



**April Meeting  
At the Museum of Arts and  
Sciences on Monday,  
May 06, 2013 at 7:30pm.**

Bring Rocks, Minerals and Fossils to swap between each other at the Meeting. For an old fashion Rock Swap!

We will also see a short film on Silversmithing.

## **President's Message**

I want to thank Jay Batcha for his show of St. Isaacs Cathedral in St. Petersburg, Russia. It is amazing the size and mass of the columns in the building. It was very interesting and informative.

We will be meeting at my house after the tour of the museum to sew and assemble the grab bags for our fund raisers. I will have some smoky bar-b-que served for lunch for those who come.

I went by the Medical Center of Middle Georgia this past Monday, April 8 to see our Vice president, Rene Smith and his wife, Betty Sue. Betty Sue has been in there, in ICU for the past two weeks, going on three now and is in needs of positive thoughts and prayers. Rene said she had been ill for the past couple of months and so they were unable to attend the

meetings. He said it wasn't until this week that he thought of letting someone know. I would like for us to take it upon ourselves to keep in touch with other club members, even away from the Museum where we meet. Call and check up on our friends whom we miss at the meetings and let them know what is going on and/or what is coming up as far a club function.

We have had a wonderful opportunity handed to us by the Museum. They are wanting to set up a new permanent display to show off prime specimens. They have asked for our help in this and details will follow later, just something to think about.

Maybe one day, the weather will cooperate with us and the Sandersville dig so we can go into the kaolin mines down there. But the weather has to be real cooperative with us when we do.

That said, with the warmer weather, keep in mind that the snakes and other toxic insects are starting to move around. When walking, make sure of where you step or reach to make sure it is relatively free of any hazards. Keep lots of water, sunblock, and a shade handy as it gets warmer and warmer.

Call me if you have any questions, comments, or queries;

Jim Souter

478.454.7273

[jgsouter@windstream.net](mailto:jgsouter@windstream.net)

President, Mid Georgia Gem and Mineral Society; 2012-2013

## **April Meeting Minutes**

The meeting was called to order at 7:33 PM by Jim Souter with 16 members/guests present.

### **Old Business**



The treasurers' report was read and approved. There was further discussion about sponsoring a fund raiser at Smiley's Flea market in Macon when the weather is more cooperative. A signup list was started to solicit volunteers. Also signup lists for a Museum visit in Milledgeville and a grab bag party at Jim Souter's house following the tour were started.

**New Business**

The museum staff led by director Susan Welsh provided a signup list for volunteers to help with the upcoming gem and mineral displays. They are looking for selection of, diversity of and lighting combination suggestions.

This month's mineral was petrified wood and several members brought in numerous specimens to share and discuss. Our own Mr. Jay Batcha, longtime member and one of our resident experts was our speaker for the evening. He gave a talk on a recent vacation to Russia focusing primarily on St Issac's Cathedral in St. Petersburg. The quality and quantity of mineral and gemstone materials used in its construction is absolutely unfathomable. The engineering and labor involved just is not comprehensible for this poor rock hounds mind especially for a building that was completed in 1858. It is definitely a location worthy of a visit if you are ever in the country. Jay also provided samples of some of the materials used for demonstration. His talk was quite informative and provided some insights into the purpose of the construction techniques involved. A question and answer session was provided at the end of his talk. The meeting was adjourned at 8:24 PM.

**Upcoming Digs**

April 5, 2013 Kaolin Mine Sandersville, Ga.  
 For various fossils, pyrite this is OUR CLUB Dig

April 20, 2013 Burgin Quartz mine Norwood, NC primarily for quartz crystals

April 26, 27 & 28 Spring Rock Swap & Dig Graves Mountain near Lincolnton, GA. for approximately 23 different minerals.

By: *Richard Arnold*



**Smiley's Flea Market  
 Fund Raiser**

May 4<sup>th</sup>, 2013 is the Rock & Gem sell and yard sale to raise funds for the Mid – Georgia Gem and Mineral Society at Smiley's flea market. We need everyone to look in their closets and garage for rock crafts and rock & minerals to sell, plus any items to donate for yard sale items. We will set up three tables, one table for rock items and to promote the club and two tables for the yard sale items. I will be there around 6:00 am to 2:00pm.

If you cannot make it to the yard sale and you have some yard sale items to donate to the club please call me and I will pickup the items and take them to the sale.

Also if anyone wants to sell expensive things, we will sale them for you and give you the money for the item. You can donate 10% of the sell price to the club with the reminder going to you.

So come on down to Smiley's and have some fun with your fellow club members and check out the other vendors at Smiley's too.

Jay Batcha, Home Phone: 784-1965 Cell: 478-957-5002

**Mineral of the Month  
 Chalcopyrite**

**PHYSICAL PROPERTIES:**

**Chemistry:** Copper Iron Sulfide

**Composition:** CuFeS<sub>2</sub>



**Class:** Sulfides **Group:** Chalcopyrite  
**Crystal system:** tetragonal  
**Fracture:** conchoidal and brittle  
**Hardness:** 3.5-4 **Specific gravity:** 4.2  
**Luster:** metallic **Streak:** dark green  
**Cleavage:** poor in one direction.  
**Color:** brassy yellow, tarnishes to iridescent blues, greens, yellows and purples.  
**Transparency:** opaque  
**Associated Minerals:** Barite, Calcite, Fluorite, Galena Pyrite, Pyrrhotite, Quartz, Siderite, Sphalerite and Tetrahedrite are a few of the most common

**COMPOSITION:**  
Sulphide of copper and iron ( **34.5% Cu, 30.5% Fe, 35% S** )

**DISTINGUISHING CHARACTERISTICS:**

Chalcopyrite looks like, and is easily confused with Pyrite and is also one of the minerals referred to as "Fool's Gold" because of its bright golden color. But it is brittle, dissolves in acid and has a dark green streak . It is distinguished from pyrite by ease of scratching, and by copper tests. The color is slightly more yellow than that of pyrite or is often tarnished in brilliant iridescent hues which is also called "peacock copper ore". Like the picture above Pyrite will frequently show striated cubes or pyritohedra, whereas chalcopyrite, if not massive, has the characteristic sphenoidal or disphenoid crystals.

**ENVIRONMENT:**

Chalcopyrite is a common mineral and is found in almost all sulfide deposits and is often disseminated through igneous rocks.

**CRYSTAL DESCRIPTION:**

Chalcopyrite is usually massive, but crystals are also common. Often they are

large and the faces usually are somewhat uneven or may have striations on most crystal faces. Chalcopyrite is often tarnished in brilliant iridescent hues. Sphenoidal crystals are common. Also common are disphenoid crystals which are like two opposing wedges that resemble a tetrahedron. Crystals are sometimes twinned and can also be botryoidal.

**TESTS:**

On charcoal fuses to magnetic black globule, touched with HC1 tints flame with blue flash. Solution with strong nitric acid is green; ammonia precipitates red iron hydroxide and leaves a blue solution.

**LOCALITIES:**

Large, well shaped crystals occur in many places such as Cornwall, England, as well as Akita, Ugo, and Tochigi Prefectures, Japan. The northern section of Mexico is well known for chalcopyrite production. Such as the Noche Buena mine, near Mazapil, Zacatecas. Many nice chalcopyrite group specimens were mined near us. In Wallace, Idaho and Butte, Montana. Other notable USA localities are the French Creek Mine in Chester Co. Pennsylvania and Large amounts of Chalcopyrite occur with Sphalerite, Galena, and Marcasite in the Joplin district of Missouri, Oklahoma, and Kansas. There are also several notable Colorado localities.

**USES:**

Chalcopyrite is a major ore of copper. As a copper ore, the yield of chalcopyrite is rather low, in terms of copper content. It is only 25%, compared to other copper minerals such as chalcocite, covellite, cuprite, or bornite which may contain 50% to 60% copper. However the great quantities and many localities make chalcopyrite the leading source of copper.

Of course it is also used as a mineral specimen and as a decorative stone because of the bright colors that are produced with aging or acid treatments.



**FACTS & HISTORY:**

Chalcopyrite is the primary mineral which by alteration and successive enrichment with copper produces the series starting with chalcopyrite and going through bornite ( $\text{Cu}_5\text{FeS}_4$ ), covellite ( $\text{CuS}$ ), chalcocite ( $\text{Cu}_2\text{S}$ ), and ending rarely as native copper ( $\text{Cu}$ ).

Its structure is so closely related to that of sphalerite that it forms intergrowths with that mineral, and isolated free-growing crystals perched on crystals of sphalerite are all parallel. The same face on all the chalcopyrites gives simultaneous reflections. (It Sparkles)

From the Greek words chalkos, "copper" and pyrites, "strike fire"

**VARIETIES**

**Blister Copper** - Chalcopyrite in a globular or botryoidal rounded form.

**Peacock Ore** - Term used to describe Chalcopyrite or Bornite with a colorful iridescent tarnish effect, which is usually artificially enhanced with acid. Most Peacock Ore is sold as a variety of Bornite, when in fact most Peacock Ore is actually Chalcopyrite.

[http://www.minerals-n-more.com/Chalcopyrite\\_Info.html](http://www.minerals-n-more.com/Chalcopyrite_Info.html)



Chalcopyrite (twinned) from Alice Mine, Clear Creek Co., Colorado, USA

**Field trips coming up, lets go digging!!!**



**Mid-Georgia Field Trip**

Friday, May 17, 2013

11:00 am

Thiele Kaolin Company, Avant Mine

**One MORE try at this dig, third time is a winner, I hope!!!**

**Note:** If rain is in the forecast or if it is raining the day of, the dig will be called off, please call Jay (478-784-1965 or 478-957-5002) to see if Dig has been canceled. I will send out a e-mail if canceled.

**Trip:** To Thiele Kaolin Company's Avant Mine in Sandersville.

in Sandersville, Georgia. It is where the two Adams Roads intersect. If you Google Map it you will understand.

**Fee:** Free

**Collect:** Kaolin, Indian Paint pots (Iron Geodes), and Pyrite. Maybe some petrified wood if we are lucky. We will also be touring the mine operations.

**Bring:** Hammers, chisels, scratching tools, buckets, paper to wrap Specimens, hat, sunscreen, food and drinks, safety glasses, Gloves. Dress for the weather. This should be easy collecting.



**Directions:** From Downtown Milledgeville head east on E. Hancock Street also known as GA-22E/Ga-24E towards Sandersville. 3.9 mile slight right onto GA-24 (GA-22 and GA-22 split apart here). Go 10.3 miles and turn right onto GA-272 S. Go 1.7 miles and turn right onto Adams Road. Go 0.4 of a mile and the other Adams Road will be on the left (also this will be the first left). Gary Snow will meet us here at 11:00am.

Travel time from I-16 and Spring St. exit is about 1 hour and 10 minutes.

**If Late:** Jay's cell # 478-957-5002  
(Please try to be on time.)

**Note: This is on Friday, May 17, 2013!!!!**

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The Mid-Ga Gem and Mineral club has been invited on this field trip with the GMS club. The normal fee is \$30.00 so you will be getting a \$10.00 discount. You must tell them you are with the GMS field trip to get the discount. It is about a 3hour 45 minute trip from Macon, Ga.

GMS FIELD TRIP  
Saturday, May 18, 2013  
8:00 a.m. Eastern Time  
Franklin, NC

**Fee Site**  
**(Special GMS Price -- \$20)**

TRIP: GMS will hold a field trip to the Mason Mine in Franklin, NC. The mine is owned by the family of a GMS member – Al Klatt! Please see the Mason Mine website for more information about the mine:

[www.masonsmine.com](http://www.masonsmine.com) As GMS we are receiving a very special discount! Members may also want to visit Ruby City, which is a very nice rock shop and museum in Franklin, NC and also owned by the Klatt family: [www.rubycity.com](http://www.rubycity.com) Plus, there is a another FREE (donations appreciated) museum – the Franklin Gem and Mineral Museum, which is operated and maintained by the Franklin Gem and Mineral Society: [www.fgmm.org](http://www.fgmm.org)

COLLECTING: Rubies and sapphires (corundum).

BRING: We will be screening for the specimens in a water flume which can be messy, so bring a change of clothes, sunscreen, and some bug spray wouldn't hurt. As always, bring lunch, snacks, and plenty of water, though supplies are also available for purchase on site.

This field trip is suitable for children but they must be supervised at all times.

FACILITIES: There is a dressing room to change in and out of dirty clothes. Water, soda, snacks, small meal items, canned goods, souvenirs, toiletries, rock specimens are available for purchase.

DIRECTIONS AND WHERE TO MEET:

We will be meeting at 8:00 am Eastern time (or later)  
6961 Upper Burningtown Rd  
Franklin, NC 28734  
From the Atlanta metro area, go North on I-985 (which turns into US23) to Franklin, NC, then follow the map below:



Travel time: From the GMS club house at 4138 Steve Reynolds Boulevard, Norcross, GA, to the meeting place is approximately 2 hours and 110 miles.

If you are interested in carpooling on this trip, please contact Cheryl Dalton at [carpool@gaminal.org](mailto:carpool@gaminal.org) or Bill Waggener at [president@gaminal.org](mailto:president@gaminal.org)  
 Charles Carter, GMS Field Trip Chair  
 Home: 770-998-7949  
 Cell: 770-891-5947  
 email: [fieldtrips@gaminal.org](mailto:fieldtrips@gaminal.org)



Pyrite in matrix of pyrophyllite, Glendon, NC.

**GLENDON QUARRY**  
**Glendon, North**  
**Carolina**  
**Standard Minerals**  
**Division/R.T. Vanderbilt**  
**Co. Inc.**

**Saturday, May 4, 2013**  
**8AM till 3PM sharp!**  
**(Attendance limited to 120**  
**registrations)**

**A Note from Jay –I sent an email out to everyone about this dig on March 9, 2013 - I believe this dig is most likely full but if interested call and check.**

**For those who do not know where Glendon, N.C. is located:**

**DIRECTIONS:** From Charlotte, North Carolina -

On I-85 North of Charlotte, either exit the interstate at Lexington on to US 64 and travel through Asheboro to SR 42. Turn right and follow SR 42 past Coleridge and Bennett and SSR 902. Then SR 42 makes a left towards Carbonton and Sanford.

Before Carbonton there is a flashing yellow light @ SSR 1006. Turn right onto SSR 1006/ Glendon-Carthage road and go south to the mine which will be on your left. If you spend the night at Sanford, N.C. you will be traveling West on SR 42 and have to make a left on SSR 1006.

Sanford N.C. is located 20 miles to the East of Glendon and is the best bet for finding a good motel room and nearby restaurants.

**SFMS Field Trip Committee:**  
**Internet website:** <http://amfed.org/sfms>  
**E-Mail** [jimflora@windstream.net](mailto:jimflora@windstream.net)  
**Jim Flora - SFMS Field Trip Committee Chair**



An Official Field Trip of The Gem and Mineral Society of Lynchburg, VA. Inc. (HOST)  
An Official Field Trip of the Mid-Ga Gem and Mineral Society

**9:00 AM EDT to 2:00 PM**  
**Saturday, May 25, 2013**  
**Boxley Aggregates, Piney River Quarry (Amherst County)**  
**739 Warrick Barn Road, Arrington, VA.**

**COLLECTING:** According to the [mindat.org](http://mindat.org) Website, the following minerals are listed from Minerals of Virginia, 1990 edition. Some on this list have not been found on our past field trips. (An ( \* ) indicates those known finds on past field trips)

Anatase: A greenish-brown replacement of ilmenite.

Ilmenite: Black metallic or highly weathered masses. ( \* )

Kaolinite: White powdery masses from the alteration of feldspar. ( \* )

Quartz: Light blue to white ( \* )

Rutile: Reddish-brown metallic to highly weathered masses. ( \* )

Tacharanite: White, dull to pearly. Occurs with the weathered anatase, rutile and ilmenite.

Zoisite var: Thulite: Veins of pink thulite occur in the feldspar. ( \* )

Additional minerals: Pyrrhotite: (has been verified) ( \* ) Silvery metallic when fresh but weathers to a dark rusty color when exposed to the weather. Pyrite: Small crystals and masses ( \* )

The main rock mined here is called APLITE. It is very hard, light-colored, and fine-grained and consists primarily of sodic plagioclase feldspar and quartz in the groundmass and, in some cases, orthoclase feldspar phenocrysts. Like pegmatites, aplite dikes may represent a residual fraction on silica-rich magma after most of the magma has crystallized.

Remember that the availability of these minerals

depends on where they are working in the quarry at the time of the field trip and how many stock piles are available. Note that some of the occurrences are very small.

**DIRECTIONS:** From Lynchburg, VA., follow US 29 By-pass north to Amherst. Continue on the US 29 by-pass for about 2 miles until you come to Rt.151 (Patrick Henry Highway). Turn Left on Rt. 151 and continue for about 6 miles and turn left on RT. 665 (Warrick Barn Road). The entrance road to the quarry will be in about 1 mile on the right.

**MEETING LOCATION & ASSEMBLY TIME:** 8:00 to 8:45 AM. At the quarry scale house / office. You will need sufficient time to read the required Boxley Hazard Training information, fill out and sign the Hazard Training Certificate and sign the required Boxley waiver of liability form. There will also be a review of the site specific hazard training and safety regulations by the quarry Superintendent. Everyone must be present for this presentation. If you are late, you will not be permitted to enter the quarry. We all will enter the quarry as a group about 9:00 AM.

All safety rules will be strictly enforced or you will be escorted out of the quarry and barred from future field trips.

**EQUIPMENT:** The Boxley Quarries are very safety-conscious. Standard quarry PPE (personal protective equipment) gear is required or you will not be permitted to enter the quarry. **Hard hat (see mfg. date below), steel-toe boots, safety glasses, good protective clothing and gloves must be worn.** It could be very cold, wet or hot in the quarry, so dress according to the weather forecast that morning. Be sure to bring plenty of water and snacks. Bring your own collecting equipment such as rock hammers, chisels, buckets and newspaper to wrap your delicate specimens. We will be allowed to drive into the quarry. Bring rain gear in case of bad weather. **HARD HAT NOTICE: CHECK THE MANUFACTURE DATE, LEFT SIDE, UNDER THE BRIM IN THE SMALL CIRCLE ON EITHER SIDE OF THE ARROW.** If you see a 1 on either side it was made in 2011, a 0/7 is 2007. If it's older than 5 years, it must be replaced. This is a New Federal rule enforcement. You must comply or be rejected.

**AGE LIMIT:** Children of all ages will be allowed but it will be the parent's responsibility to keep them under control at all times and see that they obey all



the safety requirements. The same dress and PPE requirements apply.

**NOTE:** Severe weather or other crisis out of our control may result in the canceling or rescheduling of this trip. If there is any question, please call me to confirm the trip.

**CONTACT:** David Callahan, Field Trip Chairman.  
 The Gem and Mineral Society of Lynchburg, VA.  
 Inc.  
 Web site [www.LynchburgRockClub.org](http://www.LynchburgRockClub.org) Home  
 Phone [540-297-1853](tel:540-297-1853) Cell [540-874-5201](tel:540-874-5201) (the day  
 of the trip please)  
 Email [dbc11@aol.com](mailto:dbc11@aol.com)



## Southeastern Gem & Mineral Shows

**May 4-5, 2013:**

**North Charleston, SC.**

**Lowcountry Gem & Mineral Society Annual Jewelry, Gem, Mineral, and Fossil Show, "Art by Nature".** Charleston Area Convention Center; Exhibit Hall A.

Hours: Sat. & Sun 10-5.

FREE admission and FREE parking;  
 hourly door prizes, demonstrations, fossil dig,  
 geode cracking.

Contact Karen Havenstein of Charleston, SC at  
 (843) 795-2956;

e-mail: [fossils@comcast.net](mailto:fossils@comcast.net);

Web site:

[www.lowcountrygemandmineralsociety.org](http://www.lowcountrygemandmineralsociety.org)

**May 10-11-12, 2013**

Marietta, GA

Gem and Mineral Show, Auction  
**THE GEORGIA MINERAL SOCIETY**

Fri: 10 AM to 7PM; Sat: 10AM-7PM;

Sun: Noon-5PM

The Cobb County Civic Center,  
 548 So. Marietta Parkway and Fairground St.,  
 Marietta, GA

Exit I-75 at Exit #263 and turn west onto  
 Marietta Parkway SR 120 Loop.  
 Drive 2 miles and turn left onto S. Fairground  
 Street. and then immediately  
 right to the Cobb Civic Center's parking lot.

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

\$2.00 GRAB BAGS !

30+ Dealers

Club Hospitality table, Educational exhibits,  
 Demonstrations

Show contact: Tom Batcha, Show Chair, 678-  
 407-4224

Email address: [T.Batch@comcast.net](mailto:T.Batch@comcast.net)

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

## Tidbits

**Many lapidarists now heat nodule and thunder egg halves under a heat lamp for a few minutes before polishing with tin oxide or cerium oxide on felt. The polish comes up almost instantly. Alternatives include putting specimens in a 200° F oven until they are warm to the touch or putting specimens in hot water until they are warm. Dry off excess water before polishing.**

*Via Stoney Statements Sept. 2011*



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

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

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

**Mid-Georgia Gem & Mineral**  
**Society**  
**Application for Membership**

**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.

Name(s) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Club Officers:**

**President:** Jim Souter, ph. 478-454-7273,  
[jgsouter@windstream.net](mailto:jgsouter@windstream.net)

Address \_\_\_\_\_  
 \_\_\_\_\_

**Vice President:** Rene' Smith, 478-788-1766  
 Cell 478-719-2413 [grawolfvrs@msn.com](mailto:grawolfvrs@msn.com)

City \_\_\_\_\_

State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_

**Secretary / Photographer,** Richard Arnold,  
 ph. 678-682-9860

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

**Treasurer:** Susan Hargrove, 86 Clear Branch Rd,  
 Butler Ga. 31006, ph. 478-862-5327,  
[susanbphilh@pstel.net](mailto:susanbphilh@pstel.net)

Renewal \_\_\_\_\_

E-mail \_\_\_\_\_

Address \_\_\_\_\_  
 \_\_\_\_\_

**Editor / Programs / Web:** Jay Batcha,  
 4220 Cyndy Jo Circle, Macon, Ga. 31216,  
 ph. 478-784-1965, Cell 478-957-5002  
[rocky1s@cox.net](mailto:rocky1s@cox.net)

List your interests and reasons for joining \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Education Chairperson:** Thomas Thurman,  
 ph. 478-329-1755, cell 478-293-7302  
[Tpangan@aol.com](mailto:Tpangan@aol.com)

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

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



## **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  
4220 Cyndy Jo Circle  
Macon, Ga. 31216

Save Commemorative Stamps