

FORSYTH GEM AND MINERAL CLUB, INC.

Nature's Treasures

January 18, 2018

***** Public Version *****



MEETING: The next meeting of the Forsyth Gem and Mineral Club will be held at **7:30 PM, Jan 18, 2018**, the third Thursday of the Month, at **Vulcan Materials Company's Training Center, 4401 N. Patterson Ave., Winston-Salem, NC.**



PROGRAM: The January presentation will be given by Phil Bradley of the NC geological Survey. Phil has spoken to our club before, and was warmly received. His topic will be, "The Geology of Haw River" (the HAW River is a 110 mile long tributary of the Cape Fear River in Central North Carolina).



Refreshments: Refreshments for the October meeting will be provided by **the Fulchers and Bakers**. The Club will provide cups and napkins and ice for the refreshments. Those volunteering to provide refreshments need only provide sufficient drinks and snacks, such as, cookies, cakes, crackers, or donuts **and ice**

.2017 Refreshment List

January	Fulchers and Bakers	July	*** Two Needed ***
February	Myers and Gaskills	August	Picnic
March	Goodes and McGilvarys	September	Show
April	Whickers and Becks	October	Schlottmans + One Needed
May	Brouhles and McGilvarys	November	Marions, Reeds
June	*** Two Needed ***	December	Holiday/Show Dinner

If you enjoy the refreshments, please be prepared to take a turn in furnishing them. NOTE: if you volunteer to bring refreshments, please do so. If you are unable to attend for any reason, contact Vickie Gaskill or Jeanne Schlottman prior to the meeting so that alternate arrangements can be made.

Note: Due to equipment issues in the meeting area kitchen, it will be necessary for the refreshment providers to also bring ice for the drinks, at least for the next couple of months.

Dates To Remember:

September 7-9, 2018 – Annual Gem, Mineral, Jewelry and Fossil Show



DON'T FORGET YOUR NAME TAGS



Inclement Weather Procedure

We have already had an early taste of winter, with the main season just around the corner. With it comes chances for bad weather for the next few months, so it is time to review the procedures to be followed in case of bad or threatening weather on any of the event or meeting dates.

If inclement weather is a possibility, plans are to try to make a go/no-go decision by the day before the meeting. If the decision is made to cancel, an email alert will be sent out, as well as a notice posted on the club web page. Members who do not have email or internet capability should call one of the officers.



Refreshment Volunteer Time

There are still a few slots left for volunteers to bring refreshments. Anyone willing to participate should contact Hospitality Chair Vicki Gaskill.



Membership Renewal Soon Due

As the new year starts off it is time to renew memberships for the coming year.. Members who have not renewed by the end of February will be dropped from the roster.

A copy of the membership form is included in this newsletter. The form can also be downloaded from the club's web site. Note that ALL members, *including existing members*, must fill out the form each year so that FGMC can keep the records up to date.

Membership can be renewed at any of the upcoming meetings or they can be mailed to the Treasurer.



Article on Forsyth County Corundum

Ron Carswell recently sent an email to the web admin with an article that he has written regarding his research and collecting of Forsyth County Corundum. The article itself is too long to include in the newsletter, but has been posted on the club's web page.

The email can be found at: <https://forsythgemclub.com/forsyth-county-corundum>

and the article itself is at: <https://forsythgemclub.com/wp-content/uploads/2018/01/Forsyth-County-Corundum.pdf>



AMFED Meeting in Raleigh

This year's annual meeting of the American Federation of Mineralogical Societies (AMFED) will be held in Raleigh on April 4-8. It is being hosted by the Tar Heel Gem & Mineral Club.

AMFED is the parent/national organization which backs the Southeast Federation of Mineralogical Societies (SFMS). SFMS is the organization that sponsors the Dixie Mineral Council (DMC).

FGMC is a member of AMFED and SFMS and participates in the DMC field trips.

The AMFED meeting moves around from year to year. This year's meeting in Raleigh will be the closest to our area for quite a while, and likely will not be particularly close again in the near future. So for anyone interested in finding out more about what AMFED does for the mineral collecting hobby, this will likely be the best chance to find out.

Additional information can be found in the AFMS newsletter:

http://www.amfed.org/news/n2017_12.pdf



Possible Mini-Swap at Meeting

The club was recently contacted by a collector from New Mexico regarding possible rockhounding sites in the area. During the email interchange she noted that they were going to be in the area around this time and if they can arrange it, will be attending the January meeting.

They are hoping to bring some samples from their area, and would potentially be interested in any specimens from this local area.

If you are coming to the meeting and have some interesting specimens that you would be willing to provide them, bring them along.

EDITOR'S NOTE: The DMC February trip will occur before the February newsletter will be published, so it is included in this newsletter.



Dixie Mineral Council Field Trip

An Official Field Trip of the Mobile Rock and Gem Society (Mobile, AL) - HOST

An Official Field Trip of the Forsyth Gem & Mineral Club

Note: DMC Field Trips are for club members of DMC-affiliated clubs and their families only. Liability issues mean that these trips cannot be attended by the general public unless otherwise noted.

Patty Construction Quarry

7525 Hwy 27

Summerville, Ga

Sunday, February 11, 2018

9AM - 2PM Eastern Time

TRIP: The February 2018 SFMS DMC Field Trip is sponsored by the Mobile Rock & Gem Society to collect Summerville Agate at the quarry in Summerville Georgia. This site has been a long time favorite of many collectors. The agate forms within Mississippian age chert as delicate concentric bands. Colors are predominantly gray and red. Sometimes you can find stalactic formations, or pieces covered in druzy quartz.

COLLECTING: Material is generally found by simply surface collecting, although there are plenty of large pieces and boulders for those so inclined to break them apart. A couple of guys from Georgia found a huge (about 3 feet diameter) boulder with good pattern and figure throughout and briefly contemplated how they might get it loaded into a truck, but eventually gave up on the idea.

BRING: Eye protection is a must for anyone wishing to break apart material with a rock hammer, or sledge, or are nearby someone else doing so! Things, such as a hammer, chisels, scratching tools, pry bars, buckets, small ground shovels and rakes, paper to wrap specimens, sunscreen, bug spray, food and drinks, sturdy shoes, and gloves. Much of the material is covered with a chalky white chert, and a pail of water is sometimes handy for dipping and identifying the better material. A small cart or hand truck may be useful for hauling larger pieces of take home material.

DRESS APPROPRIATELY FOR THE WEATHER OF THE DAY. This will be in February, so the temp could range from 70's to the teens. Also, be prepared for rain if forecasted.

SPECIAL CONDITIONS: THIS IS AN ACTIVE QUARRY. NO ONE WILL BE ALLOWED ANYWHERE NEAR ANY OF THE MACHINERY ON THE PREMISES . ANY VIOLATION OF THIS RULE MAY JEOPARDIZE FUTURE FIELD TRIPS TO THIS SITE.

REGISTRATION: Register upon arrival at the MRGS tent for insurance purposes and for additional information.

CHILDREN: This is a good site for children.

PETS: Any pets MUST be on a leash at all times.

FACILITIES: In town about 2 miles away. Bottled water and limited snacks will be available at the MRGS tent for a reasonable fee.

DIRECTIONS AND WHERE TO MEET:

Directions: From Summerville, Ga. follow US 27 South for 2.20 miles. The site will be on the right between the county owned waste dumpsters and the US Forestry office. Coming north from the Rome area, the site will be on the left side of US 27, and approximately 3.0 miles beyond the intersection of Gore Subligna Rd.

From downtown Summerville (Commerce St.) take U.S. 27S. There will be a left curve, then a right curve. Just past the right curve is the mine (7525 Hwy 27). Look for the Mobile Rock and Gem Society signs.

7525 Highway 27

Summerville, Georgia 30747

CONTACT: Larry Landry, Field Trip Chairman, (251) 591-5682

CHECK OUT <http://www.mobilerockandgem.com/field-trips/> FOR PHOTOS OF OUR PREVIOUS DIG AT THIS LOCATION.



Reviewing: Biotite

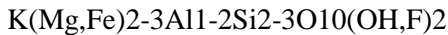
From Geology.com/minerals

Biotite is group of common rock-forming minerals found in igneous and metamorphic rocks.

What is Biotite?

Biotite is a name used for a large group of black mica minerals that are commonly found in igneous and metamorphic rocks. These include annite, phlogopite, siderophyllite, fluorophlogopite, fluorannite, eastonite, and many others. These micas vary in chemical composition but are all sheet silicate minerals with very similar physical properties.

A generalized chemical composition for the biotite group is:



The name "biotite" is used in the field and in entry-level geology courses because these minerals generally cannot be distinguished without optical, chemical, or x-ray analysis.

Biotite is a primary mineral found in a wide range of crystalline igneous rocks such as granite, diorite, gabbro, peridotite, and pegmatite. It also forms under metamorphic conditions when argillaceous rocks are exposed to heat and pressure to form schist and gneiss. Although biotite is not very resistant to weathering and transforms into clay minerals, it is sometimes found in sediments and sandstones.

Physical Properties of Biotite

Chemical Classification	Dark mica
Color	Black, dark green, dark brown
Streak	White to gray, flakes often produced
Luster	Vitreous
Diaphaneity	Thin sheets are transparent to translucent, books are opaque.
Cleavage	Basal, perfect
Mohs Hardness	2.5 to 3
Specific Gravity	2.7 to 3.4
Diagnostic Properties	Dark color, perfect cleavage
Chemical Composition	$K(Mg,Fe)_2-3Al_1-2Si_2-3O_{10}(OH,F)_2$
Crystal System	Monoclinic
Uses	Very little industrial use

Properties of Biotite

Biotite is very easy to identify, and with a little experience a person will be able to recognize it on sight. It is a black mica with perfect cleavage and a vitreous luster on the cleavage faces. When biotite is separated into thin sheets, the sheets are flexible but will break upon severe bending. When held up to the light, the sheets are transparent to translucent with a brown, gray, or greenish color. Experienced observers can sometimes recognize phlogopite by its brown color.

Biotite Minerals

As noted above, biotite is a name used for a number of black mica minerals that have different chemical compositions but very similar physical properties. These minerals generally cannot be distinguished from one another without laboratory analysis. A small list of the biotite minerals is given below with their chemical compositions.

Mineral	Chemical Composition
Annite	$KFe_3(AlSi_3)O_{10}(OH)_2$
Phlogopite	$KMg_3(AlSi_3)O_{10}(OH)_2$
Siderophyllite	$KFe_2Al(Al_2Si_2)O_{10}(F,OH)_2$
Eastonite	$KMg_2Al(Al_2Si_3)O_{10}(OH)_2$
Fluorannite	$KFe_3(AlSi_3)O_{10}F_2$
Fluorophlogopite	$KMg_3(AlSi_3)O_{10}F_2$

Uses of Biotite

Biotite has a small number of commercial uses. Ground mica is used as a filler and extender in paints, as an additive to drilling muds, as an inert filler and mold-release agent in rubber products, and as a non-stick surface coating on asphalt shingles and rolled roofing. It is also used in the potassium-argon and argon-argon methods of dating igneous rocks.

The Other "Fool's Gold"

Biotite has been known to cause excitement in inexperienced gold panners. A few tiny flakes of biotite swishing in a gold pan can produce bright bronze-colored reflections in the pan when struck by sunlight. These reflections can fool the inexperienced panner into thinking that he has found gold. If the panner regains his composure, removes one of these flakes from the pan and pokes it with a pin, it will break. First-time panners quickly learn to do some testing before shouting "gold" - which probably isn't a good idea even when gold is found because it can attract unwanted visitors to your panning spot.

Small flakes of biotite have also been known to cause excitement when they are observed in rocks. Their bronze-colored reflections can fool the inexperienced observer into thinking that tiny flakes of gold are present. Again, the pin test or a hand lens will usually yield a quick answer.

Author: Hobart M. King, Ph.D.



Upcoming Shows

There are no upcoming shows in this general area for the next few months. There are several shows in various parts of Florida, Georgia, and Mississippi. For anyone wishing to travel to those, see the SFMS web site: <http://www.amfed.org/sfms/>

The next show relatively close will be in Raleigh and will be done in coordination with the AMFED annual meeting in April, as discussed elsewhere in this newsletter. Details will be provided as the dates get closer.



Meeting Minutes

There was no business meeting for December so there were no minutes.

Instead the club met for the annual holiday/show-celebration dinner. There were 28 members and family members in attendance.

Respectfully Submitted,
Wayne Ketner, Secretary



Nature's Treasures

Nature's Treasures is the monthly newsletter of the Forsyth Gem and Mineral Club.

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