Mid-Georgia Gem Clips
Official Bulletin of the Mid-Georgia Gem and Mineral Society
www.midgagms.org **Vol. 14, Issue 5, June, 2014**

June Meeting
At the Museum of Arts and Sciences on Monday, June 02, 2014 at 7:30pm.
Tom Batcha will be the speaker this month. The subject will be about Fluorescent Minerals of Franklin and Sterling Hill, New Jersey.

Annual Picnic Follow up.

The picnic has come and gone. The weather was great 60's in the morning and low 70's in the afternoon. We had 19 people attending the picnic. There was a lot of food to eat. We had 6 tables of full of items for the auction. We raised $292.00 at the auction. Not bad for the small group of buyers. It was a great picnic and a perfect day. Lots of fun!!!

President Message

We had a good meeting this past month, only there were fewer people there than normal. We had a good program by Thomas Thurman about "Ziggy," the whale fossil we have on display there at the museum and why he was misidentified when first found.

Zygorhiza kochii was the designation first given to it. It has since been re-identified as *Dorudon* . It was good to see our visitors there and to have their inputs into the discussions.

We are approaching the summer months and once again, I ask that we all be aware of what's around us. You never know when you are going to come across a snake, be it a rat snake or a rattle snake, they both have the potential of making you hurt yourself. Do not reach into places that you cannot see what is there unless you have looked. I used to carry a flashlight and expandable probe with a small mirror on it for such circumstances (available at most auto parts stores). It is always better to look first and be safe than not and get snake bit.

I ask that you remember the rules for collecting too;

1. *Respect both private and public property, and do no collecting on privately owned land without the owner's permission. If the area is posted No Standing, No Parking, No Stopping, No Trespassing, No Anything...then don't.*
2. *Keep informed of all laws, rules, and regulations governing collecting on public lands, and observe them.*
3. *Research, locate, and observe the boundary lines of property on which you plan to collect.*
4. *Stay out of old mines and out from overhangs, they could collapse at any time.*
5. *Use no firearms or blasting materials in collecting areas.*
6. *Cause no willful damage to property of any kind - fences, buildings, signs, etc.*
7. *Leave all gates as found.*
8. *Find out if there are any fire restrictions in effect. Build fires only in designated or safe places, and make sure that they are completely extinguished before leaving the area.*
9. *Discard no burning material - matches, cigarettes, etc.*
10. *Fill in any holes that you have dug.*
11. *Do not contaminate wells, creeks, or other water supplies.*
12. *Cause no willful damage to collecting material, and take home only what you can reasonably use.*
13. *Leave all collecting areas free of litter, regardless of how you found them.*
14. *Cooperate with field trip leaders and those designated in authority in all collecting areas.*
15. *Report to proper authorities any deposit of material on public lands which should be protected for the enjoyment of future generations.*
16. *Appreciate and protect our heritage of natural resources*
17. *Let someone know your schedule and never, ever, collect alone.*

In the next few months, I want you to think about what we can do to entice new members, more (current and former) members to attend, and what we can do to grow. We will be sending you survey asking for ideas to help us grow. Phil and I have talked about this and we need to know what you think.

Have fun, enjoy what you are doing and bring a friend with you to the next meeting.

Don't forget, if you have any old photos, old newsletters or anything else pertaining to the past history of the club, please get them to me so I can scan them in for the new website I'm putting together.

http://www.midgagms.org

Thanks...
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May Meeting Minutes

The meeting was called to order at 7:31 PM by Jim Souter with 20 members/guests present.

Old Business

The treasurers' report was read and approved. The picnic was a big success this past weekend, bringing in nearly $300. Contrary to past picnics the change to May from June resulted in the weather being about 20 degrees cooler and much more enjoyable. Fun was had by all!

New Business

The mineral of the month was rhodochrosite, with numerous nice specimens brought in and discussed about. A motion was made, seconded and voted on that from this point forward that the annual Picnic will be held in May.

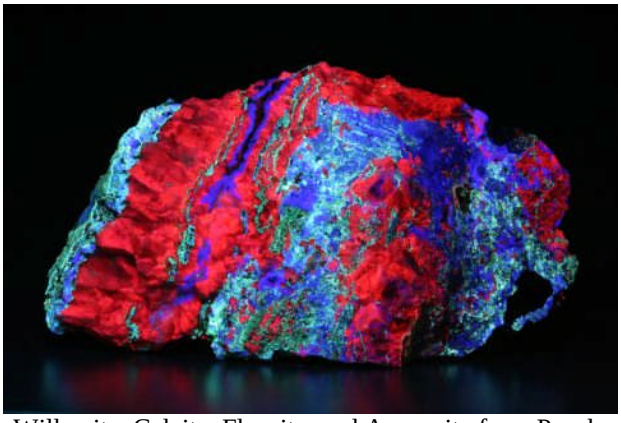
A big thanks goes out to Tina for sewing up 500 grab bags for upcoming fundraisers. A hearty request to all members for donation of rock/mineral specimens in lots of 100 or more.

The speaker this month was our very own Thomas Thurman. He gave a talk on Ziggy the museum's resident whale skeleton located in the lobby. His program was accompanied by a complete slide show profiling some of the history of ancient whales. It turns out when Ziggy was originally identified by the current available research, it was later discovered to be incorrect. Recent more updated data shows that it was similar to the original genus with differences in the jaw development. Mr. Phil Manning provided some additional input as the mining manager at the time; present at the time of the dig and recovery of the skeleton. The talk was quite informative and very interesting.

The meeting was adjourned at 8:41 PM.

By: Richard Arnold

No club meetings in July and August also no newsletters for those months. I will send any field trips out that come up for July and August. Have a great summer!



Willemite, Calcite, Fluorite, and Aragonite from Purple Passion Mine, Wickenberg AZ, Yavapai County

Mineral of the Month

Bring Any Fluorescent Mineral

Fluorescence is a startling property of certain minerals: when you shine an ultraviolet "black light" on them in a darkened place, they respond by glowing in strangely bright colors. For collectors of minerals, fluorescence adds a whole new dimension to their enjoyment. How does it work?

Fluorescence Basics

Ordinary illumination happens when photons (light "particles") meet a substance and bounce off in every direction including our eyes. Exactly how that happens is explained by quantum physics, but for our purposes the result is that the photon comes out with the same energy it went in with. Because light behaves as both particles and waves at the same time, we can also say that the photon's wavelength—its color—is unchanged.

Fluorescence happens when photons are briefly absorbed by electrons in a substance, then spat out again. An electron that absorbs a photon enters an excited state and takes up a larger orbit. Within a few nanoseconds it emits another photon that takes away the energy of excitation, and the electron slips back into its low-energy state.

That fluorescent photon is not the same as the initial one; it has a longer wavelength (and lower energy). The incoming and outgoing energy don't match because excited electrons also lose energy in other ways. The geometry of the electron's orbit precisely controls the wavelength (and energy) of the photon it emits, therefore the color of fluorescent light is very pure. It's as if your bank could accept checks larger than 100 dollars, but you could only cash that money in hundred-dollar bills. The extra money gets lost in bank charges—or in the case of excited electrons, they lose small amounts of energy as heat (vibrational energy) and other forms that can't turn back into photons.

Light of shorter wavelength, then, excites fluorescence of longer wavelength. Ultraviolet (UV) light excites fluorescence at visible wavelengths. So do X-rays. Visible light excites fluorescence at infrared wavelengths, which can be seen using night-vision scopes. But fluorescent minerals are almost always found and enjoyed using UV. X-rays are used by professional chemists, for whom fluorescence is a serious research tool.

Long-Wave versus Short-Wave UV

Mineral collectors use two types of UV light to test for fluorescence. The common "black light" is long-wave UV, with wavelengths around 365 nanometers. (Visible light ranges from violet at about 400 nm to red at about 700 nm.) Long-wave UV is the default among collectors: the equipment is inexpensive and there's no particular hazard in using it (although you should keep it from your eyes like any bright light). You can get a pocket flashlight using ultraviolet LEDs for a few dollars. It leaks a lot of violet light as well, but it's a good screening tool if you're walking through a cave or are out at night exploring a tailings pile. More serious black lights filter out the visible part and can produce spectacular light shows when your eyes are dark-adapted.

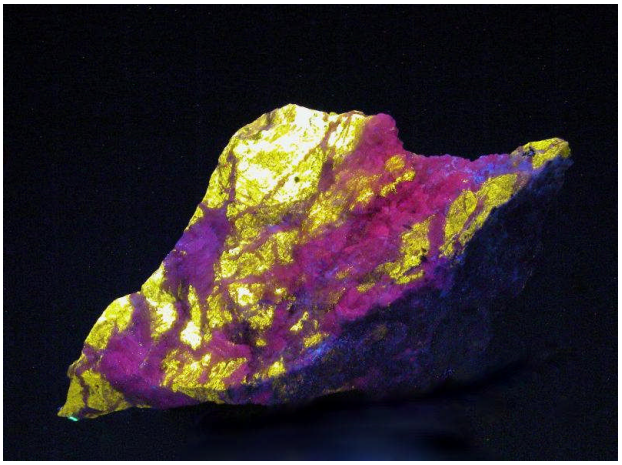
Short-wave UV, with wavelengths around 250 nm, excites fluorescence in a whole different set of minerals. The lamps are much more expensive, though. Moreover, the light itself is hazardous. Short-wave UV causes skin burns and eye damage. Although all light is technically radiation, this stuff is *really radiation*. Short-wave UV is what's used in sterilizing lamps and UV water purifiers. (The sun's short-wave UV radiation is filtered out by the ozone layer, high in the stratosphere.) These factors make short-wave UV fluorescence a minority hobby.

Fluorescence in Industrial Geology

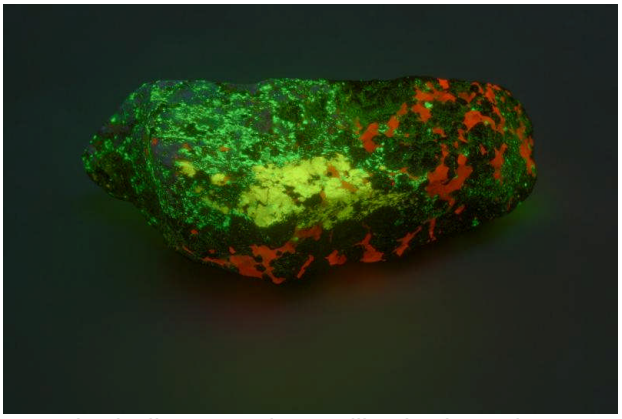
Oil drillers use long-wave UV to detect traces of petroleum in cores and cuttings and gauge its quality: light oil fluoresces blue-white, and the fluorescence color changes through yellow to brown with increasing density (that is, reduced API gravity).

Prospectors may use UV as a quick survey tool, depending on the mineral they seek. The tungsten ore scheelite, for instance, fluoresces brightly in short-wave UV, blue when it's pure and yellow if significant amounts of molybdenum are present. Uranium fluoresces with a bright yellow-green color in the secondary mineral autunite, as well as antique glass.

http://geology.about.com/od/mineral_ident/qt/Fluorescence-in-Minerals.htm



Wollastonite and Calcite from White Knob Quarry, San Bernardino County, California



Esperite (yellow-green) on Willemite (green), Calcite (orange), trace Hardystonite (blue), and Franklinite (black), Franklin, NJ

DMC Program of the SFMS Field Trip Committee
An Official Field Trip of the Forsyth Gem and Mineral Club, Inc. (Winston-Salem, NC) (HOST)
An Official Field Trip of the Mid-Ga Gem and Mineral Society

9:00 AM to 4:00PM

Saturday, June 21, 2014

Little Pine Garnet Mine

FEE Site

DIRECTIONS: From Asheville take I-26 west to US 25-70 (exit 19A for Marshall, NC – right exit). From north of Marshall, take I-26 south to US 29-70 (exit 19 for Marshall). Travel US 25-70 toward Marshall approx. 12.6 miles and turn left on Little Pine Road. There will be a sign for Sandy Bottom Trail Rides at this corner. Follow Little Pine Road 3.8 miles and turn left

onto Caney Fork Road. Parking will be at the end of Caney Fork Road. Collectors will car-pool from here to the site. Maps and/or directions will be available from the office to the mine site. We will meet at the office of Sandy Bottom trail Rides 1459 Caney Fork Road, Marshall, NC 28753 at 9:00 AM. Release forms must be turned in and admittance fee paid. You will receive a "ticket" which you must keep with you. Representatives randomly visit the collecting site and check collectors. From I-240 at Asheville time should be 35 to 40 minutes. (approx. 25 miles). The Sandy Bottom Trail Rides website also had maps and directions – sandybottomtrailrides.net.

HISTORY: Little Pine was worked commercially around 1904-05 for Garnets to produce sandpaper (garnet paper). Good crystals of Almandine Garnets can be readily found from ½" to 4" or more. Some remain in the Chlorite schist matrix and can be cleaned to produce very showy matrix specimens. There are some crystals that exhibit an elongated growth that is very desirable. **Note:** All DMC member clubs are required to maintain field trip liability insurance!

ASSEMBLY: Parking at the collecting site is limited, so members of attending clubs should arrange to car-pool from the meeting site to the collecting area. The road into the mine crosses a shallow stream, however most vehicles should pass without problems. WE CANNOT BLOCK THE DRIVE as it is also a homeowner's access road.

COST: The Dixie Mineral Council Group is receiving a discounted rate of $ 20.00 per person per day. There is not a special rate for children who attend! Please identify yourself as being a member of the Dixie Mineral Council Field Trip to receive this rate! The collecting limit is one gallon of Garnets per person. Children 8 and older allowed with close adult supervision. There are dump areas that are child friendly; however there is also a mine adit and tunnel where children should not be allowed to venture.

RELEASE FORM: Each individual MUST fill out a Sandy Bottom Trail Rides release form (**see attachment**) or go to their website - sandybottomtrailrides.net to download same. It will save time if you have these completed prior to arrival.

Children under 18 must have a parent or guardian fill out a form on their behalf **NO EXCEPTIONS**.

A Port-O-Let is located at the mine site. Bring water, food, and bug repellant.
No pets

EQUIPMENT: For dump collecting

bring scratching tools, small shovel, or pick type rock hammers. To enter the mine, a hardhat and some type of headlamp is necessary. The ceiling of this mine has some loose material and is not suited for children. DO NOT dig into or weaken the support columns!

Contact: Ken Reed - Phone 1-336-766-8581 No calls after 8:30 PM please! **E-mail:** mckinleycreed@bellsouth.net

Almandite garnet crystals from the Little Pine Garnet Mine, NC

Southeastern Gem & Mineral Shows

June 7 and 8, 2014
Birmingham AL area

Alabama Mineral & Lapidary Society 40th Tannehill Gem, Mineral, Fossil, & Jewelry Show located in the Tannehill Historical Ironworks Park, 12632 Confederate Pkwy. Mc Calla, AL. 35111.

Sat. - Sun. 9 am to 5 pm. Admission to the show is free with paid admission to the park. Dealers offer mineral specimens, fossils, beads, slabs, geodes, jewelry, loose stones, jewelry repair and all things rocks. Door prizes, club demonstrations, and Kids Korner games near our club booth.

Contact Gene Blackerby geneblackerby@labidaryclub.com or 205-807-6777. www.lapidaryclub.com

Tidbits

Hoba: The World's Largest Meteorite

"Discovered by a Farmer Plowing His Field in 1920, a farmer was plowing a field near Grootfontein, Namibia when his plow suddenly screeched to a halt. Curious about what he had run into he dug in the soil to find a large piece of metal. The large metal mass quickly attracted the attention of scientists and others, who identified it as a meteorite and removed the soil around it.

Although excavated, the meteorite has not been moved from its location of discovery because of its great weight. However, many pieces have been removed for scientific study and through vandalism.

The largest meteorite ever discovered was at Hoba in Namibia in 1920, weighing 66 tons.

A 66-Ton Meteorite

The farmer had discovered a 66-ton iron meteorite - the largest single meteorite ever found and the largest piece of iron ever found near Earth's surface. It is tabular in shape and about nine feet long, nine feet wide and about three feet thick. It was given the name "Hoba" because it was discovered on a farm named "Hoba West".

Hoba is thought to have fallen to Earth about 80,000 years ago. It is composed of about 84% iron, 16% nickel, and trace amounts of cobalt and other metals. An abundance of iron oxides in the soil around the meteorite suggests that it was much larger than 66 tons when it landed and has suffered significant losses from oxidation.

" from Geology.com , The Agateer - July 2013

Tenacity

Tenacity is the resistance a mineral offers to breaking, crushing, bending, etc. Most minerals are brittle, meaning they shatter when crushed or compressed. A few minerals, like gold or copper, are malleable, meaning they can be shaped by pounding. If a soft mineral can be cut into shavings with a knife, it is said to be sec tile. Flexible minerals can be bent easily, while elastic minerals will spring back after being bent.

The Agateer – November 2012

Silicon Carbide

"Silicon carbide (SiC), also known as carborundum, is a compound of silicon and carbon with chemical formula SiC. It occurs in nature as the extremely rare mineral moissanite. Silicon carbide powder has been mass-produced since 1893 for use as an abrasive. Grains of silicon carbide can be bonded together by sintering to form very hard ceramics which are widely used in applications requiring high endurance, such as car brakes, car clutches and ceramic plates in bulletproof vests. Electronic applications of silicon carbide as light emitting diodes (LEDs) and detectors in early radios were first demonstrated around 1907, and today SiC is widely used in high-temperature/high-voltage semiconductor electronics. Large single crystals of silicon carbide can be grown by the Lely method; they can be cut into gems known as synthetic moissanite. Silicon carbide with high surface area can be produced from SiO2 contained in plant material."

Wikipedia, The Agateer – June 2012

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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 / Webmaster: Jim Souter, ph. 478-454-7273, jgsouter@windstream.net

Vice President: Phil Hargrove, 86 Clear Branch Rd, Butler Ga. 31006, ph. 478-862-5327 susanbphilh@pstel.net

Secretary / Photographer, Richard Arnold, ph. 678-682-9860

Treasurer: Susan Hargrove, 86 Clear Branch Rd, Butler Ga. 31006, ph. 478-862-5327, susanbphilh@pstel.net

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Education Chairpersons: Thomas Thurman, ph. 478-329-1755, cell 478-293-7302 Tpangangan@aol.com
also Tuell Walters, ph. 478-922-7200, supernova1346@gmail.com

Stamp Program: Ron Davis, ph. 478-788-2616

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.

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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

Save Commemorative Stamps