



May Meeting
At the Museum of Arts and
Sciences on Monday,
May 04, 2015 at 7:30pm.

Jay Batcha will be speaking on his trip to copper country on the Keweenaw Peninsula in Michigan.

President's Message

We have our annual picnic and silent auction coming up next month. We have always had fun at this and it is a great way to raise money for the club. We will meet at the Ocmulgee Indian Mounds at 11:00am for the start of activities. The club will provide the meat and paper goods. All you have to do is bring a covered dish and your beverage. I do encourage everybody to explore the mounds, the museum and grounds so as to get an idea of the civilization that was here before the Europeans arrived.

The first people to arrive to Middle Georgia were the Paleo Indians around 15,000 BCE during the Ice Age period. After Ice Age period the planet slowly started to warm and the large Ice Age animals died off and the people in Middle Georgia became hunters and gathers (Archaic period); hunting deer and other small game while living a nomadic lifestyle. Around 1000BCE the Woodland culture began horticultural with sunflowers, giant ragweed and other grasses and living in small villages. Around 500 CE, corn, beans,

and squash were grown in Middle Georgia. Around 900 CE, newcomers known as the Mississippians came to Middle Georgia building mounds for their elite. The Mississippian thrived here until 1600 when European diseases brought the culture to an end. The survivors after 1600 became known as the Muscogee (Creek) who were removed from Georgia to Oklahoma by the early 1800s. The mounds are all we can see today of the vast culture that was here before. Take time to understand and appreciate it.

We have club members who are in need of our thoughts and prayers due to their health situations; Betty Sue Smith- has had some serious health problems over the past couple of years, Rene Smith- has also had some health issues. Rene and Betty Sue have been members for some time.

We had a great dig in Cartersville. Jay Batcha and I, and Nina rode north of the locality to another site where we dug some trilobites. The location was on the side of busy highway so I do not think it would prudent to attempt a field trip there for safety reasons. Afterwards, Jay led us to Adairsville where we picked up some *Adairsville flint*. We then went to another site Jay knew about and got some *Snow Creek Church jasper*. We all had a great time and are looking forward to our next trip.

On Wednesday, April 8, 2015, a group of us met at Jay's house where we stuffed over 200 grab bags. Six of us showed up and spent a couple of hours walking around Jay's dining room table picking up the material and putting it in the bags that Tina sewed for us. We will be doing it again next week. It was a great time and look forward to having another great time this next week.

Don't forget to bring a friend with you to the next meeting.

Do not forget the safety rules at ANY field trip;

- have a hard hat, especially in a mine.
- have hard toe or steel toe shoes.
- have safety glasses, at all times.
- be aware of who is around you at all times.
- have plenty of water for hydration and energy or food bars.



- dig only in the areas approved, no going off site to dig without permission.
- have a great time!!!

By: Jim Souter



Annual Picnic coming soon!

The club annual picnic will be on **May 02, 2015**. It will be starting at 11:00 am at the Ocmulgee Indian Mounds. It will be held at the picnic tables by the museum parking lot. We will be having a silent auction during the picnic. We had a lot of fun with the silent auction in the past years.

The club will furnish the barbeque and paper products. Everyone should bring a covered dish, your drinks, and a couple of items (more if you want to) to put in the silent auction, it can be rock related or not. Oh, don't forget your money for the items you won at the silent auction. So everyone come and have a good time. See you there and may the high bidder win!

April Meeting Minutes

The meeting was called to order at 7:34 PM by our president Jim Souter with 16 members/guests present.

Old Business

Everyone is reminded that the Annual Picnic is coming on May 2 at the Ocmulgee Indian

Mounds in Macon starting at 11 am. All members are requested to bring a covered dish and whatever beverage they choose to drink plus any additional rocks for our silent auction. Everyone is reminded to continue to include Betty and Renee Smith in your prayers as there health is not very good at this time.

New Business

The mineral of the month is Barite. The members presented some specimens which stimulated a nice discussion with several of the members contributing their knowledge. Jay is hosting an additional grab bag stuffing party at his house on Wednesday April 15 starting at 1PM.

The club has secured an upcoming dig at the KaMin mine on Friday April 17 starting at 8:30 am. The main object is various types of fossils.

Our own Tuell Waters was our visiting speaker. He gave a talk on the chemical nature of minerals. He discussed the periodic table in depth and explain how important some of the elements are to our very survival. Especially important are a number of the native metals: silver, gold, iron, copper and some of the gaseous elements. A question and answer session was provided at the end of his talk.

The meeting was adjourned at 8:35 PM. The annual Mother's Day Weekend Gem & Mineral show is May 8, 9 and 10 at the North Atlanta Trade Center off of Indian Trail Blvd. Cobb County Civic Center will be undergoing renovation during this time.

By: Richard Arnold

Follow up on your DMC dig to Cartersville Vulcan Quarry

It started out cold in the morning, but it was a nice clear day. We had just over 100 people to show up for the dig. Rodney Matiak the operations manager gave us a safety talk of things to not do and to do. Then off to the pit we went. There were people everywhere! I believe everyone found plenty to take home and some people took home a lot, like a pickup truck full. I am glad this one is in the books now I can take it easy for a few hours.



A truck load and proud of it!



Down in the pit looking for rock!



Native Copper from the Caledonia Mine's

Mineral of the Month Copper

Copper is a reddish chemical element, an extremely ductile metal and is second only to silver as a conductor of electricity and heat. It has a pleasing color and luster, it takes a high polish, and it forms alloys readily with almost all metals.

Copper found in the free metallic state in nature is called "native copper." It is found throughout the world as a primary mineral in basaltic lavas. The greatest known deposit of copper is in porphyries formed by volcanic activity in the Chile's Andean Mountains. Copper was named for the island of Cyprus, where the Romans obtained their supply.

History

Neolithic humans about 10,000 years ago first used native copper as a substitute for stone. The Egyptians and the Sumerians invented metallurgy, first reducing ores with fire and charcoal about 4000 BC. Copper was intentionally alloyed with tin as bronze about 3500 BC, and this harder metal was so universal in early history that one period is known as the Bronze Age.

Copper is easily worked and is remarkably ductile. It can be cold-rolled down to one one-thousandth inch in thickness, and, by cold drawing, its length can be increased as much as 5,000 times. Hence it is an ideal metal for making wire.

Production

Copper-bearing ores fall into two main classes: oxidized ores and sulfide ores. The oxidized ores, such as **cuprite** and **tenorite**, can be reduced directly to metallic copper by heating with carbon in a furnace. The sulfide ores, such as **chalcopyrite** and **chalcocite**, require a more complex treatment in which low-grade ores must be enriched before smelting begins. Sulfide ores are more important commercially.



Half of the world's copper deposits are in the form of **chalcopyrite** ore.

Ores are removed either by open-pit or by underground mining. Ores containing as little as .15% copper can be mined profitably in open-pit mining, but underground mining is profitable only if an ore contains 6% to 7% copper.

For many years, Chile has been the world's largest producer of copper, with the United States a close second. Other major producers include Canada, Zambia, Russia, Poland, China, Mexico, Kazakhstan, and Indonesia. After Arizona, the leading copper-producing states in the U.S. are New Mexico, Montana and Utah.

Distribution

Most of the copper produced in the world is used in electrical products. Another third is used in metal products such as pipe, tubing, plumbing fixtures, hardware, and machine tool products. Most is combined with other metals to form more than 1,000 different alloys. Important alloys in which copper is the chief constituent are brasses (copper and zinc), bronzes (copper and tin), and nickel silvers (copper, zinc, and nickel).

Copper is used in nearly all coinage and remained the second most utilized metal (after iron) until the 1960s when cheaper and more plentiful aluminum surpassed it in world production. Copper is also a trace element essential to the healthy life of many plants and animals, in which it usually occurs as part of oxidizing enzymes.

Copper Facts

Copper is mankind's oldest metal, dating back more than 10,000 years. A copper pendant discovered in what is now northern Iraq dates back to about 8700 BC.

Archeologists have recovered a portion of a water plumbing system from the Pyramid of Cheops in Egypt. The copper tubing used was found in serviceable condition after more than 5,000 years.

When Columbus sailed to the Americas, his ships, Nina, Pinta and Santa Maria, had copper skins below the water line. The copper sheathing extended hull life and protected against barnacles and other kinds of biofouling.

Paul Revere produced the bronze cannon, spikes and pumps for the famous ship, Old Ironsides. Revere was one of the earliest American coppersmiths.

Each year in the U.S., nearly as much copper is recovered from recycled material as is derived from newly mined ore.

There are more than 50 pounds of copper in an American-built automobile.

There are about 9,000 pounds of copper in a Boeing 747-200 jet plane.

The Statue of Liberty contains 179,000 pounds of copper

Read more: <http://www.desertusa.com/rocks-minerals/copper.html>



Copper with Cuprite - Ray Mine – Arizona



Field trips coming up lets go digging!!!

DMC Program of the SFMS Field Trip Committee

An Official Field Trip of Mid-
Tennessee Gem & Mineral Society, Inc.
(HOST)

An Official Field Trip of the Mid-Ga
Gem and Mineral Society

**11:00AM until 3:00PM CDT
Saturday – May 30, 2015**

WHERE: Cumberland Furnace, TN

WHEN: Saturday – May 30, 2015

DIRECTIONS: From Nashville, TN off of I-40 take exit 196 for US-70 S (Bellevue/Newsom Station) go 0.2 miles. Turn right at TN-1 W/US-70S W go 1.8 miles. Turn left at TN-1 W/US-70 W/Charlotte Pike go 16.1 miles. Turn right at TN-47 (White Bluff) go 9.6 miles. Turn right at TN-48 (Charlotte) go 6.8 miles. Take a slight left at Earl Leech Rd go 0.2 miles. Turn left on Cinder Road. You will see a log cabin (Starks Cabin) on the left hand side of the road. You can park in the field next to the cabin.

ASSEMBLY TIME: 11:00 AM at Cinder

Road, Cumberland Furnace, TN

For those meeting as at Cumberland Furnace, we should arrive about 10:00. Meet near the old log cabin on Cinder Road.

COLLECTING: We are heading to Cumberland Furnace to collect slag. The slag was a byproduct of making iron. Some of the slag is quite colorful in shades of blue and green ... some with swirls. The slag is easily cut and polished and makes nice pendants – it is too soft for rings.

Our target is a dump pile on the banks of the stream that runs through Cumberland Furnace (access by crossing a large field owned by the community). This dump pile is located about a ¼ of a mile from the parking area. Although the dump pile has the greatest potential, slag can be found anywhere along the banks (both upstream and downstream). Another way to search is by wading downstream from the furnace if the creek is low. I am not sure if conditions will permit - bring wading shoes just in case if you wish to collect in the stream.

AGE LIMIT: Everyone is welcome but children must be 6 years or older. They will not be allowed to roam around unattended and must obey all safety requirements and have all safety equipment. All pets must be under control at all times.

EQUIPMENT: You need to bring a hand tool, trowel, small shovel, etc. to dig in the slag pile and gloves to protect your hands. Bring a back pack or small buckets for carrying. Boots or wading shoes are recommended as your feet may get wet otherwise.

SEVERAL LODGING SUGGESTIONS: Depending on which direction you are coming from, I would recommend staying in the Nashville area, Clarksville (north of the



furnace) or Dickson (south of the furnace). If you are going to meet us and go as group, then Nashville is the best choice.

CONTACTS: For further information or alternative directions contact: John Martin, MTGMS Vice President at info@mtgms.org call my cell phone 615-210-5385 Visit our website www.mtgms.org and visit us on Facebook.



Cabochon made of Slag

Graves Mountain "Rock Swap and Dig"

8 am to 6 pm, Friday, April 24, 2015

8 am to 6 pm, Saturday, April 25, 2015

8 am to 6 pm, Sunday, April 26, 2015

"You are invited to field collect minerals at Georgia's premiere mineral location!"

The caretaker in charge of Graves Mountain, Clarence Norman Jr., has announced plans to hold two three day digs and rock swaps on the Mountain during the current year. He will have the mountain open to collecting from 8 am to 6 pm each day. All participants must stop at the welcome table in the Hospitality tent to sign a liability release and make a small contribution to defray the cost of opening the mountain and providing port-o-lets. There will be several golf cart type, four wheeled vehicles available

to transport those participants who have trouble walking long distances. The dig will cease and everyone is expected to be off the mountain by around 6 pm each day. Participants will be allowed to park in a designated area on the mountain.

Rock Swap and Hot Food/Drinks: Junior will set aside an area in the upper parking lot for tables to be setup for daily rock swaps. Anyone who would like to setup a table(s), please contact Junior at the phone numbers listed below. Hot food cooked on the grill, cold drinks and chips will be available for purchase on the mountain during all three days of these events. Don't forget to bring some extra money to buy the special "Graves Mountain Rock Swap and Dig" T-shirt!

THESE DIGS ARE OPEN TO ALL. NO NEED TO SIGN-UP, JUST SHOW UP FOR ALL "ROCK SWAP AND DIGS"!

Mark your calendar and tell all your friends about these great events!

Contact Information:
 Clarence Norman Jr. (Junior) -
 706.359.1544 (his business)
 or 706.401.3173 (his cell)

Graves mountain is accessible and open for mineral collecting by colleges, universities, and gem and mineral societies. Groups as small as two INDIVIDUAL mineral collectors can now reserve the mountain!

In order to gain access, (except for the two yearly "Rock Swaps and Digs") you will need to contact the caretaker, Clarence Norman, Jr (Junior) at 706.359.3862 (his business) or



706.401.3173 (his cell). Give him a call and he can reserve the mountain exclusively for your group. All of the mineral societies that come here to collect, offer the caretaker a donation for his trouble and effort in keeping the mountain open and assessable to them. Please consider what it is worth to your mineral society to be able to field collect minerals at Georgia's premiere mineral location!

Graves Mountain code of conduct!

- Park your vehicle in the designated area(at the end of the paved access road but not much beyond the woods to the right of this road).
- NO child under the age of 12 years old is to be allowed on the mountain because of all the dangers involved. **ALL CHILDREN WILL BE ALLOWED DURING THE "Rock Swap and Digs" IF EACH CHILD IS UNDER STRICT ADULT SUPERVISION!**
- **ALL pets must be kept under control and on a leash.**
- **The caretaker, Junior Norman, has final and absolute say as to where you may safely work.**
- **Ladders or power tools of any kind will not be allowed. (HAND TOOLS ONLY!)**
- **STAY AWAY FROM ALL HIGH WALLS!!**
- **NO REPELLING OFF OF ANYTHING!**
- **NO ONE IS ALLOWED TO DRIVE THEIR VEHICLE ON ANY PART OF GRAVES MOUNTAIN BEYOND THE**

PARKING AREA!

(The caretaker must accompany

- anyone driving beyond the parking area!)
- **EVERYONE NEEDS TO BE OFF THE MOUNTAIN BY DUSK. (Absolutely no one is allowed on Graves Mountain after dark.)**

Please protect our ability to field collect at Graves Mountain!

Report violations to:

Clarence Norman, Jr

Norman C E Wrecking Co

3333 C E Norman Rd

Lincolnton, GA 30817-3110

706.359.3862 (his business)

or 706.401.3173 (his cell)

DIRECTIONS: From Macon, Ga. Starting at I-75 and I-16, take I-16 east to Spring St. exit (less than 1 mile). Turn left on to Spring St. (Highway 129) towards Gray Ga., Stay on 129 until you get to Eatonton Ga. (around 40 miles). Once you get to the square turn right onto highway 16, turn left on to highway 44 (around 1 mile). Stay on highway 44 until you get to Washington Ga. (around 54 miles) turn right onto highway 78 business and go through town (highway 47 will merge in with 78 from the right, Don't turn here)(around 2 miles). Take highways 47 / 378 towards Lincolnton Ga. (about 12 miles) once you cross into Lincoln County, you will pass a church on the right, turn right into the second driveway after the church. Someone should be at the entrance to collect money. Travel time is 2 hrs 45 mins.



Iridescent hematite - Graves Mountain, Ga

Southeastern Gem & Mineral Shows

May 8, 9, & 10, 2015, Franklin, NC Gem & Mineral Society, Franklin, NC

Fri. & Sat., May 8th & 9th, 10:00 AM - 5:00 PM

Sun., May 10th, 10:00 AM- 4:00PM
 Carpenter Community Center, 1288

Georgia Rd. (US441), Franklin, NC
 No admission charge, rough and finished gemstones and jewelry, minerals and local crafts.

Contact: Norm Holbert, 828 634-0350, normholbert[at]comcast.net

May 8-9-10, 2015 Marietta, GA Gem and Mineral Show, Auction THE GEORGIA MINERAL SOCIETY

Fri: 10 AM to 6PM; Sat: 10AM-6PM;

Sun: Noon-5PM

NEW LOCATION

North Atlanta Trade Center
 1700 Jeurgens Court, Norcross, GA

SATURDAY AUCTION at 1PM!
 HOURLY ADULT AND JUNIOR DOOR PRIZES!

\$2.00 GRAB BAGS!

30+ Dealers

Club Hospitality table, Educational exhibits, and Demonstrations

Show contact: Shelly Stubbs, Show Chair

Email address: realgem7[at]aol.com

GMS Website: <http://www.gamineral.org>

May 22 - 24, 2015

Harrison County Gem & Mineral Society, Inc.'s

36th Anniversary Gem, Mineral and Jewelry Show;

NEW LOCATION

Mississippi Coast Coliseum and Convention Center

2350 Beach Blvd. Biloxi, Mississippi

Fri. 10-6, Sat. 10-6, Sun. 10-4;

adults \$5, children (10 and under) free with adult;

demonstrations, displays, Stump the Expert, hourly door prizes;

contact Lynn Tate at (228) 342-2963;

or e-mail:

GulfportGemShow[at]gmail.com



Mid-Georgia Gem Clips
Official Bulletin of Mid-Georgia Gem
and Mineral Society
Macon, Georgia

The Club meets on the First Monday of each Month, at The Museum of Arts and Sciences, in Macon, Georgia.

Except: No meeting January, July, and August. The annual Christmas Party is the first Monday in December. September the first Tuesday of the Month

Purpose: To promote the earth sciences, the lapidary arts, and the collection, study and display of rocks, minerals, and fossils; to promote the public awareness of these efforts in educational and recreational activities.

Club Officers:

President / Web Master: Jim Souter,
 ph. 478-454-7273, jgsouter@windstream.net

Vice President: Phillip Hargrove, 478-862-5327
 Cell 478-550-8199 susanbphilh@pstel.net

Secretary / Photographer, Richard Arnold,
 ph. 678-682-9860 rarnold216@charter.net

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Editor / Programs: Jay Batcha,
 4220 Cyndy Jo Circle, Macon, Ga. 31216,
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rocky1s@cox.net

Education Chairperson: Tuell Walters,
 ph. 478-922-7200
supernova1346@gmail.com

Stamp Program: Ron Davis, ph. 478-788-2616

Club year begins November 1st, a grace period of three months will be given before membership lapses.

Mid-Georgia Gem & Mineral
Society
Application for Membership

Name(s) _____

Address _____

City _____

State _____ Zip Code _____

Phone _____

Adult(18+) \$10.00 Junior \$2.50 New

Renewal _____

E-mail

Address _____

List your interests and reasons for joining _____

Make checks payable to:
 Mid-Georgia Gem & Mineral Society
 Mail to the Treasurer (listed on this page) or
 bring to a meeting.



Mid-Georgia Gem Clips

**Official Bulletin of Mid-
Georgia Gem and Mineral Society
Macon, Georgia**

**Member of Southeast Federation of
Mineralogical and Lapidary Societies
Member of American Federation of
Mineralogical Societies**



Mid-Georgia Gem Clips

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Save Commemorative Stamps