

FORSYTH GEM AND MINERAL CLUB, INC.

Nature's Treasures

July 16, 2020

**** Public Version ****



MEETING: Due to the ongoing Covid-19 (Coronavirus) situation and lockdown, FGMC will be holding an online/Zoom meeting this month. The meeting will be conducted on Thursday, August 20, 2020, starting at 7:30 PM



PROGRAM: Our speaker will be noted geologist Ed Speer of Marion, N.C.. His presentation is entitled "North Carolina Diamonds". Ed has spoken at club meetings before and I am sure this will be a very interesting presentation. The meeting invitation will be posted on the club's Facebook page also.

Join Zoom Meeting

<https://us02web.zoom.us/j/81647465346?pwd=ZXk0NG4xM3dpNWJuNnczQWppYkI2UT09>

Meeting ID: 816 4746 5346

Passcode: 910230



2020 Holiday/Show Celebration Dinner Cancelled

As with the annual show, picnic, and auction, the December holiday/show celebration dinner has also been cancelled.

This dinner serves primarily as a reward for those who volunteer at the show and is funded by proceeds from the show. Without the show there are no volunteers to reward and there are no funds for the dinner itself. So, the dinner for this year is cancelled.



Changing of the Guard

This newsletter will likely be the last produced by your current newsletter editor, Wayne Ketner (me). A combination of issues makes it impractical for me to continue to do the newsletter. The club will need to find a new permanent editor in the very near future. If you are interested contact the club officers.

Looking back, it is hard to believe that it is almost exactly eight years that I have been doing this. There is a lot of water under the bridge in that time. The club has done many things over the years to make membership in the club interesting.

The current "Covid Crisis" has proven to be a major challenge for the club. But as is said, "this too shall pass", and hopefully the club will be able to resume normal operations in the not too distant future.

For whoever takes up the mantle, I hope that all of the members will give them their full support. And especially, contribute ideas and articles. Doing such helps the editor immensely.



FGMC Field Trip

Ken Reed and Charles Whicker has arranged a potential field trip for FGMC members.

Final Decision Will Be Made During the Zoom Meeting Thursday August 20, 2020.

Little Pine Garnet Mine Madison County, NC (near Marshall, NC)

Many of us have visited Little Pine before and never came away empty handed. Actually, in past trips decisions had to be made on which pieces were worth keeping. Matrix specimens of garnet crystals in chlorite schist are normally abundant as well as loose garnets up to 3" with 1" to 2" being common. The matrix specimens clean up very nicely and have a good contrast of color between the red/brown garnets and the green/gray matrix. Some elongated crystals are found here and occasionally a single staurolite will occur.

THE OLD "cave type" MINE ADIT IS NOW OFF LIMITS TO COLLECTING !!!

History: Little Pine was worked commercially around 1904-05 for Garnets to be crushed and used in making sandpaper (garnet paper).

The trip will take about 2 ½ to 3 hours from Winston-Salem. The Mine is operated by Sandy Bottom Trail Rides 1459 Caney Fork Road Marshall, NC 28753 – Phone 1-800-959-3513. A map is included to get you to the Trail Rides office. (Once you leave highway 25-70 there will also be signs directing you to the Sandy Bottom Trail Rides office), where you will pay your fee and turn in the liability release.

The fee is \$ 30.00 a day – per person (9 am to 5 pm), with a collecting limit of 1 bucket per person.

Due to Covid19, groups are currently limited to 10 people, and social distancing should be observed. (I would have a mask available).

Directions and parking information will be available at the office, but I am including what I have below.

DO NOT GO TO THE MINE SITE WITHOUT FIRST VISITING THE OFFICE – THEY PROVIDE A "TICKET" THAT YOU MUST KEEP WITH YOU AND IS SUBJECT TO BEING CHECKED!!

Coming out from the Sandy Bottom Trail Rides office – go left at the intersection of Caney Fork and Little Pine Roads. About ½ mile turn left onto Roberts Branch Road (SR-1127). Follow Roberts Branch Road 4/10ths mile & turn left onto a gravel drive. Follow this drive thru the creek, (yes, no bridge and only shallow water normally) - park in the wide area on the right. **DO NOT BLOCK THIS DRIVE!!** – it is a driveway to a home or homes farther on. PLEASE VERIFY THIS INFO AT THE OFFICE – I have not personally visited this location in a few years, drives get paved, mailboxes moved, road signs torn down, etc.

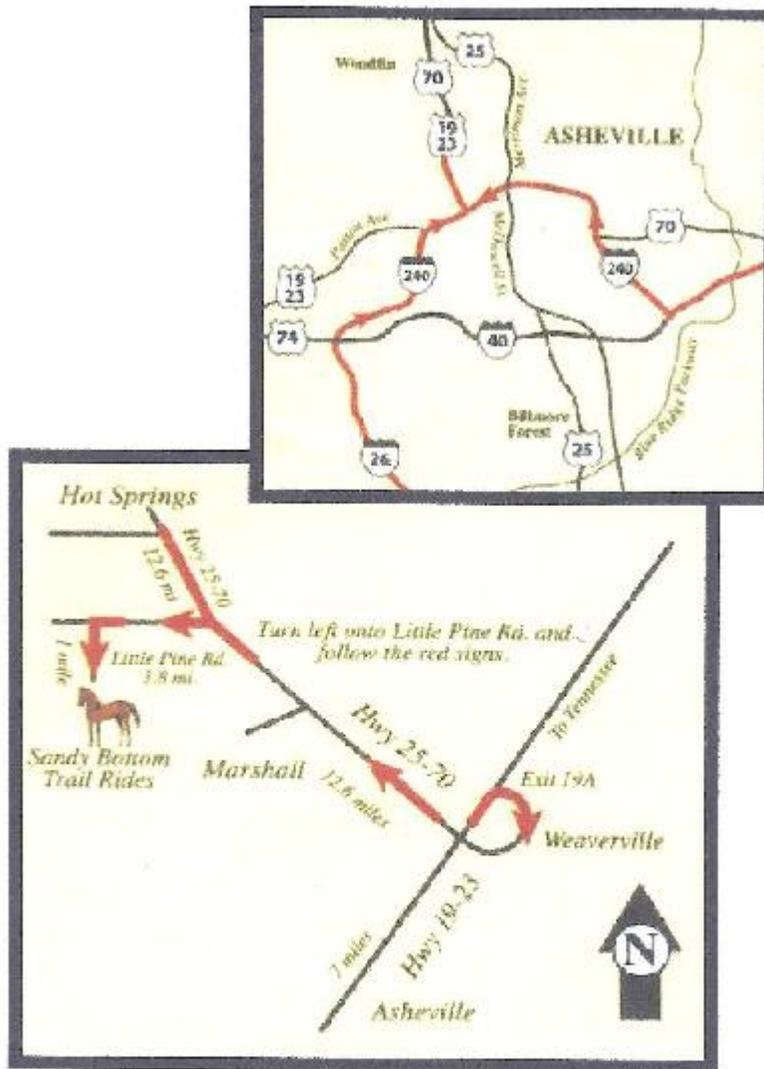
Each individual will be required to sign the liability waiver (copy also included). Please print as many as you need for EACH individual in your group. Minor children will need a parent or guardian to also sign their form.

Tools – You will be digging in tailings/spoils piles or dumps. A bucket to transport your finds (limit of 1 bucket per person). A small pick or mattock, small shovel, rock hammer, screw driver, small prybar will be handy. (Scratching and splitting tools). Not all are needed, but something to turn the piles, and help in selecting pieces to collect. The Garnets are in a fine-grained mica/chlorite schist, which sometimes needs splitting to reveal the crystals.

Bring snacks, drinks/water (no store close by), and bug repellent if nature finds you tasty. There may be port-o-lets at the actual mine area, and there are facilities at the mine office. Otherwise, there are many trees – and you may want to include some "necessary paper-work".

As with all sites, make sure to pick up your trash, do not block drives or roadways when parking, avoid digging in gravel drives, damaging fences/gates, or straying onto adjacent property. Being a responsible, cooperative group will help assure us the ability to return.

As stated above – a “Go/No Go” decision will be made during the Club’s Zoom meeting 8-20-2020, based on interest. Be sure to attend this meeting!



From Asheville, NC: Take Hwy 19-23 North, approximately 7 miles to Hwy 25-70. Take Hwy 25-70 12.6 miles to Little Pine Rd, which is on the left. Go 3.8 miles on Little Pine Road to the second bridge and take a left on Caney Fork Road. Continue one mile to the end of the road and you will have arrived at Sandy Bottom Trail Rides!



Reviewing: Augite

From Geology.com/minerals

A common rock-forming mineral of dark-colored igneous rocks.

Article by: Hobart M. King, Ph.D., RPG

What is Augite?

Augite is a rock-forming mineral that commonly occurs in mafic and intermediate igneous rocks such as basalt, gabbro, andesite, and diorite. It is found in these rocks throughout the world, wherever they occur. Augite is also found in ultramafic rocks and in some metamorphic rocks that form under high temperatures.

Augite has a chemical composition of $(Ca,Na)(Mg,Fe,Al)(Si,Al)_2O_6$ with many paths of solid solution. Commonly associated minerals include orthoclase, plagioclase, olivine, and hornblende.



Augite is the most common pyroxene mineral and a member of the clinopyroxene group. Some people use the names "augite" and "pyroxene" interchangeably, but this usage is strongly discouraged. There are a large number of pyroxene minerals, many of which are distinctly different and easy to identify. Augite, diopside, jadeite, spodumene, and hypersthene are just a few of the distinctly different pyroxene minerals.

Physical Properties of Augite

Chemical Classification	A single chain inosilicate
Color	Dark green, black, brown
Streak	White to gray to very pale green. Augite is often brittle, breaking into splintery fragments on the streak plate. These can be observed with a hand lens. Rubbing the debris with a finger produces a gritty feel with a fine white powder beneath.
Luster	Vitreous on cleavage and crystal faces. Dull on other surfaces.
Diaphaneity	Usually translucent to opaque. Rarely transparent.
Cleavage	Prismatic in two directions that intersect at slightly less than 90 degrees.
Mohs Hardness	5.5 to 6
Specific Gravity	3.2 to 3.6
Diagnostic Properties	Two cleavage directions intersecting at slightly less than 90 degrees. Green to black color. Specific gravity.
Chemical Composition	$(Ca,Na)(Mg,Fe,Al)(Si,Al)_2O_6$
Crystal System	Monoclinic
Uses	No significant commercial use.

Augite is usually green, black, or brown in color with a translucent to opaque diaphaneity. It usually exhibits two distinct cleavage directions that intersect at slightly less than 90 degrees. A hand lens is often needed to properly observe the cleavage, especially in fine-grained rocks.

Light reflecting from cleavage surfaces and crystal faces of augite produces a vitreous luster, while light striking other surfaces produces a dull luster. Augite has a Mohs hardness of 5.5 to 6. Its specific gravity of 3.2 to 3.6 is higher than most other minerals in the rocks in which it occurs.



Uses of Augite

Augite does not have any physical, optical, or chemical properties that make it especially useful. It is therefore one of the few minerals that has no commercial use. The calcium content of augite has been found to be of limited use in studies of the temperature history of igneous rocks.

Extraterrestrial Augite

Augite is a mineral that has been found beyond Earth. It is a common mineral of lunar basalts. It has also been identified in many stone meteorites. Some of these meteorites are thought to be pieces of Mars or the Moon that were launched into space by large impact events.



Meeting Minutes

July 15 - Zoom meeting with Shaun Shelton (club member and mineral dealer - Backwoods Prospector.) Powerpoint presentation about Hiddenite minerals and mining. Approx. 15 members participated..Respectfully Submitted,

Lisa Reed, Secretary



Nature's Treasures

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

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