Mid-Georgia Gem Clips
Official Bulletin of the Mid-Georgia Gem and Mineral Society
www.midgagms.org **Vol. 18, Issue 5, June, 2018**

June Meeting At the Museum of Arts and Sciences on Monday, June 04, 2018 at 7:30pm.

Speaker for the June Meeting will be Bonnie Sams. Bonnie will talking on Contact Metamorphism of the Mancos Shale: Impacts on weather ability and solute release in the East River Valley, Gothic, CO, USA. This is a shortened version of the research she's presenting for her master's thesis.

Don't forget we have no meetings in July and August. Next meeting after June meeting will be Tuesday September 4th. I will e-mail out field trip information as it comes to me for July and August.

President's Message

I had several people tell me that my approach to mineralogy was a bit too complicated for them. So, I'm starting a different approach to see if this helps. This is about mineral classifications. I hope it isn't too complicated for you to understand. If it is, just let me know and I will try to answer any questions.

Mineral classifications:

Minerals are classified, mainly by their chemistry, into the following classes: Native elements, Sulfides, Oxides and Hydroxides, Halides, Carbonates, Sulfates, Phosphates, Silicates, and Organics.

Native Element Classification: The metals and their alloys and the nonmetals.

Aluminum, Antimony, Arsenic, Copper, Diamond, Gold, Graphite, Iron, Lead, Mercury, Nickel, Platinum, Silver, Thellurium, Tin, Titanium, Zinc.

Sulfides Class: Elements containing S^{2-} ions.

Selenides, Tellurides, Arsenides, Antimonides, Bismuthides, Sulfosalts. Most major ores of important metals such as copper, lead and silver are sulfides. Most sulfides are metallic, opaque, soft to average hardness and they have high densities, and an igneous origin. But there are a few vitreous and transparent members such as cinnabar, orpinment and realgar.

Subclass: **Sulfides:**

Cinnabar, Galena, Marcasite, Millerite, Orpiment, Pyrite, Realgar, Sphalerite, and Stibnite.

Subclass: **Sulfosalts:**

Proustite, Pyragarite, Tetrahedrite

Halides Class: Fluorides, Chlorides, Iodides. The halides are a group of minerals whose principle anions are halogens. Boleite, Carnallite, Halite, Sylvite, Williaumite.

Oxides Class: Oxides and hydroxides.

The oxide class of minerals is a very diverse class. It includes minerals that are quite hard, corundum, and some that are quite soft, cuprite. It has metallic minerals such as hematite and gemstones such as corundum, chrysoberyl and spinel.

Anatase, Bixbyite, Brookite, Chrysoberyl,

Corundum (Ruby, Sapphire), Cuprite, Hematite, pyroclore group (betafite, microlite, pyrochore), Rutile group (Cassiterite, Pyrolusite, Rutile), Senarmontite, Spinel group (Chromite, Franlinite, Gahnite, Magnetite, Spinel), Taaffeite, Vallentinite, Zincite

Subclass: **Hydroxides**

Brucite, Goethite, Manganite

Carbonate Class: Carbonates, borates, nitrates, rare Earth carbonates Typical carbonates are transparent, lightly colored, average to above average density, soft with good to perfect cleavage, and tend to originate in sedimentary and oxidizing environments with the exceptions of carbonate igneous intrusions.

Azurite, Aragonite group (Aragonite, Cerussite, Stontianite, Witherite), Calcite group (Calcite, Gaspeite, Magnesite, Rhodochrosite, Siderite, Smithsonite), Dolomite, Malachite, Stitchite, Weloganite.

Subclass: **Borates**

Borax, Colemanite, Howlite, Kernite, Ulexite

Subclass: **Rare Earth Carbonates**

Bastnasite, Burbankite, Parisite

Sulfates Class: Sulfates, Sulfites, Chromates, Molybdates, Selenates, Tellurates, Tellurites, Tungstates (or Wolframates).

The typical Sulfate class mineral is vitreous, average to above average density, average in hardness and are originally found in veins, oxidation zones, contact metamorphic zones and in evaporite deposits.

Anhydrite, Barite group (Anglesite, Barite, Celestite), Caledonite, Creedite, Glauberite, Goetite, Gypsum (and alabaster), Hanksite, Thaumasite.

Subclass: **Chromates**

Crocoite

Subclass: **Molybdates**

Powellite, Wulfenite

Subclass: **Tungstates**

Huberite, Scheelite, Wolframite

Phosphate Class: Phosphates, Arsenates, Vanadates, Antimonates

The typical phosphate is vitreous to dull, often strongly colored, above average density, average in hardness (4-7 mohs) and low in index of refraction unless ions such as lead are present. Amblygonite, Anapatite, Apatite group (Apatite, Mimetite, Pyromorphite, Vinadinite), Augelite,Beryllonite, Brazillianite, Esophorite, Herderite, Lazulite, Ludlamite Monazite, Montbrasite, Phosphophyllite, Purpurite, Triphylite, Turquoise, Vivianite, Xenotime

Subclass: **Arsenates**

Adamite, Erythrite, Legrandite, Mimetite, Olivinenite, Scorodite

Subclass: **Vanadites**

Carnotite, Vanadinite

Silicate Class: The largest class, Nesosilicates, Sorosilicates, Inosilicates, Clyclosilicates, Phyllosilicates, Tectosilicates

The silicates are the largest and most interesting and most complicated class of minerals so far. Approximately 30% of all minerals are silicates and some geologist estimate that as much as 90% of the Earth's crust is made up of silicates.

Subclass: **Nesosilicates** (single tetrahedrons)

Andalusite, Datolite, Euclase, Fayalite, Garnet group, Jadeite (Pyroxene Group), Kyanite, Olivine(Peridot), Phenakite, Sillimanite, Sphene, Staurolite, Topaz, Willemite, Ziron.

Subclass: **Sorosilicates** (double tetrahedrons)

Danburite, Epidote group (Allanite, Epidote, Clinozoisite, Tanzanite, Zoisite),

Hemimorphite, Idocrase (Vesuvianite)

Subclass: **Inosilicates** (single and double chains)

Amphible group (Actinolite, Endenite, Tremolite), Pyroxene Group (Aegirine, Augite, diopside, Enstatite, Hypersthene, Jadeite, Spudomene), Neptunite, Rhodonite, Serandite

Subclass: **Cyclosilicates** (rings)

Axinite, Benitoite, Beryl, Iolite (Cordierite, Dichroite), Diptase, Eudyalite, Milarite, Toumaline group,

Sugilite

Subclass: **Phyllosilicates** (tetrahedronal sheets)

Apophyllite, Canvasite, Chrysocolla,

Chlorite group (Chlorite, Clinochlor, Kaemmererite), Lepidolite,

Prehnite, Pyrophyllite, Serpentine.

Subclass: **Tektosilicates** (framworks)

Danburite, Feldspar group (Amazonite, Andesine, Anorthite, Bytownite, Labrodorite, Microline, Oligoclase, Plagioclase, Sanadine), Feldspathoid group (Cancrinite, Leucite), Petalite, Linarite, Quartz, Scapolite, Sodalite group (Hauyne, Lazurite, Sodalite), Zeolite group (Chabazite, Natrolite, Pollucite, Scolecite, Stillbite, Thomsonite, Yugawarlite).

Organic Class: Minerals composed of organic chemicals

The organics class covers minerals that have an organic chemical component in their formula. Organic class "minerals" do not adhere to the four rules defining a mineral as follows;

1- Minerals must have a repetitive crystalline structure,

2- Minerals must have a determinable and precise formula.

3- Minerals must be natural.

4- Minerals must be inorganic.

Amber, Jet, Mellite, Opal, Pearl, Whewellite

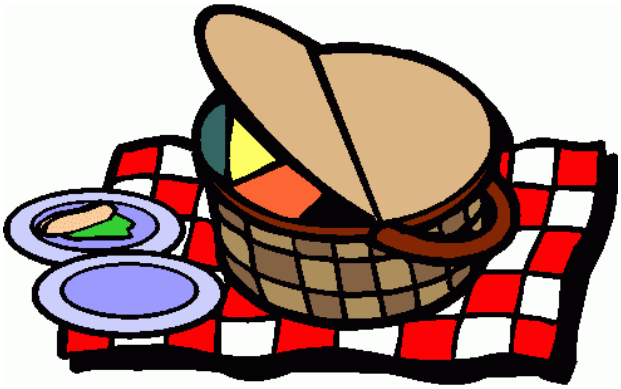
Mineraloids: "Minerals" that lack crystal structure.

The members of this unofficial class are often mistaken for minerals and are sometimes classified as minerals, but lack the necessary crystalline structure to be trully classified a mineral. Pearl, Jet and Amber are also the products of organic process that further remove them from full mineral status. These materials are found naturally, some are treated as gemstones and are included in most mineral references.

Amber (fossilized tree resin), Jet (very compact coal), Lechaterlierite (nearly pure silica glass), Limonite (a mixture of oxides), Mercury (a liquid at normal temperatures), Obsidian (volcanic silica glass), Opal (hydrated silica), Pearl (organically produced carbonate), Tektites and Moldavites (meteoric silica glass).

I hope everybody has a great summer and remember to be safe!!! We need each and every one of you.

Jim Souter- President
jgsouter@windstream.net
478-454-7273
Bill Mayer- Vice president
orebilly@gmail.com
678.621.3457
Susan Hargrove- Treasurer
susanbphilh@pstel.net
478.837.5327
Jay Batcha- Editor & Field trip chairman
rocky1s@cox.net
478.957.5002



The Annual Picnic has come and gone.

The club annual picnic was on **May 05, 2018 at the Ocmulgee Indian Mounds**. The day was a little warm but a beautiful cloudy day. There were 22 members attending the picnic. We had plenty of great food to feed everyone. The bidding was fast and fierce at our silent auction and in the end it brought in $283.00 dollars.

Mid-Georgia Gem Clips
Official Bulletin of the Mid-Georgia Gem and Mineral Society
www.midgagms.org **Vol. 18, Issue 5, June, 2018**

It's time to stuff some Grab bags.

We need to get to work! Come help stuff some grab bags at Jay's house on Saturday, July 14 starting at 11:00am. This is the club's main fund raiser for the year. We will be selling them at the Perry Fair in October. We have 450 bags to fill, not planning to get them all done at this stuffing. Hoping to fill at least half that. Please call Jay (478-957-5002) if you are planning to help and/or if you need to get directions to his house.

Jay

May Meeting Minutes

The meeting was called to order at 7:31 PM by Jim Souter with 14 members/guests present.

Old Business

The treasurers' report was read and approved. We signed up one new members. The picnic was successful in that we made $283.

New Business

This month's mineral was epidot and several members brought in nice specimens to share. There is an upcoming dig in Harleyville, SC on May 19 at 10-3PM. There is also an upcoming dig in Woodbury, Tenn on May 20 starting at 11am. The Tellus rock fest is coming up on June 9-10. The Perry fair is scheduled from October 4-14th. There is a grab bag stuffing party scheduled at Jay's house on July 14th starting at 11am.

Our own Jay Batcha was this month's speaker. He gave a talk on the city of Denver Colorado. He concentrated on the Gem and Mineral show which is the largest combined shows in the United States. The total of the 12 shows had more than 900 dealers at multiple locations most within walking distance. The main part of the show included over 8 miles of tables, 50,000 sf inside and 500 dealers. The Museum of Nature and Science and the Colorado School of Mines museums are worth a visit. Rocky Mountain National park in Estes Park and the Coors Brewery in Golden also make nice side trips while there. The shows this year are scheduled to run from the 7th-18th of September. The talk was quite informative and provided some insights into where to go and suggestions on what to do while in Denver. A question and answer session was provided at the end of his talk. The meeting was adjourned at 8:35 PM.

By: Richard Arnold

Mid-Georgia Gem Clips
Official Bulletin of the Mid-Georgia Gem and Mineral Society
www.midgagms.org **Vol. 18, Issue 5, June, 2018**

Tailings pile from Morefield Gem Mine, Amelia, Virginia

Mineral of the Month
Amazonite

Formula: $KalSi_3O_8$
Mohs Hardness: 6- 6.5
Specific Gravity: 2.55- 2.57
Crystal system: Triclinic
Crystal Habit: Prismatic
Tenacity: Brittle
Cleavage: Perfect
Fracture: Uneven, Conchoidal
Color: Green, blue-green
Streak: White

A variety of microcline feldspar. Amazon stone, or amazonite, is a green variety of microcline. It is not found anywhere in the Amazon Basin, however. The Spanish explorers who named it apparently confused it with another green mineral from that region.
For many years, the source of amazonite's color was a mystery. Naturally, many people assumed the color was due to copper because copper compounds often have blue and green colors. More recent studies suggest that the blue-green color results from small quantities of lead and water in the feldspar.

The largest documented crystals of microcline were found in Devils Hole Beryl Mine, Colorado. It measured 50x36x14m. This could be the largest crystal of any material found so far.
The Morefield Gem Mine, Amelia, Virginia is a world renowned mine for the material.

Amazonite w smoky quartz, Smoky Hawk Claim, Crystal Peak, Teller County, Colorado Rob Lavinsky

LET'S GO DIGGING!

DMC Program of the SFMS
Field Trip Committee

An Official Field Trip of the Middle Tennessee Rockhounds (Nashville, TN) (HOST)
An Official Field Trip of the Mid-Ga Gem and Mineral Society

Saturday June 23, 2018
10AM – 2PM CST
Coon Creek Science Center
McNairy County, Tennessee
Limited to 35 participants
Pre-Registration Required
FEE $15

TRIP: Within the grounds of Coon Creek Science Center, located in rural McNairy County, Tennessee, lies one of the most important fossil sites in North America. Acquired by the Memphis Museum System in 1988, this property contains a treasure lode of superbly preserved Upper Cretaceous marine shells and vertebrate remains left there 70 million years ago when the water of the Gulf of Mexico receded. Coon Creek fossils are mostly marine invertebrates (clams, snails, oysters, shrimp etc.) that are about 75 million years old. They are found in an unconsolidated clay/sand matrix. Coon Creek fossils are very unique because of the state of their preservation. They are original material – the shells have not turned to stone. They are also very abundant with a huge variety of species. You will be able to collect in a "quarry" area and surface collect from Coon Creek's stream bed (as guided by the museum staff). You will be "carving" fossils out of the Coon Creek formation by looking through chunks of the formation that have been loosened from the quarry. Participants will use a curved linoleum knife for collecting. Museum instructors will demonstrate how to collect your fossils and how to clean them. Everyone will find fossils! Some of the fossils are very fragile. You keep what you find with a few exceptions. If you find a specimen that would be beneficial for the Museum's collection or research, the Museum reserves the right to keep that fossil. See also: http://www.memphismuseums.org/coon_creek-overview

Program – Field Paleontology (4 Hours): Introduction – 30 minutes; Collecting Session (quarry and surface) – 2 Hour; Lunch – 30 minutes; Clean and Identify Fossils - 45 minutes

COLLECTING: Upper Cretaceous marine fossils.

BRING: Lunch (there is no food nearby & no vending machines at the center), water, boots or shoes that can get wet/dirty, poncho, towel, change of clothes & shoes (for return home), bucket, small digging tool (optional; linoleum knives will be furnished), roll of aluminum foil (to protect your finds), and bug spray.

FEE: $15 per participant

REGISTRATION: Pre-Registration Procedure: After you supply required

information by email to Middle Tennessee Rockhounds (MTR), MTR will assign you a registration number by return email – bring registration number the day of the fieldtrip. [Instructions for mailing the $15 per participant fee will be included with registration number. Registration is not official until fee is received.] Once registration reaches 35, registration is closed. ***To register***, email Fieldtrip@rockhound.org with: Name(s; Last, First), Address/ City/State, Phone (include cell for day of trip), club, age of children (must be 10 to 17 years old and accompanied by a parent or a guardian). Registration requests are limited to family members, couples, and significant others; non-related individuals must email separate registration requests. ***All persons who attend DMC fieldtrips (including children), must be members, in good standing, of an SFMS club (who has provided their membership with SFMS liability insurance).***

CHILDREN: Yes (see stipulations in registration above; ***no children under 10 per Coon Creek Science Center***)

PETS: No.

FACILITIES: Bathrooms and showers are available. There are no snack or drink machines. There are no restaurants or stores nearby.

RAIN OR SHINE: This fieldtrip is rain or shine. The Science Center will cancel only if weather conditions are threatening.

DIRECTIONS AND WHERE TO MEET

Address: 2985 Hardin Graveyard Road, Adamsville, TN (approximately 2.5 hours from Nashville; approximately 2 hours from Memphis). Please arrive by 9:45am CST.

Directions: Click on Coon Creek Science Center Map, then click Directions in upper left-hand box and enter your city. See also: http://www.memphismuseums.org/coon_creek-map.

Lodging & Camping: Rooms are available in nearby Henderson and Savannah, Tennessee. Campsites are available at Chickasaw State Park (http://tnstateparks.com/parks/about/chickasaw) and Mousetail Landing State Park (http://tnstateparks.com/parks/about/mousetail-landing).

CONTACTS:
Mike Mangrum, 615-587-1733; TennRockGuy@gmail.com
Randy Gentry, 615-566-8482; RGentry@biscanconstruction.com (no calls after 10pm CST; leave message if no answer);
To register for field trip, email Fieldtrip@rockhound.org.

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

June 3 - 4, 2017

McCalla, Alabama

Tannehill Gem, Mineral, Fossil, & Jewelry Show

The Alabama Mineral & Lapidary Society presents their 44th annual show.
Saturday, 9 a.m. to 5 p.m.; Sunday, 9 a.m. to 5 p.m.

Tannehill Ironworks Historical State Park
12632 Confederate Parkway
McCalla, AL 35111

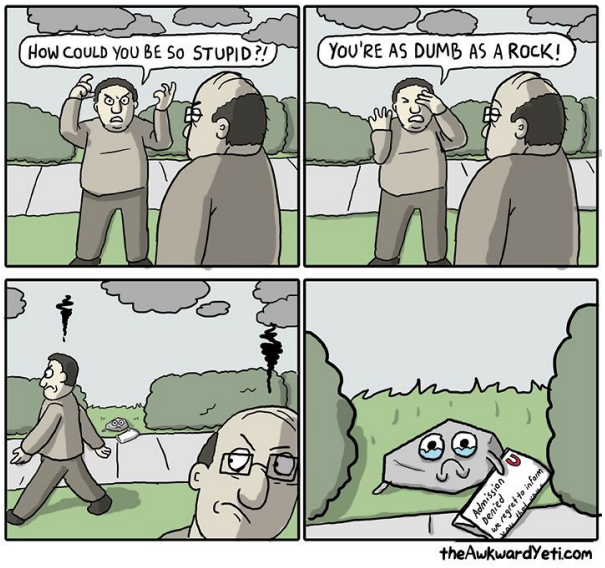
The show is free with paid admission to the park. Take I - 20/59 to Exit #100 or I - 459 to Exit #1 and follow the signs. Contact: Cathy Kellogg tannehillgemshow[]gmail.com

RockFest 28

Saturday, June 9 & Sunday, June 10, 2018
10 AM – 5 PM
Tellus Science Museum
100 Tellus Dr, Cartersville, GA 30120

Suitable for all ages.
Members: FREE
Non-Members: Regular Admission
27 GEM, MINERAL, FOSSIL, AND JEWELRY DEALERS from across the country will be set up in the Banquet Room and outside on the back lawn. See rare and exotic jewelry, ancient fossils, and rocks from around the world that you can purchase for your own collection.
See Susan Hargrove for discounted tickets. (Contact info under club officers)

Tidbits



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: Bill Mayer,
ph. 678.621.3457, orebilly@gmail.com

Secretary / Photographer, Richard Arnold,
ph. 678-682-9860 rarnold216@charter.net

Treasurer: Susan Hargrove, 86 Clear Branch Rd, Butler Ga. 31006, cell. 478-837-5327,
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: Tuell Walters,
ph. 478-922-7200
firecomet46@gmail.com

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