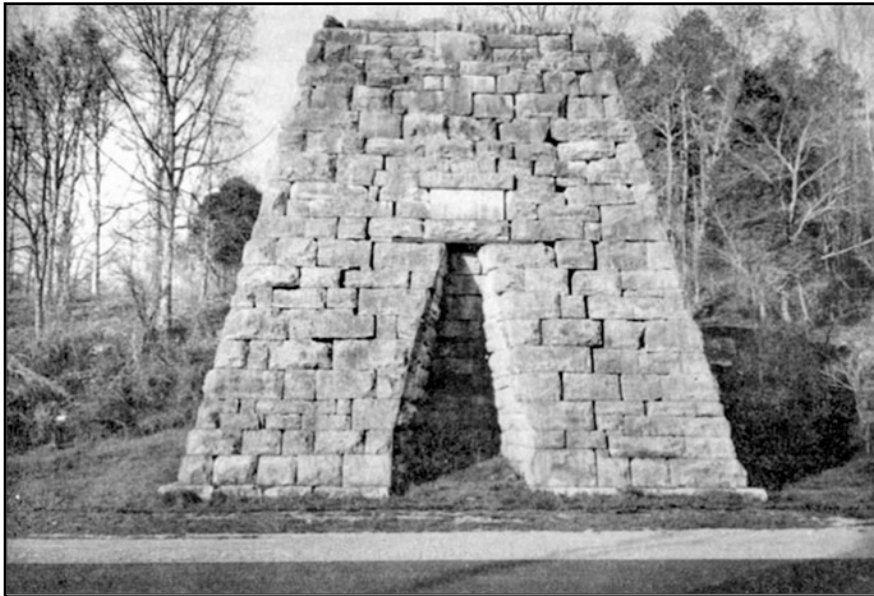


Volume 59 ◊ Number 09 ◊ September 2013 ◊ A monthly newsletter for and by the members of MAGS

Archaeology at the Wayne Furnace Site

Guy Weaver

September Membership Meeting Adult Program



Back in 2004, archaeologists with Weaver & Associates conducted major excavations at the Wayne Furnace Site, a nineteenth century "iron plantation." The site is located on the Western Highland Rim off Highway 64 in Wayne County, Tennessee. Archi-

val research suggests that there were at least four major building episodes at the Wayne Furnace site, beginning in the 1830s and ending in the 1880s. Between 1868 and 1876, Wayne Furnace was the largest producer of pig iron in Tennessee. *Continued, P. 3*

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August Field Trip by *Kim Hill*

Our August field trip was another one close to home base, for most of the club—while not as big as the Pink Palace, full of wonders of its own!

This field trip was held at the home of the McDaniels. Did you know she makes wonderful little loaf cakes? Mmmmm.... All I can say is WOW... just WOW...hope you enjoy the story.

No, seriously, there were SO many neat finds around each corner, inside and out. Let's start with the outside.

I forgot to bring the address and the directions given me were 2 blocks from Cooper and Central. I knew the house was on Central so I started looking for a house with extra cars parked around it. That didn't work 'cause a *Continued, P. 7*

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PRESIDENT'S MESSAGE

Hi MAGS Rockhounds,

Hope you had a great Summer; it's almost over. It's back to school for some and back to work for others. The cooler weather that we've been enjoying lately is great for rockhounding. So find some spectacular rocks, minerals, and fossils on your adventures.

The August indoor rock swap was great—plenty of specimens to buy, sell, or trade, and the food was splendid. Congratulations to the Lybanons once again on their 50th anniversary. I wish you both many more years of marriage and rockhounding together

Origin-ally yours,

W. Paul Sides

MAGS President

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.

September DMC Field Trip

WHERE: Cowee Mountain Ruby Mine, Franklin, NC

WHEN: Wednesday, September 25, 10:00 A. M.

COLLECTING: Rubies, sapphires, emeralds, and more

INFORMATION: Arlon Eldridge, (828) 369-5271, cowee@yahoo.com

October DMC Field Trip

WHERE: Coon Creek Science Center, McNairy County, TN

WHEN: Saturday, October 5, 10:00 A. M.-2:00 P. M.

COLLECTING: Upper Cretaceous marine fossils

INFORMATION: **Limited to 35 participants.** Email MiddleTnRockhounds@gmail.com **NOW.**

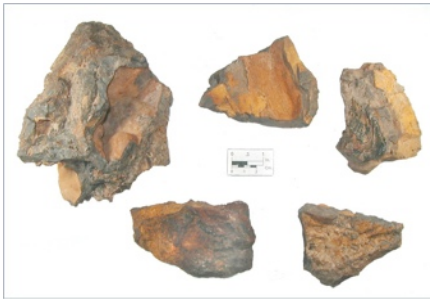
Links to Federation News

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

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Archaeology at the Wayne Furnace Site Continued from P. 1



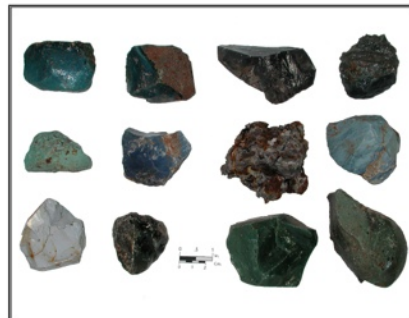
At the heart of any early nineteenth century iron works was the furnace stack, a pyramidal structure of limestone or brick. Furnace stacks were typically built against the side of a hill. A charging deck was built to connect the hilltop with the top of the furnace stake (trunnel head). Workers would load alternating charges of charcoal, iron ore, and limestone directly into the trunnel head from the charging deck. The limestone acted as a flux which drew out the impurities from the molten iron, forming glassy slag. The molten iron and slag would move down through the trunnel to the hearth, or crucible, a sandstone structure where the molten iron pooled. After the slag was removed, the molten metal was tapped and channeled out through the run-out arch onto a casting yard floor. The casting yard was covered in sand, into which was molded a central channel, or sow, off of which were molded depressions for the pig irons. Pig iron appears to have been the principal product at this site.

The “industrial strength” archaeology produced almost 4 tons of artifacts, including over 600 pounds of glassy slag, all of which was counted, weighed, and sorted.



MAGS Presents a Big Check to the Ronald McDonald House

Plenty of slag can be seen at this meeting, along with other curious artifacts, like pig iron bars and tools used to produce them.



Matching Radiocarbon Dates to Calendar Dates

Mike Baldwin

- 9,600 radiocarbon years**
= **11,000 calendar years**
- 10,200 radiocarbon years**
= **12,000 calendar years**
- 11,000 radiocarbon years**
= **13,000 calendar years**
- 12,000 radiocarbon years**
= **14,000 calendar years**
- 12,700 radiocarbon years**
= **15,000 calendar years**

- 13,300 radiocarbon years**
= **16,000 calendar years**
- 14,200 radiocarbon years**
= **17,000 calendar years**
- 15,000 radiocarbon years**
= **18,000 calendar years**
- 15,900 radiocarbon years**
= **19,000 calendar years**
- 16,800 radiocarbon years**
= **20,000 calendar years**
- 17,600 radiocarbon years**
= **21,000 calendar years**
- 18,500 radiocarbon years**
= **22,000 calendar years**
- 19,300 radiocarbon years**
= **23,000 calendar years**
- 20,000 radiocarbon years**
= **24,000 calendar years**

The question of when people first reached the Americas is complicated by a problem with dates.

Archaeologists generally rely on radiocarbon dating to determine the age of such artifacts as bones, charcoal or wood. But one radiocarbon year is not the same as one calendar year.

Continued, P. 5



Mars is not very far from the Las Vegas Strip. When Arnold Schwarzenegger's character in *Total Recall* went to Mars to get his memory back, the Valley of Fire stood in for Mars in the outdoor scenes. Other movies have been shot there as well, but something about the Valley of Fire makes it right for sci-fi. The red sandstone hills are where Captain Kirk fell to his death in *Star Trek Generations*.

Valley of Fire is a Nevada state park, in the Mojave Desert about 58 miles northeast of the Las Vegas Strip. Its elevation varies between 2,000 and 2,600 feet. Lake Mead abuts the park's eastern entrance.

Valley of Fire was named for the magnificent red sandstone formations that were formed from great shifting sand dunes during the Mesozoic Era. These brilliant sandstone formations can appear to be on fire when reflecting the sun's rays. Other important

rock formations include limestone, shale, and conglomerates. Some huge petrified logs have been excavated and are on display.

Prehistoric people of Valley of Fire included the Basket Maker people and later the Anasazi, who were farmers from the nearby fertile Moapa Valley. Their visits to the area probably involved hunting, food gathering, and religious ceremonies. They left behind fine examples of petroglyphs at several locations throughout Valley of Fire.

If you're ever in the area, don't miss the Valley of Fire. The visitor center has exhibits on the geology, ecology, prehistory, and history of the park and the nearby region. There are campgrounds, RV camping, and covered picnic areas. There are even four locations for weddings—but who wouldn't rather be married by Elvis in Vegas?



Radiocarbon Dates Continued from P. 3 Radiocarbon dating works because all living things absorb carbon from the atmosphere around them. Living things (plant and animal) absorb two different isotopes of carbon: carbon 14 and carbon 12. While an animal or plant is alive, the ratio of carbon 14 to carbon 12 in its tissues reflects the ratio present in the atmosphere. Once it dies, that ratio changes.

Carbon 14 is radioactive (but not dangerous) and undergoes radioactive decay; carbon 12 is stable. During a creature's lifetime, processes such as breathing replenish carbon 14. After death, however, the amount drops, and the ratio between carbon 14 and carbon 12 falls as well. Scientists know the rate at which carbon 14 decays, and by determining how much has been lost compared with carbon 12, they can decide upon the age of an object.

The ratio of carbon 14 to carbon 12 in the atmosphere is not constant, which alters the baseline for calibrating dates. To match radiocarbon years to calendar years, researchers have turned to independent timescales based on tree rings, ice cores, and uranium-thorium dating.

Unfortunately for scientists studying the peopling of the Americas, the period between 10,000 and 20,000 years ago has been difficult to calibrate. For many years archaeologists simply presented their results in uncorrected radiocarbon years.

Recent findings, however, make it easier to adjust dates from this era. The distinction between

radiocarbon years and calendar years is very important. Several years ago, a report described a 13,000-year-old skeleton found in California and compared it to 12,500-year-old Monte Verde, without mentioning that the former date was in calendar years and the latter, radiocarbon years. Some readers understandably thought that the California skeleton was older than the campsite at Monte Verde. But in calendar years, Monte Verde is 14,700 years old.

Editor's Note: These conclusions are confirmed by other work. Many nonscientists use "exponentially" in a loose way, usually when speaking of something that increases very rapidly. Radioactive decay actually is exponential—the rate of decay is proportional to the amount present. A plot on a semi-log graph is a straight line.

But as the article points out, the mathematics is complicated by the fact that the proportion of carbon 14 in the atmosphere has changed over time. A group that studied sediments from the bottom of Lake Suigetsu in Japan has provided a direct measure of radiocarbon in the atmosphere over a long period of time.

Plant matter that sinks to the bottom is light-colored in winter and dark in summer. The alternating layers under the lake bottom make it easy to identify every year, going well back into the last Ice Age. The researchers assert that these measurements allow radiocarbon dating to be accurate within 10 years, for samples between 11,000 and 53,000 years old.

Ref: C. B. Ramsey et al, *Science* 19 October 2012:
Vol. 338 no. 6105 pp. 370-374
DOI: 10.1126/science.1226660

MAGS Archaeology Interest Group

Robert Connolly

The MAGS Archaeology group has been meeting once per month for the past several months at the C. H. Nash Museum at Chucalissa. Their current project involves creating three display cases that can be used by MAGS members at various community outreach events. The cases will exhibit prehistoric materials that cover the following topics:

- 1) How artifact styles change through time.
 - 2) Typical types of artifacts that are found at an archaeological site.
 - 3) How different pottery styles can be used to date archaeological sites.
- The MAGS Archaeology group will also create an outline that explains the artifact cases so that members who wish to use the exhibits during an outreach event have the basic information in hand.

Many of the artifacts that are being used in the MAGS cases are from a large surface collection donated to the C. H. Nash Museum at Chucalissa by Robert Ford of Wynn, Arkansas. MAGS members assisted and provided financial support for the large display of the Ford Collection currently in place at the C. H. Nash Museum. Mr. Ford, a graduate and star athlete from the Uni-

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MAGS Archaeology Interest Group Continued from P. 5

versity of Memphis, has long been an avocational archaeologist.



C. H. Nash Museum Collections Manager Brooke Mundy at the opening of the Robert Ford Collection exhibit at Chucalissa.

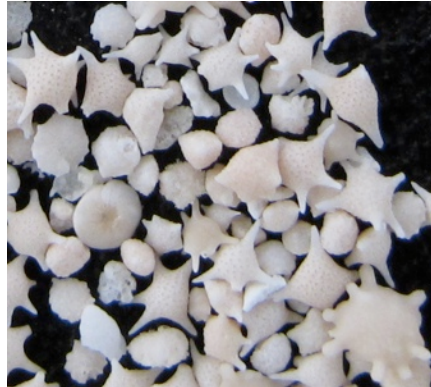
The next MAGS Archaeology group meeting at Chucalissa will take place on Saturday, September 28th. Stop by and join us as we examine and use artifacts curated at Chucalissa in building exhibits to share with the public.

Biogenic Sand

Lori Carter

One type of sand that is definitely not just tiny rocks is biogenic sand. This type of sand comes from living things that may have been alive recently, or in the case of fossil sand, things that lived a very long time ago. Last

month we looked at some sand from Okinawa, Japan, that is called “star sand”. The “stars” are the tests (external skeletons) of foraminifera, a type of plankton. Star sand is an iconic example of biogenic sand. A close look at the sand reveals some of the intricate structure of the tests.



Star Sand

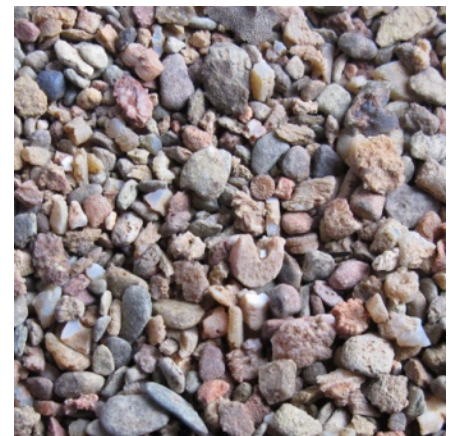
Sand from Sanibel Island, Florida, is composed almost entirely of bits of shells. Not surprising, since Sanibel Island is well known for the beauty and quantity of shells on its beaches. Other beaches near Sanibel, like Captiva Island, contain shell bits as well as quartz sand, so it is a combination of biogenic and eroded sand, i. e. tiny rocks.



Sanibel Island Sand

Fossil sand is sort of tiny rocks but it is also biogenic. Though fossils in fossil sand are basically

rocks now, they came from plants or animals originally, so its classification as biogenic is, as one sand collector very wisely stated, “a matter of time.” Bryozoans abound in some sand I found in a limestone quarry. Though they are tiny, the bryozoan fossils are wonderfully detailed. And how many times have you collected crinoid stems at Dale Hollow Lake in Tennessee without noticing the sand there?



Dale Hollow Lake Sand

For modern biogenic sands, a quick test with vinegar, a weak acid, can determine if certain biogenic particles are present. If there are any carbonates in the sand, the vinegar will make the sample bubble. Fossil sand may also react to the vinegar, but if the fossils are silicified nothing will happen. Diatoms are silica based, so they will not react either. For sands that may contain silicified fossils or diatoms, visual examination is the best way to determine whether or not the sand can be considered biogenic.

Of course, even when biogenic particles are present, it doesn't mean the sand is strictly biogenic. It may also contain non-biogenic parti- *Continued, P. 7*

August Field Trip number of
Continued from P. 1 houses seemed
to be entertain-
ing that day. SO I started looking
at the yards. When I came to a
house with rock borders around all
the flower beds AND some huge
pieces of petrified wood I felt this
might be the place. I turned the
corner and saw some club mem-
bers putting rocks in their car. I
found the right place!!!

I parked and walked around
the front a bit, enjoying the
mother-in-law tongues and the
porch and rocks bordering the
beds. Then I walked into the
backyard and the WOWS just

kept coming out of my mouth.



There were so many places to
look, where to start? First I said
hi to other members that were
there and our host. He had told us
if we brought a bucket we could
pick over his rock pile, if we
signed up to work the next year's
Show. Well that was a gimme for
me since the grandkids and I love
working the Rocks Around the
Clock and other games. I can
never resist a rock pile and am try-
ing to make a sorta dry creek in
my yard, so I was carrying my
bucket. W. C. pointed out where
the rock pile was. Now for some
reason I had it in
my head that the *Continued, P. 8*

Biogenic Sand cles as well.
Continued from P. 6 Whether you
decide to de-
clare it biogenic or not depends on
the quantity of biogenic material
relative to non-biogenic and how
important the biogenic particles
are to the nature of the sand.



Clinchfield Sand (Bryozoan)

How sand is formed is a fasci-
nating aspect of sand collecting, so
one of the workshops at SandFest
is all about the genesis of sand and
will include some hands on activi-
ties. For more information about
SandFest, please see the website at
www.iscs.sigmabookstore.com.
Next month we will look at some
sand art.

July Board Minutes

Carol Lybanon

The MAGS Board of Directors met
July 1 at St. Francis Hospital, 5959
Park Avenue. The meeting was called
to order at 6:40 P. M. Present were:
Mike Baldwin, Ron Brister, James
Butchko, Bonnie Cooper, Bill Gilbert,
Carol Lybanon, Matthew Lybanon, W.
C. McDaniel, Nannett McDougal-
Dykes, Paul Sides, and Bob Cooper.

Secretary: The minutes were ac-
cepted as submitted.

Treasurer: No report. Matthew
informed the Board that he had re-
ceived a letter from the IRS that said
we had not filed a Form 990 for cal-
endar year 2011. He scanned the let-
ter and emailed it to all Board Mem-
bers. He also gave some dues money
he had collected at Chucalissa to Bill.

Membership: No report.

Field Trips: W. C. said that the field
trips were averaging 20-22 people. On
July 13 Ron Brister will lead a field trip
to the Pink Palace from 2:00 to 5:00.
W. C. needs to work out details for
the August 10 Rainwater Observatory
trip. In September we will go to
Coon Creek, tentatively on Septem-

ber 28. In October Paul Sides and
Charles Hill will schedule a field trip
to a rock quarry in Arkansas. W. C. is
attempting to schedule a geode col-
lecting trip, but has been unable to
get in touch with Mr. Ledbetter's
family. W. C. will purchase a first aid
kit for our field trips. He asked the
Board if we should allow members of
other clubs on our field trips. The
Board agreed; we need to make sure
they understand that they need to
have their own insurance.

Adult Programs: Ron thanked Paul
for taking care of the introduction of
the speaker at the June meeting. Mat-
thew Lybanon will give the July pro-
gram, on beaches. Guy Weaver was
scheduled for August, but since that
meeting will be our indoor picnic Guy
will need to be rescheduled.

Junior Programs: Jim reported
that the July program will be on mi-
cromounts. Bill Gilbert will give this
program. August is the indoor rock
swap. In September Bob and Bonnie
Cooper, with the help of Mike Bald-
win, will give a program on fluores-
cent minerals.

Show: No report from Jim. Bob
asked asked about a *Continued, P. 8*

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August Field Trip rocks would be
Continued from P. 7 mostly fist size
and maybe
smaller. I couldn't have been more
wrong. Don't get me wrong; there
were some smaller samples, but I
found druzy, quartz, agate types,
some crinoids, plates, and other
pretty rocks, and most were bigger
than my head.

Bucket? How 'bout backhoe?
I was lucky Chris was there!!
Sweetheart carried all my choices
to my truck. THANK YOU SO
MUCH!!

After getting my boulders, I
wandered around the yard. There
was a 'rock garden' full of un-
cracked geodes. Forget going to
Nameless, we could find plenty of
geodes in that bed. Not sure I
could leave so many uncracked
geodes like that, 'cause I have to
know what's inside.

There was a cute 'jungle' bed
with, yes, statues of animals, a bed
bordered by ammonites. Rocks
with plants growing out of them.

Everywhere you looked was some-
thing else to inspect. I loved the
bowling balls used as garden
spheres.

Then Chris led me inside—a-
gain just WOW! And I wasn't the
only one saying that. In fact I
heard someone, I won't say
names...Nan...exclaiming it to be
their dream home. I agreed
wholeheartedly!

One of the first things to
catch my eye was an immense
bookcase, floor to ceiling, in a
hallway, full of all kinds of goodies.
I think I actually drooled when I
saw it.

Being a marble freak, one of
the main things I was wanting to
see was their marble collection. I
wasn't disappointed!

There was a wall of shadow
boxes in one room, displaying
German swirls, Indians, clam-
broths, and many others. There
were glass displays filled with mar-
bles...AH!!, marble heaven!! There

were spheres made from all kinds
of minerals and even petrified
wood, ranging in size from ping
pong balls to basketball size.

Not only were there wonderful
examples of mineral specimens of
all kinds, fossils, petrified wood, a
tray inches deep in sharks teeth...
there were the wonderful cases or
tables they were displayed on or
in. I kept going back to the
marbles and one beautiful case full
of polished agates...my favorite!!

I was trying to get ready to
leave for vacation the next day so I
didn't have as much time to wan-
der and look and visit as I wanted,
and I forgot my camera so don't
have pictures. But that may be a
good thing, in a way. Now you will
have to go the next time they
open their wonderful yard and
house for us to explore, and see
for yourself a fascinating collec-
tion!

Again, I say come to a field
trip. You're missing a lot if you
don't!!!

July Board Minutes final Showteam
Continued from P. 7 meeting. July 8
was proposed.
Matthew reported that one check,
from the Agricenter, will close out the
Show account. Nannett is attempting
to schedule a time to present our do-
nation to the Ronald McDonald
House. Mike will print a six-foot
check, for publicity photos.

Library: Ron checked with Bill to
see why his request for reimburse-
ment had not been processed. We
need to buy a book for the library
dedicated to the memory of Barry
Burns.

Newsletter: Matthew reported that
the July issue is out. He wants to tell
everyone that there will be an earlier

deadline in both July and August,
since he has some travel planned.

Webmaster: Mike listed MAGS on
brownielocks.com, a website that
lists holidays for every day of the year.
MAGS Day is September 29, which is
the day of the year when MAGS was
chartered. We should do something
special to celebrate our day. It was
suggested that we have a rock swap at
Chucalissa on Sunday, September 29,
to celebrate our day.

Historian/Rock Swap: Nannett is
in charge of the August program, the
indoor rock swap. She will take care
of the supplies, and Matthew will run
an article in the newsletter.

Old Business:

▶ Carol reported on the new Hospital-

ity program. She has lined up volun-
teers through the end of the year.

- ▶ W. C. stated that TEST contacts us
for donations, so we don't need to
contact them.
- ▶ Ron reported on the MAGS Ar-
chaeology Interest Group. The next
meeting will be on July 27.

New Business:

- ▶ W. C. questioned the need for our
TV at the church. Do we need to
keep it? The Board needs to decide;
no action was taken at this meeting.
- ▶ Ron said that we should start think-
ing about new officers for the up-
coming election, which is still over a
year away. Some of our Board
Members are holding two jobs. He
thinks that 2-year

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Upcoming Field Trips

Month	Date and Location	Trip Status
September	August 30-September 2 (Labor Day Weekend) North Central Texas, Ammonites	trip bulletin available
September	September 28 Birmingham Ridge, Mississippi	trip bulletin available (North Mississippi trip)
October	October 5 Coon Creek	DMC trip—trip bulletin published
October	October 12 —Gravel pit near Jonesboro, Ark., new site for MAGS	trip bulletin to be published
November	November 2 Gravel Pit, Memphis Stone and Gravel	trip bulletin to be published
November	November 16/17 Middle Tennessee—Ledbetter Farm (geodes), Dale Hollow Lake-Fossils	trip bulletin to be published
December/ January	January 3-5, Missouri tentative	trip bulletin to be published

Note: *If Richardson Landing drops to five feet or below (river stage) and we have cool temperatures will schedule trip with a short notice.*

Reminder: MAGS field trip rules:

1. Field trips are open only to current MAGS members. Exception: If MAGS participates in any field trip sharing program with other clubs those members may participate if it is a shared trip.
2. MAGS members will not contact private landowners to obtain permission to collect on sites where the owner has granted the club permission to collect. If a member is unsure of the location they will seek a decision by the Board of Directors.
3. MAGS members will not visit (prior to) a collecting site once it is scheduled and published as a club field trip. Exceptions are to public and/or fee places or locations with multiple collecting sites. If a member is unsure of the location they will seek a decision by the Board of Directors.

MAGS Membership Meeting Additions

AUCTIONMAGS—Opening night Friday, September 13

1. A monthly auction held during the membership meetings (except August, December, and April).
2. Will consist of material that has been donated to the club. Limited number of lots (a lot is one or more specimens) will be presented each month.
3. Will primarily be a silent auction although other auction methods may be used.
4. Will provide advance information/notifications of auction items
5. Proceeds will be determined in advance and announced with the publication of auction items.

NOTE: AUCTIONMAGS items and proceeds from the September auction will not be listed in the September newsletter. Information will be distributed by the MAGS email group.

DISPLAYMAGS—Opening night Friday, October 11

DISPLAYMAGS to include two types of displays:

1. Current competitive display will continue:
 - Members continue to bring recent finds, collections and/or special items of interest.
 - Club members will vote and winner(s) will receive MAGSBUCKS or special prize
2. Theme display—each month a theme display will be featured.
 - Theme display will feature a specific type of specimen (agates, fossils, etc.) or items from a specific MAGS trip location.
 - Members may bring one or more specimens.

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

MAGS Membership Meeting Additions Continued from P. 9

- Judging will be focused on quality, condition, accuracy and rarity.
- The monthly specimen display will also feature education information.
- Display winners will be determined by a committee. No voting.
- Winners will receive MAGSBUCKS or a special prize.
- Schedule themes:
 1. October—Agates
 2. November—Geodes
 3. December—no displays
 4. January—Druze Quartz

MAGSBUCKS—Starts September 13

1. May be awarded to winners of displays during membership meetings or other special events.
2. Will be the equal to U.S. dollars.
3. MAGSBUCKS may be used for the following:
 - MAGSAUCTION events
 - Show including dealer purchases
 - Other events when designated

July Board Minutes terms are harder than 1-year terms. We need to emphasize that each job is not very difficult, and it is fun to be involved.

The meeting was adjourned at 8:00 P. M.

July Meeting Minutes

Carol Lybanon

The MAGS Membership Meeting was held at Shady Grove Presbyterian Church on July 12. The meeting was called to order at 7:40 P. M.

BUSINESS:

- ▶ Matthew Lybanon asked that newsletter material be sent to him a little earlier for the next two months because of travel plans.
- ▶ There will be a field trip tomorrow, July 13, to the Pink Palace, 2:00-5:00. We will meet in front of the planetarium. This will be a behind-the-scenes tour. W. C. McDaniel continued his field trip report. He is working on field trips through the end of the year. Matthew Lybanon asked Members who are interested in the Texas field trip

to sign up for that trip.

- ▶ Nannett McDougal-Dykes reminded everyone that next month's meeting will be the indoor rock swap. On July 25 Nannett will present our donation to the Ronald McDonald House.

- ▶ James Butchko asked Members to start bringing in donations of material for the 2014 Show.

DISPLAYS: There were five displays, three adult and two Juniors.

PROGRAM: Matthew Lybanon presented the program, "Let's Go To the Beach!"

Jewelry Bench Tips by *Brad Smith*

LAYOUT TOOLS

Dimensions on some features of a design can be fluid while others must be accurate for the design to work. When precision on a piece is important, good layout techniques are essential.

These are the tools that I rely upon to get holes in the right place, to achieve correct angles, and to cut pieces the correct length.

I like crisp sharp lines to follow, so I often coat surfaces with a dark marker and scribe my layout lines onto the metal. A square makes quick work of checking right angles or marking where to cut, and the thin centerpunch helps me mark a place to drill holes exactly where I want them.

Finally, a good set of dividers is probably my favorite layout tool. They let me quickly mark a strip for cutting, swing an arc, and divide a line or curve into as many equal segments as I need. I keep at least one set of dividers in every toolbox.



INVENTORY RECORD

In an ideal world each of us has a complete pictorial record of all pieces of jewelry in our inventory. We use it for insurance. We use

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Jewelry Bench Tips it as a record of what was sent out on consignment. We use it to remember which items we are taking to a show. And eventually, we use it as a record of what we have sold.

Unfortunately, we don't always have time to take good pictures for an inventory. In situations like this I've been able to make a quick record with the help of a color copier. Simply place a number of pieces face down on the glass and make a copy. The quality is more than sufficient for an accurate record.

More BenchTips by Brad Smith are at [facebook.com/BenchTips/](https://www.facebook.com/BenchTips/) or see the book *Bench Tips for Jewelry Making* on Amazon.

Nevada Rock Carvings— Oldest In North America?



A team of anthropologists has dated rock carvings in western Nevada to between 10,500 and 14,800 years old, making these carvings the oldest known petroglyphs in North America. The ancient rock carvings—which are on boulders at Winnemucca Lake, located about 35 miles northeast of Reno, Nevada—have been known for several decades, but had only recently been dated using radiocarbon dating.

“Prior to our study, archaeolo-

gists had suggested these petroglyphs were extremely old,” said University of Colorado-Boulder researcher Larry Benson, an adjunct curator of anthropology at the University of Colorado Museum of Natural History who also is affiliated with CU’s Institute of Arctic and Alpine Research. “Whether they turn out to be as old as 14,800 years ago or as recent as 10,500 years ago, they are still the oldest petroglyphs that have been dated in North America.”

These results were published in the August issue of *Journal of Archaeological Science*. Benson and his team obtained permission to study the petroglyphs from the owners of the land, the Pyramid Lake Paiute Tribe. The carvings, large complex designs of grooves and dots, were carved deeply into several large limestone boulders.



Carvings near the base of some boulders were partially covered in what Benson described as a white layer of carbonate. This carbonate crust was a type of limestone, formed from the precipitation of dissolved carbonate minerals in the lake water onto submerged parts of the boulders. The crust line on the boulders ended where the lake water level would have been at its highest. Above the crust was the original

surface on which the petroglyphs were carved. Since some petroglyphs were covered in precipitated carbonates, this indicated that the carvings were made some time when the boulders were exposed to air, before being submerged once more in the rising water level.

Benson obtained rock samples at different heights on the boulders, from nearby sections with the same geological history, and at other locations in the area including Pyramid Lake. He and his colleagues used radiocarbon dating to determine the age of the limestone samples. Limestone underlying the petroglyphs was found to be 14,800 years old. Samples from Pyramid Lake with the same geologic history, however, showed two periods when falling water levels would have exposed the base of the boulders to air.

Both epochs—11,300 to 10,500 years ago and 14,800 to 13,200 years ago—coincide with other archaeological findings. Previously, petroglyphs near Long Lake in central Oregon were thought to be the oldest rock carvings in North America; some had been partly buried by outflow from a volcanic eruption that occurred 7,630 years ago, which indicated that the carvings were made sometime before that eruption. Whether it's as early as 14,800 years ago or as late as 10,500 years ago, these carvings are now the oldest known petroglyphs in North America.

Editor's Note: Thanks to Mike Baldwin for passing this along. And see picture on P. 4 for other petroglyphs in Nevada.

CAGMAGS Show

The 41st Annual Central Arkansas Gem and Mineral Show will take place October 5 and 6, 2013 (Saturday and Sunday), 9:00 A. M. through 5:00 P. M. The location is the Jacksonville Community Center, 5 Municipal Drive, Jacksonville, Arkansas (Hwy. 67/167 exit 9, Main Street). Admission is free. The show will feature minerals, fossils, beads, lapidary material, and jewelry. There will be a kid's dig, demonstrations, exhibits, hourly door prizes, and a grand prize drawing. The show is sponsored by the Central Arkansas Gem, Mineral, and Geology Society (www.centralarrockhound.org). For more information contact

Tom Sharp, Show Chairman, at (501) 379-8653 or thom61847@yahoo.com.

Thank You, MAGS



Thanks for your thoughtfulness and good wishes in helping us celebrate our 50th anniversary.
Matthew and Carol

Calendar

September 5, 2013

Board Meeting, St. Francis Hospital, Library, 6:30 P.M.

September 13, 2013

Membership Meeting, Shady Grove Presbyterian Church, 7:30 P.M.

September 25, 2013

DMC Field Trip, Franklin, NC

September 28, 2013

MAGS Archaeology Group Meeting, Chucalissa, 10 A. M.

September 28, 2013

NMGMS Field Trip, Birmingham Ridge

September 29, 2013

MAGS Day rock swap and picnic at Chucalissa

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

