



HAPPY NEW YEAR!



February Meeting
At the Museum of Arts and
Sciences on Monday,
Feb. 02, 2015 at 7:30pm.

Jay will be speaking on his trip to
Upper Michigan Iron Country.

President's Message

Here it is, the start of a new year. Two thousand-fifteen. Just a drop in the bucket when we look at the geology around us. I am amazed as to what we are able to learn about the past by looking at the present. We can see so much in the landscapes, the soils and the rocks that tell us volumes about the past.

This coming year, I would like to see us to continue to grow in membership as well as our knowledge of the past. I would like for everybody to remember to bring a friend with them to the meetings. I have had people say things like, "I'm just not as knowledgeable as everybody else" or "I'm just a rank amateur." I have to look at them and remind them, we have all been in that place, where we didn't feel like

we knew "that much." By coming together and sharing our information, experiences, and ideas, we teach each other and thereby become more informed on the subject.

We sold ALL the grab bags from last year. After the Perry fair, I was contacted by a 4-H advisor in Tattnall County and she purchased all the bags that were remaining for them to use in their geology program. They had asked for 100 bags but all we had were 80 bags but they were satisfied with that. I want to thank Lesli with the school there for her interest in our program.

It looks like we will be going back to the Vulcan mine to dig for blue quartz again. I want to remind people to bring spray bottles loaded with water so as to help with the location of the better material. The stone looks gray until wet. The water causes the blue to pop into the color spectrum. Once the stone is cut and polished, the blue is very easy to see and very easy on the eye. I want to thank Jay for getting us back in there. Remember to bring safety glasses, hard hat, gloves, comfortable boots or shoes, and plenty of water to keep hydrated. Remember the rules for the trip, be courteous and treat everybody as you would have them treat you. Also, we would like for club members to bring back specimens that Jay could put into grab bags too as he is in need of materials for them.

We have a few new members in the club so please introduce yourself to them and make them feel welcome. I may not have a memory for names, hence the use of name tags, but forgive me if I don't recall your name when we meet.

Let's have another great year!!!

Jim Souther
jgsouter@windstream.net
478.454.7273



Dues are Due

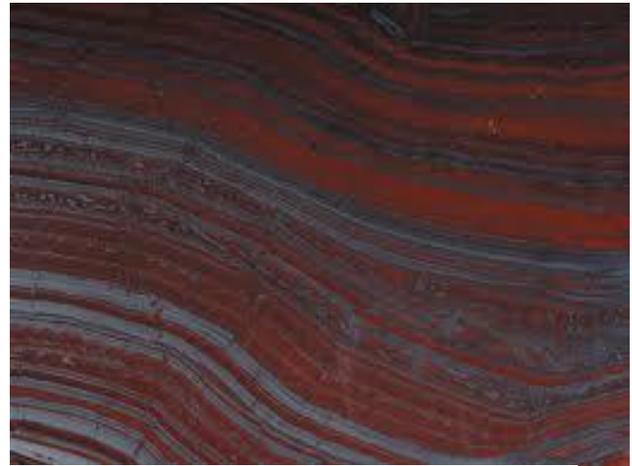
*** Important Note ***

**This will be your last
newsletter if your dues are
not paid by 1-31-2015**

**News flash....Our Club
sponsored DMC dig is almost
here!**

The DMC dig that our club will be sponsoring is coming up in March. We finally have a location, **Hooray!!!** It will be on March 7, 2015 at 10:00am to 2:00 pm. I have the dig write up in this newsletter so all can view. We will need at least 4 or 5 people to help out at the dig. Just at the beginning mostly than you can collect all you want. Remember to collect a little for our grab bags for the fair.

BY: Jay Batcha



Sedimentary layers with bands of hematite, magnetite (gray/black), and jasper (red) in Precambrian banded iron formations (BIFs) of northern Michigan.

Mineral of the Month

Iron Ore – Hematite and Magnetite

Iron ores are rocks and minerals from which metallic iron can be economically extracted. The ores are usually rich in iron oxides and vary in color from dark grey, bright yellow, deep purple, to rusty red. The iron itself is usually found in the form of magnetite (72.4%Fe), hematite (69.9% Fe), goethite (62.9% Fe), limonite (59.35%Fe), or siderite (48.2% Fe).

Earth's most important iron ore deposits are found in sedimentary rocks. They formed from chemical reactions that combined iron and oxygen in marine and fresh waters. The two most important minerals in these deposits are iron oxides: hematite (Fe_2O_3) and magnetite (Fe_3O_4). These iron ores have been mined to produce almost every iron and steel object that we use today - from Knives and trains to the steel beams in bridges.

Nearly all of Earth's major iron ore deposits are in rocks that formed over 1.8 billion years ago. At that time Earth's oceans contained abundant dissolved iron and almost no dissolved oxygen. The iron ore deposits began forming when the first organisms capable of photosynthesis began releasing oxygen into the waters. This oxygen



immediately combined with the abundant dissolved iron to produce hematite or magnetite. These minerals deposited on the sea floor in great abundance, forming what are now known as the "banded iron formations." The rocks are "banded" because the iron minerals deposited in alternating bands with silica and sometimes shale. The banding might have resulted from seasonal changes in organism activity. The upper Michigan Iron Country is one of these locations with the banded iron formations. With Hematite and Magnetite found in the UP of Michigan.

A little about hematite and magnetite follows:

Hematite (Fe_2O_3) is the world's most important ore of iron. Although magnetite contains a higher percentage of iron and is easier to process, hematite is the leading ore because it is more abundant and present in deposits in many parts of the world.

Hematite is mined in some of the largest mines in the world. These mines require investments of billions of dollars and some will remove over one-hundred million tons of ore per year. These open pit mines can be hundreds to thousands of feet deep and several miles across by the time they have worked to completion.

China, Australia, Brazil, India, Russia, Ukraine, South Africa and the United States are the world's leading producers of iron ore (includes hematite, magnetite and other ores). Iron ore production in the United States occurs in Michigan and Minnesota.

Pure hematite has a composition of about 70% iron and 30% oxygen by weight. Like most natural materials it is rarely found with that pure composition. This is particularly true of the sedimentary deposits where hematite forms by inorganic or biological precipitation in a body of water.

Magnetite (Fe_3O_4) is easy to identify. It is a black, opaque, submetallic to metallic mineral with a Mohs hardness between 5.5 and 6.5. It is often found in the form of isometric crystals. However, its magnetic properties are distinctive. It is one of just a few minerals that are attracted to a magnet. It is the most magnetic mineral found in nature. Sometimes it is auto-magnetized and attracts metal objects.

Lodestone is a form of magnetite that acts as a natural magnet. Normal magnetite is attracted to a magnet but lodestone acts as a magnet, attracting iron particles.



Specular hematite (sometimes called "micaceous hematite") collected in Republic, Michigan



Field trips coming up, lets go digging!!!

DMC Program of the SFMS Field Trip Committee

**An Official Field Trip of the Western
South Carolina G&MS (Greenville,
SC) (HOST)**

**An Official Field Trip of the Mid GA
Gem and Mineral Society, Inc.**

Saturday, February 28, 2015

9:00 am until dark

**Amos Cunningham Farm, Due West, SC
Abbeville County**

FEE SITE

Children: 12 and under \$10 and must have



adult supervision.

Pets: If controlled on a leash.

Fee: \$20 for an adult (over 12)

TRIP: Amos Cunningham Farm, 471 Alewine Rd., Due West, SC 29639

When: February 28, 2015 from 9:00 AM until dark.

COLLECTING: Good sized beryl crystals, amethyst and smoky quartz. This site has the best South Carolina beryl specimens of any site that I know how to get access to. The crystals are well shaped hexagons with flat ends. The color is green though most have a blue cast. The beryl ranges from translucent to opaque. Most crystals are specimen quality though some gem quality is present.

Digging Conditions: The site is flat to rolling land of South Carolina red clay. The digging areas have been machine trenched down to white kaolinite veins that have the beryl and quartz crystals. Dirt and rock removed from the trenches and piled up, also contain beryl and are good places to search especially after a rain. Beryl is often found by breaking open quartz rocks.

BRING: Bring picks, shovels, rock hammers, scratching tools, and screens. Large hammers will not be very useful. Also bring plenty of drinks and a picnic lunch unless

you want to drive a few miles for lunch.

DIRECTIONS AND WHERE TO MEET:

We will meet at the Amos Cunningham farm between Antreville and Due West, SC. From Anderson, SC drive 18 miles down route 28 East (really south) to Antreville. Turn left on Route 184 East heading toward the town of Due West. Travel for 4 miles and turn left on George Alewine Road. Drive for less than 1 mile. You will pass a trash/recycling site on the right, cross a bridge over a small creek and turn into the first lane on the right. If you pass the Cunningham Backhoe Service on the left you have gone too far.

Lodging can be found around Anderson, SC. There is no lodging in Antreville or Due West.

The next day: In the past people have asked me about going to the nearby Diamond Hill Mine the next day while they are in the area. Diamond Hill will be open on Sunday, March 1. The mine is well known for quartz crystals, smoky quartz, amethyst, skeletal quartz, and cacoxenite. Cost is \$20 per person, but if 10 or more arrive as a group the cost will be \$10 per person.

Contact info for Amos Cunningham:
cunninghamamos@yahoo.com or 864-379-8918 or 864-992-7843

Contact numbers: 864-404-0025 Bill Wetzel
Field Trip Chairman, Western South Carolina
G&MS. e-mail address: wwetz14@gmail.com



Beryl Crystals, Amethyst, and Smoky Quartz

**DMC Program of the SFMS Field
 Trip Committee**
**An Official Field Trip of the Mid-
 Georgia Gem and Mineral Society
 (Macon, GA) HOST**
**An Official Field Trip of the other
 clubs.**

10:00 AM to 2:00 PM
Saturday, March 07, 2015
Vulcan Materials Company,
Bartow Quarry, Cartersville, GA
Free Area

Where: Vulcan Bartow Quarry, 5840 Highway
 20 SE, Cartersville, 30121

The Quarry began operations in 1995 at this
 location. They have 797 acres and their pit is

approximately 1,200 feet wide and 250 feet
 deep at this time.

FREE AREA: This field trip is free for all who
 participate.

Directions: Interstate 75 North to exit 290.
 Highway 20. At the exit you make a right and
 go 1 and 1/2 miles to the quarry on the right.
 This is past the McDonalds. Turn right into the
 quarry and continue to a small building were
 we will meet before going to the pit. If you
 are coming from the North, you would still
 exit at 290 but turn left, go east and continue
 to the quarry. When we arrive we will meet a
 Vulcan employee who will be our guide for
 this trip.

Collecting: The rock found here is a
 porphoblastic granite gneiss and is part of the
 Corbin Gneiss Complex. These rocks are some
 of the oldest in Georgia dating back some 1.2
 billion years, making it much older than the
 granites found at their other locations. This
 quarry is known for the blue quartz found
 within the granite. While most of the blue
 quartz is small, you can normally find some
 large enough to polish into a very nice
 cabochon. Some may be found with pyrite
 inclusions as well as other minerals within the
 granite.

WHAT TO BRING: Clothes that would be
 appropriate for this time of year in Georgia.
 That could be almost anything and I would
 suggest layers that could be removed and
 something in the event of a shower. A hard



hat, safety glasses, and steel toe shoes/boots, or at least a good pair of shoes. We should be finished early enough to go to the McDonalds for lunch but something to drink is always good to bring along.

They are blasting rock every week and, as a working quarry, there are spoil piles all around. No one will be allowed near any of the high walls but with the abundance of material we normally just have to bend over and pick things up. All you really need is a bucket to take your samples home. If you want to chip off a piece of a larger boulder be sure you have all your safety equipment including safety glasses, gloves, hard hat and a chisel and crack hammer.

Field Trip Contact: Jay Batcha.

rocky1s@cox.net

Phone: [478-784-1965](tel:478-784-1965) Cell: [478-957-5002](tel:478-957-5002)

Southeastern Gem & Mineral Shows

Feb. 7- 8, 2015

Merritt Island, Florida

**38th Annual Symphony of Gemstones Show and Sale
 Sponsored by Central Brevard Rock and Gem Club**

Kiwanis Island Recreation Center
 951 Kiwanis Island Park Rd. off SR 520 Exit on I95 going East, entrance is just east of the Merritt Island Mall, turn at the sign

Sat./Sun 10AM - 5 PM adults \$5 (\$1 discount

coupon on Website and in local papers) children under 12 are free when accompanied by adult.

We will have over 20 vendors offering both finished and handmade fine jewelry, beads, pearls, rocks, slabs, minerals, specimens, tools, silent auction, sluice and children activities. There will be demonstrations by club members.

Demonstrations, hourly prizes, grand prize, children's activities and silent auction.

Flyers for \$1 off admission can be found on our website: centralbrevardgems.org and local newspapers.

Contact information: Roz Mestre
 email: roz.mestre@att.net, (321) 431-0159.
 club website: www.centralbrevardgems.org

FEBRUARY 28, 2015

Lakeland, Florida

**Annual Show and Sale
 Imperial Bone Valley Gem, Mineral & Fossil Society**

Saturday 9:00am - 4:30pm

175 Lake Hollingsworth Dr., Lakeland, FL 33801

Hourly door prizes, Spin & Win Mineral Wheel, Kids Treasure Dig, demonstrations and educational displays, Silent and Chinese auctions and over 30 dealers of rocks, minerals, fossils, jewelry, gifts and hobby supplies.

Contact Kim Price, Show chair, at (863) 412-9156, or email ibvgmfs@gmail.com. Facebook: Bone Valley Gem, Mineral & Fossil Society. Website: www.bonevalley.net



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

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

Editor / Programs: Jay Batcha,
 4220 Cyndy Jo Circle, Macon, Ga. 31216,
 ph. 478-784-1965, Cell 478-957-5002
rocky1s@cox.net

Education Chairperson: Thomas Thurman,
 ph. 478-329-1755, cell 478-293-7302
Tpangangan@aol.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
4220 Cyndy Jo Circle
Macon, Ga. 31216

Save Commemorative Stamps