



**May Meeting
At the Museum of Arts and
Sciences on Monday,
May 07, 2018 at 7:30pm.**

**Speaker for the May Meeting
TBD. Bonnie Sams was to be
the speaker but asked to be
moved to June meeting instead.**

President's Message

We had a great meeting in April- even if Jay wasn't there. Tina did a great job talking about rocks in Georgia and why they are where they are. I want to thank her for her work and efforts. When I went over my brief introduction into the *Miller indicies* used in crystallography and was still seeing glazed eyes in the group so I think I need to rethink my approach to explaining it.

As usual, with the weather warming up again, we need to be aware that the snakes are going to start moving again and we need to watch out for them.

We have our annual picnic coming up May 5, at the Ocmulgee Indian Mounds, out in front of the museum under the oak trees. We ask that you bring a covered dish and your beverage and something for the auction afterwards. The club will provide the meat. The picnic usually starts getting together around 11. I hope to see everyone there.

If anybody has any questions, comments or suggestions, please feel free to contact me or any other club official;

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678.621.3457

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**The Annual Picnic
May 5th**

The club annual picnic will be on **May 05, 2018**. It will be starting at **11:00 am at the Ocmulgee Indian Mounds**. It will be held at the picnic tables at the far end of the museum parking lot. There will be a silent auction during the picnic. We had a lot of fun with the silent auction in the past years. You can get some really nice specimens for a good price. The club supplies the barbecue meat and paper products. Everyone please bring a cover dish or two and your drinks. Also bring 1 or 2 items to put in the silent auction (hobby related items are best).



April Minutes

The meeting was called to order at 7:42 PM by Jim Souter with 17 members/guests present.

Old Business

The treasurers' report was read and approved. We are still requesting that members collect extra material on digs for grab bags. The Science Olympiad was successful with a larger group participating than last year. A special thanks goes out to Jay, Tina, and Jim for helping out for the event.

New Business

This month's mineral was Kyanite and several members brought in specimens to share. The annual picnic is coming up at the Ocmulgee Indian Mounds on May 5th starting at 11am. Members are reminded to bring a covered dish and their choice of beverage. Cobb County is sponsoring a rock swap at their headquarters located at 516 W Atlantic Street in Marietta on Saturday April 21. Also Georgia Mineral Society is hosting their annual mother's day weekend show at the Cobb county civic center in Marietta on May 11-13. There is GLW rock show in Franklin North Carolina on May 11-13.

Tina Marie Perkins was our speaker for this month and she talked about Fairy Crosses and other Oddities. She provided a slide presentation that was an introduction to the

gem, fossil and mineral deposits available throughout the state of Georgia. These include but are not limited to: Amethyst, Calcite, Garnet, Corundum, Iridescent Hematite, Barite, Jarosite, Phosphosiderite, Variscite, Quartzite, Rutile, ilmenite, Pyrite, Lazulite, Staurolite, tourmaline, Pyrophyllite, Goethite, Limonite, Sulphur, and Gold. There is also a wide variety of both plant and primarily marine animal fossils available including some of the oldest in the US. The talk mentioned some of the counties where they have been found in the past. The talk was quite informative and a question and answer session was provided at the end of her talk. The meeting was adjourned at 8:19 PM.

By: Richard Arnold



Epidote, Calumet Mine, Chaffee County, Colorado

Mineral of the Month

Epidote

$Ca_2Al_2(Fe^{3+};Al)(SiO_4)(Si_2O_7)O(OH)$
Mohs hardness: 6-7



Specific gravity: 3.3-3.5

Monoclinic

Streak- vitreous to resinous

Epidote is a name that is used in two different ways in mineralogy: 1) the "Epidote Group" is the name of a group of silicate minerals that share common structural and compositional characteristics; and, 2) "Epidote" is the name of the most common mineral in the Epidote Group.

Epidote- the mineral

Epidote is a silicate mineral that is commonly found in regionally metamorphosed rocks of low-to-moderate grade. In these rocks, epidote is often associated with amphiboles, feldspars, quartz, and chlorite. It occurs as replacements of mineral grains that have been altered by metamorphism.

Frequently found in veins that cut granite. It occurs in monoclinic crystals in pegmatites. Also, it is found in massive form and as monoclinic crystals in marbles and schists.

Epidote usually ranges between yellowish green to pistachio green in color. Less often it is brownish green to black. In massive form it is usually translucent with a vitreous luster. Well-formed crystals from marble and pegmatite are often transparent.

Epidote has a chemical composition of $\text{Ca}_2(\text{Al}_2,\text{Fe})(\text{SiO}_4)(\text{Si}_2\text{O}_7)\text{O(OH)}$. It is an end member of a solid solution series with clinzoisite. In that series, the iron of epidote is gradually replaced by aluminum to the end member clinzoisite composition of $\text{Ca}_2\text{Al}_3(\text{SiO}_4)(\text{Si}_2\text{O}_7)\text{O(OH)}$. Clinzoisite is usually lighter in color than epidote because iron is what produces epidote's greenish to brownish color.

Epidote- The mineral group-

Members of the epidote mineral group have a crystal structure that consists of isolated and paired silica tetrahedrons. They share a generalized chemical composition of $\text{A}_2\text{M}_3(\text{Si}_2\text{O}_7)(\text{SiO}_4)\text{O(OH)}$. "A" is a pairing of

calcium, manganese, strontium, lead, or sometimes a rare earth element. "M" is usually aluminum pairing with iron, magnesium, manganese, or vanadium. Some of the member minerals of the epidote group are listed in the table with their chemical compositions.

Epidote in Rocks-

Epidote is a rock forming mineral. Many regionally-metamorphosed rocks contain a small amount of epidote. Two types of rocks contain significant amounts of epidote are *epidosite* and *unakite*. The epidosite is composed of small amounts of quartz. It forms when basalts in sheeted dikes and ophiolites are transformed by hydrothermal activity or metasomatism. (Metasomatism is the process by which the chemical composition of a rock is changed through the introduction or extraction of chemicals dissolved in fluids that migrate through the rock's pores.)

Unakite is a rock that forms from the metamorphism of granite. Less-resistant minerals in the granite are altered to epidote or replaced by epidote, with the orthoclase and quartz remaining. It is an interesting pink and green colored rock that was first discovered in the Unakas Mountains of North Carolina, from which its name was derived. Unakite is a favored stone to the lapidary arts in that it is often cut into cabochons and beads of all shapes and sizes.



Unakite, North Carolina



Epidote- Skardu District, Baltistan, Northern Areas, Pakistan



LET'S GO DIGGING!

DMC Program of the SFMS Field Trip Committee

**An Official Field Trip of the Lowcountry
Gem and Mineral Society (Charleston,
SC) (Host)**

**An Official Field Trip of the Georgia
Mineral Society, Inc.**

**Saturday, May 19, 2018
10AM 'til 3 PM EDT
119 Railroad Ave
Harleyville, SC 29448**

**No limit on Attendees
No Registration Required
No Fee**

TRIP: While fossil hunting at the LaFarge Quarry is no longer permitted, collecting is permitted in a lot next to Old Town Hall in Harleyville, SC. The material is fossil-bearing dump material brought in from the nearby LaFarge Quarry. The collecting site is approximately the size of a tennis court.

COLLECTING: The material from this quarry cuts 80 feet through the Harleyville Formation (Late Marine Eocene) and the Cross Formation (Middle Marine Eocene). You will find fossil shark teeth, bones, brachiopods, and other marine fossils.

BRING: Digging tools, shovels, screens, buckets, work gloves, and don't forget weather protection gear, water, and snacks.

REQUIREMENTS: No specific requirements are necessary for the site. Safety equipment like hard hat, safety glasses, steel-toed boots, gloves, etc. are not required.

Fee: No Fee

CHILDREN (Yes): Children are allowed. If children are present, adult supervision is required at all times.

PETS (Yes): Pets are allowed as the site is within city limits; leash is required at all times.

FACILITIES: As the site is within city limits, nearby facilities are available at or near the site.



DIRECTIONS AND WHERE TO MEET:

From I-26, take Exit 177 toward SC 453 to Harleyville.
Go 1.3 miles (past the LaFarge Quarry).
Turn left onto West Main Street (Hwy. 178) and go 0.3 mile.
Turn right onto Railroad Avenue.
Meet at 119 Railroad Avenue in adjacent to the old Harleyville Town Hall building.

No admission charge, indoor, climate controlled, rough and finished gemstone and jewelry, minerals, fossils and demonstrations.

Contact: Norman Holbert, 828-634-0350, normholbert@comcast.net

May 11, 12, and 13, 2018 Marietta, GA Gem and Mineral Show, Auction THE GEORGIA MINERAL SOCIETY

Fri: 10 AM to 6PM; Sat: 10AM-6PM; Sun: Noon-5PM
Cobb County Civic Center
548 South Marietta Parkway
Marietta, GA 30060

SATURDAY AUCTION at 1PM !
HOURLY ADULT AND JUNIOR DOOR PRIZES!
\$3.00 GRAB BAGS !
30+ Dealers
Club Hospitality table, Educational exhibits, Demonstrations

Show contact: Shelley Stubbs, Show Chair
Email address: mayshow@gamineral.org
GMS Website: <http://www.gamineral.org>



Check website
<http://www.amfed.org/sfms/>
For more shows coming up in the Southeast and other great information!

**May 11, 12, & 13, 2018
Franklin, NC
Gem & Mineral Society of Franklin, NC**

Fri. & Sat., May 11th & 12th, 10:00 AM - 5:00 PM
Sun., May 13th, 10:00 AM- 4:00PM
Carpenter Community Center, 1288 Georgia Rd. (US441), Franklin, NC



Tidbits

NO - MAR PLIERS

Pliers can often leave nicks and scratches on your work. If this is giving you a problem, first take a close look at the plier jaws. New tools can be a little rough. I typically relieve any sharp edges, sand away any tool marks, and give working areas a quick polish.

If that doesn't solve the problem, you probably need to cover the jaws. Plastic electrical tape provides a quick fix but can leave messy adhesive on the jaws, and dips don't seem to last very long.

A quick and easy solution is to slip a length of 1/8 dia. vinyl tubing over each jaw. It works well and leaves no sticky residue. The tubing can be found in a store that sells aquarium supplies. Note that this will increase the size of the plier jaws a bit, but I haven't found that to be a problem.



PATINA RECIPES

Sometimes it's fun to explore some new patinas. If this appeals to you, here are a couple web sites that have ideas particularly for copper and bronze.

The first is The Science Company at

<http://www.sciencecompany.com/Do-It-Yourself-Patina-Formulas-W12C672.aspx> with plenty of formulas for a variety of colors. And there are more formulas at Tim McCreight's Brynmorgen Press web site at <http://www.brynmorgen.com/resources.html>

Small quantities of chemicals for making your own patinas are available from The Science Company at <http://www.sciencecompany.com/Patina-Chemicals-Patina-Book-C672.aspx>

If you prefer to buy the patinas ready for use, one of the best sources I've come across is Sculpt Nouveau at <http://www.sculptnouveau.com/> Don't miss all the instructional pdf's on the site and be sure to take a look at the videos showing how to use the products at <http://www.youtube.com/sculptnouveau>

You Know You're A Rockhound If:

- Your garage is so full of rocks that the car won't fit in.
- You collect interesting specimens, including the brown unknown ones, just in case they might turn out to be something special.
- You've dumpster dived at a marble warehouse.
- You colour co-ordinate your clothes and shoes to match your gemstone pendants.
- The sign on the side of the road says "Falling Rock" and you pull over to wait.
- You like to examine the rocks in your driveway.
- You treasure ancient, fossilized animal dung.
- You spend hours searching the ground while everyone else around you gets bored.



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,
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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**



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