



September Meeting
At the Museum of Arts and
Sciences on Tuesday,
September 02, 2014 at 7:30pm.

Kim Cochran will be the speaker this month. The subject will be about Geology and then a Quiz with the winner getting a door prize.



**September meeting is on the
first Tuesday of the month.**

**Not the first Monday due to
Labor Day being on Monday!**

President Message

Here we are at the close of another summer season. As we get ready to start the new year in the clubs meetings, we should look forward to what we want to achieve in the coming year. In October, we will be once again hosting a booth inside the *Miller-Murphy-Howard Building* where will have some of our best specimens on display for people to see. We will have minerals, gemstones, and fossils from around the state of Georgia and the world, we will also be doing demonstrations of how we cut and polish stones. We ask that you bring us specimens, pieces of jewelry you have made, stones you have cut that are exemplars of our craft for others to see.

I want to make everybody aware of the fact we have a new webpage, <http://www.midgagms.org> and on the site, there is a page for our junior members, mineral of the month (*MoM*), latest club news and events that are coming up. The online application form now works. The application form can also be used to submit questions to me that you may have. There is a simple gallery of rocks, gems and minerals and fossils found in Georgia. There is a history of the club and some of the *Tips and Trips* archived there as well.

We ask that everyone ask a friend, neighbor, or family member who might be interested in rocks, gemstones, fossils, geology or just having fun learning new things, attend a meeting. We might get them interested in joining the club. We need more juniors too, because they are the future of the hobby. If you know any Boy Scouts, Cub Scouts, Girl Scouts that have geology badge to earn, ask them to attend a meeting so we can help them achieve what they need to complete their task. I would love to see us have to go to the Scout troop meetings to talk to them about the rocks, minerals, gemstones and fossils, getting them signed up as members so they could attend field trips with us.



If anybody has any ideas for meetings, programs, field trips, you may email me directly at jgsouter@windstream.net, or use the website application form and submit your suggestion through it at http://midgagms.org.ipage.com/?page_id=240.

Remember, if you dig a hole, fill it up. If you find a gate closed, close it when you leave. If you don't have permission to be there, don't go there. Don't abuse the privilege, it could cost us all.

Jim Souter,

jgsouter@windstream.net

478.454.7273

Fair News

The Club is invited back for this year's Georgia National Fair in Perry. The Fair will be October 2-12.

We will be located in approximately the same place as in the past three years. The primary purpose of what goes on in this building is to promote the Arts and hobbies of Georgia artists and residents. We use this time to educate the public about gems, minerals, fossils and the lapidary arts and to promote the Club. The Fair's expectation is that we will be demonstrating as much as we can manage. It is not necessary that you demonstrate – we need docents to talk with the public. People are generally eager to talk about gems & minerals, etc. and interested in the Club. If you would like to bring some of your collection to display while you are there as a docent, that would be great!

Since we are demonstrating we are allowed to sell on a limited basis. As in prior years we

may sell lapidary related items we have made; things that require some level of skill to produce. The only other people in this building allowed to sell are the Artists-in-Residence (in the Georgia Living section, not referring to the adjoining Fine Arts). If anyone is planning on selling, remember that the space allowed for your display is approximately 3 x 3 feet. If you plan on selling you must also be demonstrating. Please arrange for any equipment and tools you will need; do not assume any equipment will be provided.

The Fair allows us to sell grab bags as a fund raiser for the Club. Various Club members have been working on these grab bags since last year's Fair. We sold all of the bags we had prepared last year and likely could have sold more. A special Thanks to Tina Perkins for sewing 500 bags! And Thanks to everyone else that donated fabric, sewed bags, donated items for the bags and stuffed those 500 bags! We'll need more for next year so remember to collect extra when you go on a field trip!

Right now we are on the calendar to set up on Monday, September 22. We'll announce the time at the September meeting and we'll ask Jay to send out a reminder email of the date & time when we get closer to the setup day. If you have any specimens you would like to display, bring them to the Fair grounds on the 22nd or you may get them to Jay or bring them to the September meeting. Please mark all your items in some way if you cannot be at the display setup. On the day of setup all of the cases are locked by the Fair personnel before anyone leaves. Same when we take the display down; the cases are not unlocked until everyone responsible for items in the cases is present.

If you would like to docent please contact Susan or Phil Hargrove as soon as possible so we can arrange the schedule. The absolute deadline to sign up is our September meeting.



The Fair needs the name and addresses and how many days (or parts of days) you commit to. You will be mailed tickets and a parking pass. We need to be conscious of keeping our space neat and orderly and the display fully accessible to the public. Remember that no open drinks are allowed in this building and no eating. There is a dining area in the back of the building that we can use.

Contact Susan at 478-837-5327 or Phil at 478-550-8199 or email susanbphilh@pstel.net.

Thanks and see you at the Fair!
By: Susan

June Meeting Minutes

The meeting was called to order at 7:31 PM by Jim Souter with 18 members/guests present.

Old Business

The treasurers' report was read and approved. Members are reminded that items are still needed for the annual grab bags at the State fair. We are requesting lots of 100 or more.

New Business

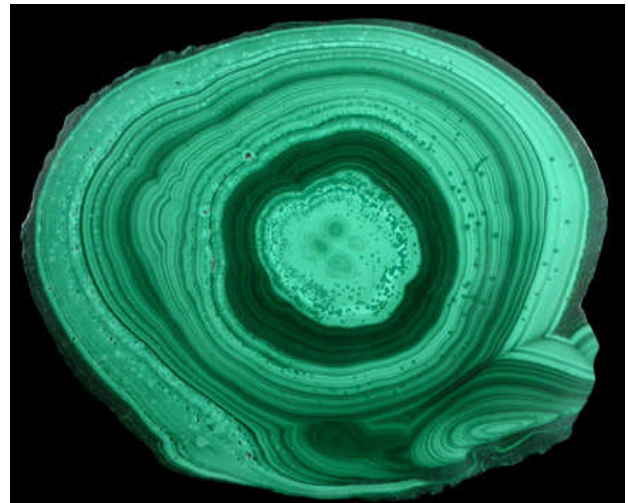
This month mineral was the fluorescent family of minerals or ones that glow under ultraviolet lights. There were many varied specimens brought in which we were able to view by the different UV lights. You can obtain just about any color you prefer from the different minerals that fall into this category.

Tom Batcha was our visiting speaker who is a member of the Georgia Mineral Society. He gave a talk on Sterling Hill mine which is the best location in North America to collect and view 89 different fluorescing minerals. A total of 360 different minerals have been identified at this mine location with 89 being first found here. Work began on this mine around 1750's looking for iron in the beginning. It later was discovered that it is a prime location for zinc as well. They began mining for the zinc in the

1880's up until the 1980's. Now there is a museum there and you can also tour the mine or collect from there tailings piles. It cost \$5 admission and \$1.50/pound of the minerals you collect.

On the same geological formation within about 8 miles is the Mine Hill later became known as Buckwheat hill. This area at one time was also known as the NJ Zinc works. His program included slides and was quite informative. It provided some interesting insights into an interesting location that would merit a visit in the future if anyone gets up to that part of New Jersey. A question and answer session was provided at the end of his talk. A great, thanks once again goes out to Mr. Tom Batcha for his generous donation of his time for this presentation.

The meeting was adjourned at 8:50 PM.
By: Richard Arnold



Malachite, Mashamba Mine, Shaba Copper Belt, Democratic Republic of the Congo (Zaire)

Mineral of the Month Malachite



Malachite is a green copper carbonate hydroxide mineral with a chemical composition of $\text{Cu}_2(\text{CO}_3)(\text{OH})_2$. It has been used as a gemstone and sculptural material for thousands of years and is still popular today. The green color of malachite is enduring and powdered malachite was used as a pigment and coloring agent for thousands of years. Malachite was one of the first ores used to produce copper metal but it is of minor importance today.

Where Does Malachite Form?

Malachite is a mineral that forms at shallow depths within the Earth, in the oxidizing zone above copper deposits. There it precipitates from solution in fractures, caverns, and the intergranular spaces of porous rock. It often forms within limestone where a subsurface chemical environment favorable for the formation of carbonate minerals can occur. Associated minerals include: azurite, bornite, calcite, chalcopyrite, copper, cuprite, and a variety of iron oxides

Some of the first malachite deposits to be exploited were located in Egypt and Israel. Over 4000 years ago they were mined and used to produce copper. Material from these deposits was also used to produce gemstones, sculptures and pigments. Several large deposits in the Ural Mountains of Russia were aggressively mined and supplied abundant gem and sculptural material in the 1800s. Very little is produced from these deposits today.

Much of the malachite entering the lapidary market today is from deposits in the Democratic Republic of the Congo. Smaller amounts are produced in Australia, France and Arizona.

NOTEWORTHY LOCALITIES

Africa contains several outstanding Malachite deposits. The mines at Katanga (Shaba), especially at Kolwezi, in the Congo (Zaire) produce Malachite in all sorts of odd shapes and forms, and are the source of the best banded, concentric, stalactitic and sparkling specimens. Tsumeb, Namibia, also contains some of the best Malachite, especially Malachite pseudomorphs after Azurite. The Emke Mine in Ogonja, Namibia is also an outstanding Malachite locality. Morocco also contains fabulous Malachite sources, specifically in Touissit and Kerrouchene.

In the U.S., Arizona is by far the most prolific producer of Malachite, and the mines at Bisbee, Cochise Co., are well known among all collectors for their outstanding variety and quality of Malachite. Other important Arizona localities are Morenci, Greenlee Co.; Ajo, Pima Co.; Mammoth-Saint Anthony, Tiger, Pinal Co.; and the Globe-Miami District, Gila Co.

See more at: From:

<http://www.minerals.net/mineral/malachite.aspx#sthash.m3ciTkrL.dpuf>

From: <http://geology.com/minerals/malachite.shtml>



Malachite, New Cornelia Mine, Ajo,
 Pima County, Arizona



DMC Program of the SFMS Field Trip Committee

An Official Field Trip of the
 Tennessee Valley Rock and
 Mineral Club (Chattanooga, TN)
 (HOST)

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

**8:00 AM to 2:00 PM Central
 Time**
Saturday, August 16, 2014
GRUETLI-LAARGER, TN
ON THE CUMBERLAND
PLATEAU

Place: GRUETLI-LAARGER, TN ON
 THE CUMBERLAND PLATEAU

Time: Saturday, August 16, 2014 -
 8:00 AM to 2:00 PM - Central
 Daylight Saving Time

MEET: MONTEAGLE TN , EXIT 134
 ON I-24. MEETING PLACE IS
 WEST OF I-24 IN PIGGLY WIGGLY
 PARKING LOT , ON LEFT APPROX
 1/2 Mile. There is no cell service
 after we leave the meeting area, late
 arrivals should call prior to 8 AM to
 let us know so someone can wait.

Cost: Free

Children are welcome under adult
 supervision.

What to find: Hunt area is in a
 wilderness area without facilities,
 easy access to abundant
 Mississippian and Pennsylvanian
 fern and tree bark fossils, some iron



impregnated/red specimens are found. Park along road at the site.

WARNING: POISON IVY AND VENOMOUS SNAKES IN THE AREA. BE PREPARED!

What to bring: gloves, buckets, pry bar, trowel, rock hammer, boots, gloves, long sleeve shirt. A change of clothes (you may get wet), newspaper to wrap fossils, drink and food. SUN BLOCK and bug spray!

Contact Information: For further information call JACK WEAVER 423 596 0640, CHARLIE JONES 423, 563 4479



Southeastern Gem & Mineral Shows

**Sept. 21-23, 2012,
Jacksonville, Florida
24th Annual Show
Jacksonville Gem and Mineral Society**
Friday 1:00pm-6:00pm
Saturday 10:00am-6:00pm
Sunday 10:00am-5:00pm
Admission: \$4
Morocco Shrine Auditorium
3800 St. Johns Bluff Rd
Jacksonville, Florida 32224
Contact: Karen Olson
Email: jgmsnews@gmail.com
Phone #: 904-981-0293 weekdays
904-448-5182 evenings and weekends
Address: 9353 River Pine Road,
Jacksonville, FL 32257



Sept. 27-28, 2014

Lexington, KY

24th Annual Show

Rockhounds of Central Kentucky

Saturday 10:00am-6:00pm

Sunday 12:00pm-5:00pm

Admission: \$2, Children \$1 (5% max per family), Scouts in uniform FREE

Kentucky National Guard Armory

4301 Airport Road

Lexington, KY 40510

Contact: Allen Ferrell

Email: kyrock2010kentucky@yahoo.com

Phone #: 859-277-2469

Club Website:

www.lexingtonrockclub.com

Tidbits

‘World’s biggest dinosaur’ discovered in Argentina

Paleontologists in Argentina say they recently discovered fossils belonging to the largest dinosaur on record. During its lifetime, the new species of titanosaur is believed to have stood 65-feet-tall, was more than 130-feet-long, and weighed 77 tons (155,000 pounds).

"Given the size of these bones, which surpass any of the previously known giant animals, the new dinosaur is the largest animal known that walked

on Earth," researchers Dr. Jose Luis Carballido and Dr. Diego Pol told the BBC.

Its enormous length was spread out across a long neck and tail, with a relatively small skull. To put the newly discovered titanosaur's enormous size in context, a T-Rex weighed about 7 tons. The fossils were first spotted by a local farm worker in 2011 and were fully excavated by a team from the Museum of Paleontology Egidio Feruglio led by Carballido and Pol. The fossils, taken from seven different titanosaurs, were described as being in "remarkable condition."

"Standing with its neck up, it was about 20m high -- equal to a seven-story building." Carballido said.

Despite its overwhelming size, the giant titanosaur, belonging to the larger sauropod group of dinosaurs, is believed to have been a herbivore, roaming through the forests of the Cretaceous Period about 100 million years ago. "This is a true paleontological treasure," Carballido said in a statement.

Carballido and Pol said in choosing a name for the newly discovered species, the researchers want to honor both the historic size of the fossils but also the farming community that first stumbled upon the remains.

"It will be named describing its magnificence and in honor to both the region and the farm owners who alerted us about the discovery," they said.

This was the second major titanosaur find in 2014. Back in January, a team of Pennsylvania scientists uncovered fossils belonging to the *Yongjinglong datangi* during an excavation in China.

Carballido and Pol say the 150 fossils were found in close proximity to other species, including carnivores. They say the unusual placement means the dinosaurs likely died in a draught, either due to dehydration or after getting stuck in the mud.

"It's like two semi trucks, one after another, and the equivalent of more than 14 African elephants together in weight," Carballido said. "Such dimensions put the focus on the extent to which these animals may have grown. It's a real paleontological treasure," he added.



A note for the picture with this write up

A technician lies next to the femur of a dinosaur at the Egidio Feruglio Museum in Argentina's Patagonian city of Trelew, in this photo provided by Telam on May 16, 2014. Paleontologists have unearthed in Argentina what they say is the largest set of remains of a dinosaur ever found to date. According to paleontologists from the renowned Egidio Feruglio Museum, Jose Luis Carballido and Ruben Cuneo, the fossils are that of a sauropod and preliminary tests dates the fossils at some 90 million years old.



New Test for Mineral Hardness!!!!

You're out in the mountains, near Franklin. You see a sparkly clear crystal in the water and pull it out. How do you tell if it topaz and not quartz? Without using a quartz crystal to test the hardness?

Dry it off, wipe it clean with a cloth to remove all grease, and then drop a drop of water (that's right good H2O!) on it from an eyedropper or soda straw.

Watch the water bubble. On stones 7 or less in hardness, the water drop will disperse! On harder stones it will form a globule.

The harder the stone, the bigger the globule! The principle is called "cohesion." The water drop "pulls" together on a hard surface. The greater the difference between the surface tension of the water and the stones, the bigger the water globule.

Tried & tested by the T&C Editor and by folks from Gem Cutters News, 3/2011 and Breccia, 6/2011, From The Mountain Gem 8/2011



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 / Webmaster: Jim Souter, ph. 478-454-7273, jgsouter@windstream.net

Vice President: Phil Hargrove, 86 Clear Branch Rd, Butler Ga. 31006, ph. 478-862-5327
susanbphilh@pstel.net

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 ph. 678-682-9860

Treasurer: Susan Hargrove, 86 Clear Branch Rd, Butler Ga. 31006, ph. 478-862-5327,
susanbphilh@pstel.net

Editor / Programs: Jay Batcha,
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rocky1s@cox.net

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Tpangan@aol.com
 also 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

Jay Batcha, Editor
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Save Commemorative Stamps