

FORSYTH GEM AND MINERAL CLUB, INC.

Nature's Treasures

January 19, 2017

*** *Public Version* ***



MEETING: The next meeting of the Forsyth Gem and Mineral Club will be held at **7:30 PM, Thursday, January 19, 2017**, the third Thursday of the Month, at **Vulcan Materials Company's Training Center, 4401 N. Patterson Ave., Winston-Salem, NC**



PROGRAM: The program for the January meeting will be FMGC's own David Goode with a presentation on "Feldspar and Igneous Rocks".



Refreshments: Refreshments for the meeting will be provided by the **Sandra and Stephanie Myers and Jim Jones**. The Club will provide cups and napkins and ice for the refreshments. Volunteers to provide refreshments need only provide sufficient drinks and snacks, such as cookies, cakes, crackers, etc.

2017 Refreshment List

January Sandra & Stephanie Myers, Jim Jones	July Sandy & Yvonne Beard, <i>one needed</i>
February Brent Beck, Charles Whicker	August Picnic
March Bakers, Hughes	September Show
April McGilvarys, Brouhles	October <i>Two Needed</i>
May Goodes, Pete Smith	November Marions, Reeds
June Gaskills, Schlottmans	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.



Dates To Remember:

August – Club Picnic

September 8-10, 2017 – Annual Gem, Mineral, Jewelry, and Fossil Show

December – Annual Show Celebration and Holiday Dinner



DON'T FORGET YOUR NAME TAGS



Inclement Weather Procedure

Winter is here and with it 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.



Refreshments for 2017

There are still a few slots available for the refreshments for the new year. Anyone who is willing to contribute should contact Vickie Gaskill.

FORSYTH GEM AND MINERAL CLUB, INC.

Membership Application

For the Year 2017

Date _____

Member Name: _____

Additional Family Names: _____

Address: _____
Street City State Zip

Telephone Home (____) _____
Work (____) _____

E-Mail Address _____

If you have an e-mail address, would you be interested in receiving the bulletin via e-mail rather than hard copy? Yes _____ No _____

Annual Dues of \$15.00 are payable January 1 for the current year, per family (mailing address). Dues are reduced to \$8.00 per family, if joining after July 1 of the year. *An additional fee of \$5 per year is charged for those who wish to receive a printed newsletter by regular mail. (\$2.50 for those joining after July 1.)*

I am interested in the following activities (check all that apply):

___ Mineral Collecting ___ Fossils ___ Gold or Silver Smithing
___ Lapidary ___ Faceting ___ Carving
___ Jewelry Making ___ Wire Wrapping ___ Other _____

I would like to help with the Annual Gem and Mineral Show? Yes No

Circle yes or no

Areas needing volunteers work in are:

Setup & display case assembly	Display case takedown and loading
Club area setup & table covering	Dealer dinner
Admission & information	Gold panning (instructor)
Grab bag, geode, and gold panning sales	Geode cutting (saw operator)

Please **complete** and **return to the Club Treasurer, Alex McGilvary, at the address below.**

Alex McGilvary
1524 Trinity Garden Circle
Clemmons, NC 27012-8356



Annual Dues are Due

Dues for the coming year are due by January 1 of each year. Members who have not renewed by the end of February will be dropped from the rolls. A copy of the membership form for next year is included in this newsletter. Dues can be paid at the club meetings or sent in by mail at any time.

Reminder: Yes, it is strongly encouraged that each member fill out and turn in the application form each year. This allows for tracking of member changes, as well as identifying members who are willing to assist at the show.



Field Trip Meeting

New Field Trip coordinator Stephanie Myers will hold a meeting for the 2017 field trips prior to the January meeting. The field trip meeting will be held at our usual meeting site at Vulcan Materials. The meeting will start at 6 PM.

Members who are interested in participating in the field trips are encouraged to attend if at all possible. Members who may have ideas about possible field trip sites but cannot make the meeting are encouraged to pass on information to Stephanie or the officers.

Reminder that the club is responsible for the upcoming June 2017 Dixie Mineral Council trip. Sponsoring the trip is one of the main requirements for the club to remain in the DMC and for members to be able to attend DMC trips.



Upcoming Shows

March 10-12, 2017 - Augusta, GA - 29th Annual Aiken-Augusta Gem, Mineral & Fossil Show -

Always Held: 2nd Weekend in March - Vendors that offer a wide variety of jewelry, rare fossils and mineral specimens, gems of all colors shapes & sizes, lapidary and much more. - Member Show Cases, Lapidary Demonstrations, Educational Resources, Grab Bags, Treasure Dig, Geode Sales & Cutting, Mineral Panning, Hourly - Door Prizes and a Grand Prize that will be awarded at the end of the show on Sunday. - Show Contact: Richard McNutt 706-650-8280 -Sponsoring Clubs: Aiken Gem, Mineral and Fossil Society www.aikengmfs.org and the Augusta Gem and Mineral Society www.agam.club - Fri & Sat 10AM-6PM / Sun 11AM-5PM Julian Smith Casino / 2200 Broad St. / Augusta GA - Admission: \$3 per adult or \$5 Weekend pass-Children under 12 Free with an Adult

MARCH 24-26, 2017 - Catawba Valley Gem and Mineral Club Show -HICKORY, NORTH CAROLINA -Annual show; Hickory Metro Convention Center, 1960 13th Ave Dr SE, Hickory NC 28602 Fri. 9-6; Sat. 9-6; Sun. 10-5 School, scout, youth, retirement home groups and law enforcement officers/military admitted free; \$5.00 admission; Children under 12 free; Hourly and grand door prizes, 20+ vendors with gems, minerals, fossils, jewelry; Theme- "Meteorites + Dinosaurs=Extinction?"; Programs for school groups, children, and adults; Displays of meteorites, dinosaur bones, Guinness Record sapphire, 112 lb. ruby corundum, educational displays, mini-mine, faceting, cocooning, specimen identification by geologists Contact: Dean Russell, show chm, (828) 303-1448 or cvgmcsecretary@aol.com Complete show info on web page: www.cvgmc.com/ .

Note: There are also several shows in Florida and other southern states during the January to March time period. Members who will be traveling to these areas during this time and are interested in possibly attending such shows should check the SFMS calendar at: <http://www.amfed.org/sfms/club-shows-123.html>



Meeting Minutes

There was no program meeting in December. Instead the club hosted the annual Show Celebration / Holiday dinner. There were 28 members and guests present for the dinner.



Reviewing: Malachite

From geology.com/minerals

Used as an ore of copper, a pigment, a gemstone, and a sculptural material for thousands of years.

What is Malachite?

Malachite is a green copper carbonate hydroxide mineral with a chemical composition of $\text{Cu}_2(\text{CO}_3)(\text{OH})_2$. It was one of the first ores used to produce copper metal. It is of minor importance today as an ore of copper because it is usually found in small quantities and can be sold for higher prices for other types of use.

Malachite has been used as a gemstone and sculptural material for thousands of years and is still popular today. Today it is most often cut into cabochons or beads for jewelry use.

Malachite has a green color that does not fade over time or when exposed to light. Those properties along with its ability to be easily ground to a powder made malachite a preferred pigment and coloring agent for thousands of years.

Where Does Malachite Form?

Malachite is a mineral that forms at shallow depths within the Earth, in the oxidizing zone above copper deposits. It precipitates from descending solutions in fractures, caverns, cavities, 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 they 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.

Physical Properties of Malachite

Chemical Classification	Carbonate
Color	Green
Streak	Green
Luster	Rare crystals are vitreous to adamantine. Fibrous specimens are silky. Massive specimens are dull to earthy. Polishes to a very bright luster.
Diaphaneity	Most specimens are opaque. Crystals are translucent.
Cleavage	Perfect in one direction. Fair in a second direction.
Mohs Hardness	3.5 to 4.0
Specific Gravity	3.6 to 4.0
Diagnostic Properties	Green color, soft, effervesces with dilute HCl to produce a green liquid.
Chemical Composition	$\text{Cu}_2(\text{CO}_3)(\text{OH})_2$
Crystal System	Monoclinic
Uses	A minor ore of copper. Gemstones, small sculptures, pigment.

Malachite's most striking physical property is its green color. All specimens of the mineral are green and range from a pastel green, to a bright green, to an extremely dark green that is almost black. It is typically found as stalactites and botryoidal coatings on the surfaces of underground cavities similar to the deposits of calcite found in caves. When these materials are cut into slabs and pieces the sawn surfaces often exhibit banding and eyes that are similar to agate.

Malachite is rarely found as a crystal, but when found, the crystals are usually acicular to tabular in shape. The crystals are bright green in color, translucent, with a vitreous to adamantine luster. Non-crystalline specimens are opaque, usually with a dull to earthy luster.

Malachite is a copper mineral, and that gives malachite a high specific gravity that ranges from 3.6 to 4.0. This property is so striking for a green mineral that malachite is easy to identify. Malachite is one of a small number of green minerals that produces effervescence in contact with cold, dilute hydrochloric acid. It is also a soft mineral with a Mohs hardness of 3.5 to 4.0.

Malachite as a Pigment

Malachite has been used as a pigment for thousands of years. It was one of the oldest known green pigments to be used in paintings. The mineral malachite is an excellent material for producing a powdered pigment because it can easily be ground into a fine powder, it mixes easily with vehicles, and it retains its color well when exposed to light over time.

Alternative names for malachite pigment include copper green, Bremen green, Olympian green, green verditer, green bice, Hungarian green, mountain green, and iris green. Malachite pigment is found in the paintings of Egyptian tombs and in paintings produced throughout Europe during the 15th and 16th centuries. Its use declined significantly in the 17th century as alternative green colors were developed. Today, malachite pigment is sold by a few manufacturers who specialize in providing materials to painters who practice historically accurate techniques.

Malachite as a Gem Material

The vivid green color, bright polished luster, banding and eyes of malachite make it very popular as a gemstone. It is cut into cabochons, used to produce beads, sliced into inlay material, sculpted into ornamental objects, and used to manufacture tumbled stones. Small boxes made from slices of malachite are attractive and popular.

Some of the most spectacular gem-quality malachite involves intergrowths, inclusions, and admixtures of malachite with other copper minerals such as azurite (azurmalachite), chrysocolla, turquoise, and pseudomalachite (eilat stone).

Malachite's use as gem and ornamental stone is limited by its properties. It has perfect cleavage and a Mohs hardness of 3.5 to 4. These limit its use to items that will not suffer abrasion and impact. It is also sensitive to heat and reacts with weak acids. These properties further limit its use and require care during cleaning, repair, and maintenance. Malachite is sometimes treated with wax to fill small voids and improve its luster.

Synthetic malachite has been produced and used to make jewelry and small sculptures. Poorly done synthetics are often recognized by their unnatural color. The better synthetics can usually be recognized because their banding and eyes do not have a natural geometry. An experienced person can identify most of the synthetic and imitation materials on sight.



Dixie Mineral Council Field Trip

An Official Field Trip of the Columbia Gem and Mineral Society (Columbia, SC) - 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.

Diamond Hill Mine

100 Diamond Hill Road, Antreville, SC

Fee Site: \$15 per person regardless of age

COLLECTING: You can find smoky quartz, amethyst, skeletal quartz, milky quartz, clear quartz, garnets, aquamarine, drusy quartz, mica, & epidote .

FEE: \$15 per person regardless of age

BRING: Clothing appropriate to the weather (note: if there have been recent rains, the area will be very muddy, so boots will be very helpful), a potato rake, a bucket, safety glasses, a rock hammer and chisel, gloves, small bags for delicate specimens like mica, and paper for wrapping your finds.

FACILITIES: There are 2 portapotties on site. No food or drink is sold on site, so bring drinks and snacks – the Aiken Club will have limited supplies of water and snacks available. You will be able to leave the site for lunch and return if you like. The nearest towns with restaurants are Iva, SC (10 miles away) and Abbeville, SC (16 miles away).

DIRECTIONS AND WHERE TO MEET:

Diamond Hill Mine
 100 Diamond Mine Road
 Antreville, SC

FROM I-20 IN SC

Take exit onto SC 19 North.
 Follow SC North to junction with US 25. Take US 25 thru Edgefield
 Past Edgefield, turn left onto SC 283
 Follow SC 283 until it ends on SC 28
 Turn right on to SC 28. Stay on it for 41 miles until you get to Emanuel Baptist Church (on left)
 Turn left onto Hiwy 284.
 Travel 2.3 miles to “old house” on the right.
 Turn right here on to Suber Road.
 Travel 0.7 miles to Diamond Mine Road.
 Turn right on to Diamond Mine Road; you will see the mine entrance on your right

DIRECTIONS FROM I-85

Get off I-85 on Us-76(Clemson Blvd) toward Anderson
 Turn right off Us- 76 onto SC 28
 Follow SC 28 around Anderson
 Stay on it until you get to Emanuel Baptist Church (on right)
 Turn right onto Hwy 284.
 Travel 2.3 miles to “old house” on the right.
 Turn right here on to Suber Road.
 Travel 0.7 miles to Diamond Mine Road.
 Turn right on to Diamond Mine Road; you will see the mine entrance on your right.

DIRECTIONS FROM I-20 (GEORGIA)

Exit off I-20 onto Washington Road. Turn left onto Washington Road.
 Follow Washington Road to Furys Ferry Road(approx. 3.5 miles) Bear right onto Furys Ferry Road.
 This becomes Hwy 28. Follow this road 32 miles to Plum Branch, SC
 Stay on it for another 41 miles until you get to Emanuel Baptist Church (on left)
 Turn left onto Hwy 284.
 Travel 2.3 miles to “old house” on the right.
 Turn right here on to Suber Road.
 Travel 0.7 miles to Diamond Mine Road.
 Turn right on to Diamond Mine Road; you will see the mine entrance on your right.



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

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