THE GOLDRUSH LEDGER

CHARLOTTE GEM & MINERAL CLUB

FEB. 2015

THE PREZ SAYZ

The Charlotte Gem and Mineral Club is developing a reputation that extends beyond the geographic boundaries of Charlotte. Thanks to the efforts of volunteers within the membership, we are becoming known in surrounding areas such as Weddington, Concord, Waxhaw, Rock Hill, etc. I often get emails and phone calls from public and private school teachers, home school organizations and scouting groups asking for help in presenting programs focused on geology and the earth sciences. Mary Fisher, director of our Junior Rockhound program, is a frequent responder to these emails but with her rather heavy business travel schedule, she cannot meet every request. We are fortunate, however, to have club members who have degrees in or long-standing experience in geology and can fill in when needed.

Last October two members, Terri Harper and Brad Glover participated in "Community Appreciation Day" sponsored by Vulcan Mines in Mint Hill. Their/our booth featured a rock specimen giveaway, rock and gem ID and a demonstration of grinding and polishing on a Genie. In addition, a number of CG&MC brochures were handed out to the families in attendance. Both Brad and Terri reported that a fun time was had by all (and we even came away with a future potential dig site as suggested by exhibitors from another booth).

More recently, Neil Hohmann guided a group of cub scouts through their Weblos Geology

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Merit Badge at a church in Weddington. He presented various facets of geology; how the science is used in our society, products of a geological origin, drilling operations, mountain building and the future of the profession. He found most interesting their knowledge of the earth and the depth of their questions on fossils, flora and fauna, sand, Arkansas diamonds, etc. Lots of thank you notes and personal comments were forthcoming and Neil's comment to me was "It was fun".

A few weeks ago Terri Harper gave a geology presentation to a class of third graders at Weddington Christian School in conjunction with the classroom lesson plan. Her hour-long discussion ended with lots of questions and her comment to me was "Thank you for this opportunity". As you can see from the photo below, Terri and her audience were totally engaged in the teaching/learning process.

It seems to me that the club, in general, benefits greatly from the work of these member/volunteers. New member applications are at an all-time high with many coming from outside of the immediate Charlotte area. Obviously the results of these efforts tend to extend well beyond the classroom. Thanks to all who participate.

Murray Simon
President
Charlotte Gem and Mineral Club

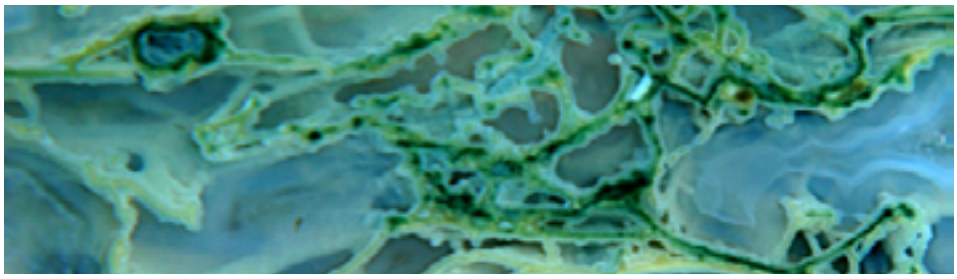
William Holland
School of Lapidary Arts

Are you interested in taking your gem and mineral hobby or business to the next level? Then William Holland School of Lapidary Arts is the place for you! Registration for the 2014 season is open now.

Learn about silver smithing, faceting, cabochons, opals, and tons of other interesting and exciting topics. Spend one week immersed in rockhounding pursuits in the beautiful Georgia countryside.

Learn more at:

http://www.lapidaryschool.org/



Charlotte Gem and Mineral Club Monthly Meeting

Thursday February 19, 2014

Social Hour from 6:00 - 7:00, Meeting to Start at 7:00

Location:

Tyvola Senior Center
2225 Tyvola Rd. Charlotte, NC 28210 (704) 522-6222

Our Guest will be: Missy Eppes PhD. UNCC Associate Professor of Earth Sciences "The Influence of the Sun on Cracking Rocks (Including Mars)"

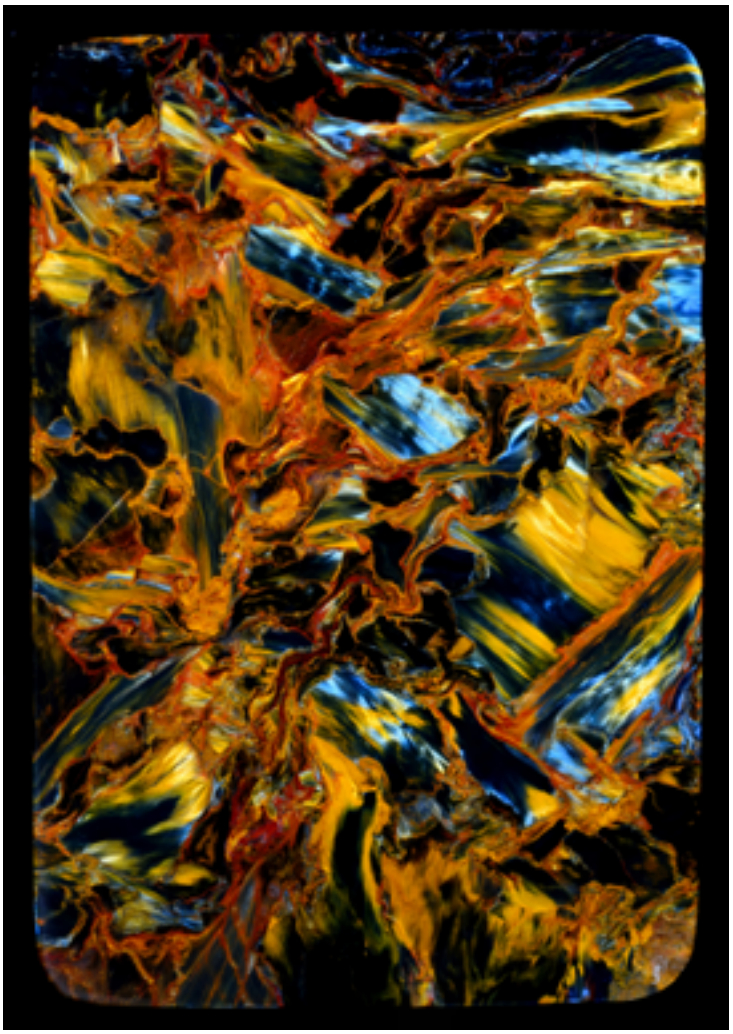
**Jewelry Making Workshop prior to the meeting* 5:00 to 7:00 pm*

Martha Rogers will teach: Beaded Bezels for Cabochons - PART 2
Finish what you started last month! Students will pick up where they left off last time. Did you miss out last time? Come down anyway. You can see what you missed and we will have something for you to start.

Charlotte Junior Rockhounds

Saturday February 28, 2015 10:00 - 11:00
Topic: Land and Sea Fossils
Location:
Matthews Community Center
100 McDowell St. Matthews, NC 28105
Contact Mary Fisher to sign up for the class: mefisher@att.net

Rock of the Month
Pietersite



Pietersite was discovered by Sid Pieters in 1962 while he was prospecting some farmland in Namibia, Africa. After his discovery, he registered the find in the mineral records of Britain. His discovery was published in 1964, and the material was named pietersite. Currently there are only two known sources of pietersite: African and Chinese. Pietersite is considered a type of tiger's eye, having the same properties as tiger's eye but with different patterns due to its brecciated formation.

The fibrous structure in pietersite has been folded, stressed, even fractured and/or broken apart via the Earth's geologic processes. The fibrous materials have then been reformed and naturally recemented together by quartz. Stones and crystals that go through this process are referred to as brecciated, creating a finished product with multiple colors, hues and superb chatoyancy. While pietersite has the lovely chatoyancy of tiger eye, it is not found in continuously structured bands. Rather it can form in swirls, swathes and fibrous (sometimes linear) segments. Thus the structure of the fibrous streaks in pietersite may appear rather chaotic, and can flow or exist in many directions side-by-side like bold paint strokes.

African pietersite is the most sought after pietersite due to its wide rage of colors. Colors include various blues, golds and reds, that may appear together or alone. Blue is the rarest color, followed by red. The blues range from a baby blue to dark midnight hue. Golds can be light to very deep and rich, sometimes having a reddish hue. All fibrous color variations will have a superb and striking chatoyancy, the bright and subtly changing shimmer of color that moves along the surface of a gemstone as it is viewed from varying angles.

Chinese pietersite is said to have been discovered in 1993, but did not come to market until 1997. Chinese pietersite exhibits slightly different variations in color and patterns from the pietersite found in Africa. Its colors are primarily golden and bronze, as seen in the pictures to the right, but can also be found in blue shades.

~from Wikipedia.com

Agates - some classifications

by ron gibbs

Cryptocrystaline means that the structure of agate comes from many small crystals cemented together with more silica. The process of making agate is most likely a solution or gaseous process and not a simple melt cooling. Molten magmas grow large crystal if cooled slowly, or random, small, crystals if cooled rapidly. The patterns found in most agates don't fit either scheme of mineral formation from a melt.

The bulk material that cements the agate together is silica and is called chalcedony. Sometimes pure chalcedonies are formed and collected for gemstone use. Green chalcedony containing nickel is also known as chrysoprase. A red variety has the name of carnelian, brown is called sard, and there are also purple and bluish colors. These materials are usually found in seams or narrow lens like openings.

Agates form in rounded nodules or in seams. This lends itself to the theory of liquid or gas crystallization. Flowing magmas (lava) often trap gases in bubbles as they cool, thus providing an ideal nursery for agate growth. Many high silica lavas with entrapped gas sphericals can be leached by rain water dissolving some of their silica content and flow through the porous lava filling the sphericals.

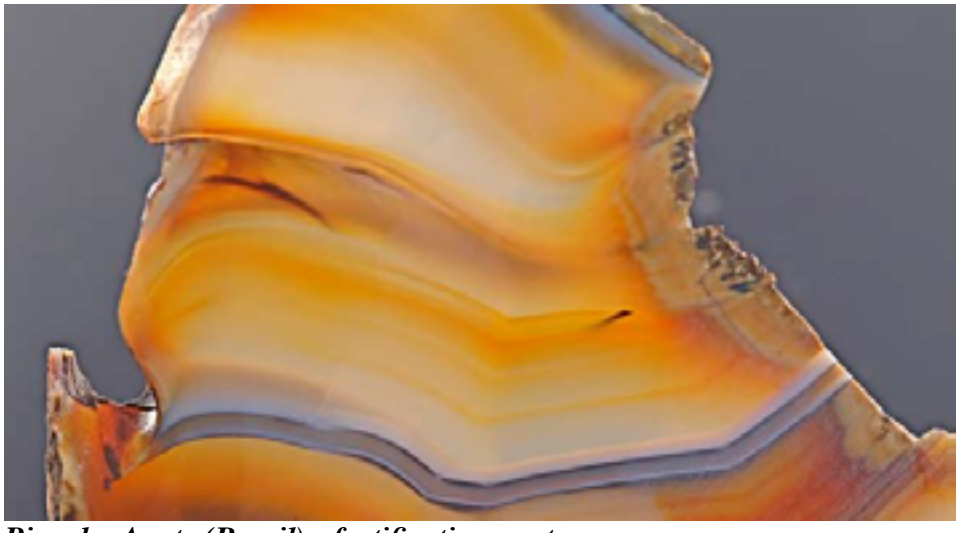
Over time a repeating cycle of wetting and drying of the spherical chambers might produce a pattern of periodic precipitation. If the silica changes chemistry from time to time it might well carry differing amounts of dissolved metals (colorants) into the growing agate providing bands of color.

There are many varieties of agate and it is not likely that one growth method can be found which can produce all of the various types. Many nodules contain "fortifications", or concentric bands of alternating or repeating colors. These may follow the general shape of the nodule or might form straight parallel bands across the nodule. Sometimes they do both in the same agate. The following photos show some fortification agates. In nodules the banding often makes concentric rings that resemble ancient fortification and hence the name.

In seam agate the banding usually follows the edges of the seam or crack and forma roughly parallel lines along the length of the agate.

In some nodules the lined form parallel stripes that are aligned with the bottom of the nodule. These may be called "water-level" agates and may contain both fortification and level banding. This phenomena is also known as Uruguay bands.
(see photos)

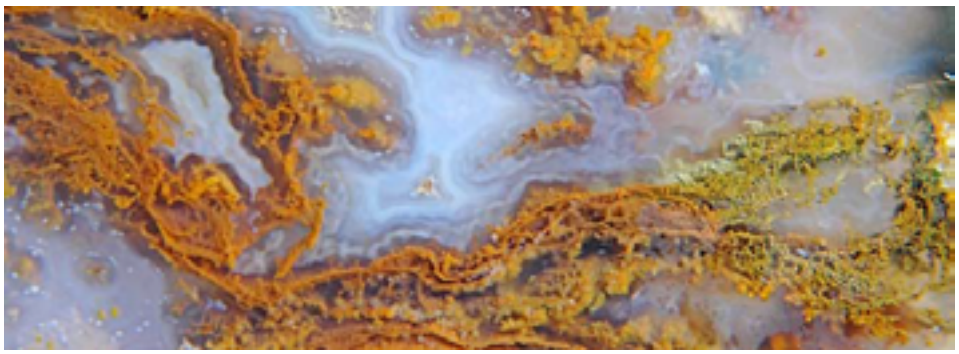
Laguna Agate Nodules (Mexico) - fortification agates



Piranha Agate (Brazil) - fortification agate

Brazilian Agate (Brazil) - (water level)

Rainbow Agate (Indonesia) - (seam agate)



Needle Peak Moss Agate (Texas)

Maury Mountain Moss Agate (Oregon)

Another popular agate type is the "moss" agate. The moss agate gets its name from the mass of vegetable like strands trapped in the silica matrix. (see lower photos)

The moss can be of nearly any color and many moss agates have more than one type of moss. This type of structure does not lend itself well to periodic precipitation as its origin. More likely the cementing mass has already begun to form a gel, and color channels are created by precipitating metal hydroxides and oxides along grain boundaries or flow channels.

The color of the moss is related to the metal hydroxide/oxide that is present. Most yellow, orange, and red mosses come from iron and black moss from manganese minerals. They are mostly made up of mixed metal oxides much of it with amorphous structure.

White mosses tend to from in the chalcedony as phase change in the silica. The white material tends to be one or more forms of common opal.

Moss Agate (SW Texas)

Upcoming Dig

Not Coordinated through CG&M

Saturday, February 28, 2015
9:00 am until dark
Amos Cunningham Farm, Due West, SC
Abbeville County
FEE SITE

Children : 12 and under $10 and must have adult supervision.
Pets: If controlled on a leash.
Fee: $20 for an adult (over 12)

TRIP: Amos Cunningham Farm, 471 Alewine Rd., Due West, SC 29639

When: February 28, 2015 from 9:00 AM until dark.

COLLECTING: Good sized beryl crystals, amethyst and smokey quartz. This site has the best South Carolina beryl specimens of any site that I know how to get access to. The crystals are well shaped hexagons with flat ends. The color is green though most have a blue cast. The beryl ranges from translucent to opaque. Most crystals are specimen quality though some gem quality is present.

Digging Conditions: The site is flat to rolling land of South Carolina red clay. The digging areas have been machine trenched down to white kaolite veins that have the beryl and quartz crystals. Dirt and rock removed from the trenches and piled up, also contain beryl and are good places to search especially after a rain. Beryl is often found by breaking open quartz rocks.

BRING: Bring picks, shovels, rock hammers, scratching tools, and screens. Large hammers will not be very useful. Also bring plenty of drinks and a picnic lunch unless you want to drive a few miles for lunch.

DIRECTIONS AND WHERE TO MEET:
We will meet at the Amos Cunningham farm between Antreville and Due West, SC. From Anderson, SC drive 18 miles down route 28 East (really south) to Antreville. Turn left on Route 184 East heading toward the town of Due West. Travel for 4 miles and turn left on George Alewine Road. Drive for less than 1 mile. You will pass a trash/recycling site on

the right, cross a bridge over a small creek and turn into the first lane on the right. If you pass the Cunningham Backhoe Service on the left you have gone too far.

Lodging can be found around Anderson, SC. There is no lodging in Antreville or Due West.

The next day: In the past people have asked me about going to the nearby Diamond Hill Mine the next day while they are in the area. Diamond Hill will be open on Sunday, March 1. The mine is well known for quartz crystals, smokey quart, amethyst, skeletal quartz, and cacoxenite. Cost is $20 per person, but if 10 or more arrive as a group the cost will be $10 per person.

Contact info for Amos Cunningham: cunninghamamos@yahoo.com or 864-379-8918 or 864-992-7843
Contact numbers: 864-404-0025 Bill Wetzel Field Trip Chairman, Western South Carolina G&MS
e-mail address: wwetz14@gmail.com

UPCOMING SHOWS

March 20-22—ASHEVILLE, NORTH CAROLINA: Annual show; Mountain Area Gem and Mineral Association, Camp Stephens; Clayton Road; Fri. 9:00 am-6:00 pm, Sat. 9:00 am-6:00 pm, Sun. 9:00 am-5:00 pm; Admission Free; Numerous vendors offering gems, minerals and fossils from North Carolina and around the world. ; contact Richard Jacquot, POB 542, Leicester, NC 28748, (828) 779-4501; e-mail: rick@wncrocks.com; Web site: www.americanrockhound.com

March 27-29—HICKORY, NORTH CAROLINA: 45th Annual Unifour Show and 2015 Eastern Federation Convention; Catawba Valley Gem & Mineral Club, Hickory Metro Convention Center; 1960 13th Ave. Dr. SE, I-40, Exit 125; Fri. 9-6, Sat. 9-6, Sun. 10-5; adults $4, students and children free; dealers, exhibits, hourly door prizes, hands-on children's activities, cabbing, faceting and wire wrapping demonstrations, "Somewhere in the Rainbow" exhibit; contact Baxter Leonard, 2510 Rolling Ridge Dr., Hickory, NC 28602, (828) 320-4028; e-mail: gailandbaxter@aol.com; Web site: cvgmc.org/

Jewelry Making Classes

Learn the art of jewelry making from one of your fellow club members. The above works of art were created by members like you during a previous jewelry class. Classes are available to all up to date members.

This month Martha Rogers will teach BEADED BEZELS FOR CABOCHONS. Bring your own cabochon (if you do not have one, one will be provided). This is a continuation from last month's class. If you were not there, come on by and she what they are doing. We will get you started on a piece too!

Next Class is Thursday Feb. 19th
from 5 to 7 prior to the club meeting*