

GOLDRUSH LEDGER



CHARLOTTE GEM & MINERAL CLUB

JULY 2012

Prez Sez ...

If you're looking for someplace to escape the heat later this month and have an interest in adding some significant specimens to your lapidary collection – have I got a place for you! The Franklin Gem & Mineral Show in Franklin, NC will be running from Thursday July 26th through Sunday July 29th. This is the second oldest gem & mineral show in the southeast and features dealers from across the United States, South America and Asia.

If you haven't been there before, break open that piggy bank, make a list and take a very pleasant 3+ hours ride into the mountains north of Asheville. Linda and I have made this a one-day trip several times and while you may come back tired (and broke), you will not regret the effort.

This show has five components that make it a unique and significant event. Under the huge main tent you will

find hundreds of vendors selling jewelry findings, mineral specimens, gemstones and lapidary equipment. Adjacent to the tent is The Village with its outdoor vendors, some from Brazil and other exotic locations, selling rough, geodes, fossils and a variety of unique items at competitive prices.

A few miles away is the Franklin Community Center where the Gem & Mineral Society of Franklin holds its show with a somewhat more local flavor to the items and materials for sale. One block from the local show is the "Fun Factory", a pseudo Las Vegas casino (with a rather distinct mountain flavor). There are 3 banquet rooms at the Factory and they will house the Faceters' Frolic.

It will be the fifth annual meeting of this group offering 2 days of sales, instruction and faceting competitions from begin-

ners to experts (July 27th and 28th). The fifth place to be in Franklin is the Franklin Gem and Mineral Museum housed in the old Macon County Jail (built in 1850). They display not only specimens of local (Coweet Valley) gemstones but also gems, minerals and artifacts from around the world. The museum is staffed by members of the Franklin Gem and Mineral

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Society who are very knowledgeable about the specimens on display as well as the history of gem mining in the area. Their gift shop is small but a few years ago I found some very interesting petrified wood pieces in a basket that resulted in some wonderful cabochons.

You don't have to spend a lot of money to make this a worthwhile trip. It's a great venue to find out what's new in lapidary materials, the changes taking place in gem fabrication and setting techniques, the current value of materials you may have bought years ago and you just might pick up an idea or two for improving your own skill sets.

Some visitors make a weekend of it. Franklin has a

number of hotels and restaurants but many people choose to rent a cabin or a camping site along a trout stream and manage to find the time to take a hike through the mountains. The mountains there are quite beautiful, the food is good and you will find Franklin to be a great show and vacation destination.

If you do go and make some interesting purchases, be sure to bring them to the next CG&MC meeting and share your adventures with us.

Murray Simon - President Charlotte Gem and Mineral Club - past president of Charlotte GYM and Mineral Club, and Previous Past Pro-Tem Presiding Presence Providing Post Prevalent Predicessorial Prognostications, as need.

Faceters' Frolic (2012)

This will be the 5th year for the Faceters' Frolic during the Annual Summer Shows in Franklin, NC.

This year it will be a two-day event on Friday July 27th & Saturday 28th of 2012. It will be held at the Fun Factory, which is the same location as FFF3. Robert Strickland will offer two GemCad classes on Friday and a larger number of quality dealers will start offering items for sale at 1PM on Friday.

Dealers will be available all day on Saturday.

Dealers Room open 1-6 pm Friday, and 9-5 pm on Saturday.

We have scheduled some great programs, demos and prizes, so start making your plans now.

For a full run-down on all the information see their

WEB site:

<http://www.facetersfrolic.org/>

Charlotte Gem & Mineral Club Monthly Meeting

July 19, 2011 Thursday -- 7:00 pm --

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

***Summer Special
Double Header!***

Impacts of Stormwater Management on Hydrology and Temperature Response in Urban Streams

by Charles Safrit

Charles was one of the two Charlotte G&M Club's scholarship winners in last year's award. The talk will be about the effects Stormwater Control Measures (SCM) have on local ecosystems in urban streams. These ecosystems can be very fragile and susceptible to change in temperature. By analyzing data retrieved from four local sites at both upstream and downstream locations, I hope to determine if the thermal pollution magnitude and duration are increased due to SCM placement.

IRIS AGATE - 2011 AFMS WINNER

Did you know a camera is able to capture a more intensely colored iris than sunlight? It's what Pete Rodewald called "Extreme Iris". If you like "eye candy" with substance, you'll appreciate "Iris Agate".

Using Pete's photos and notes, Wayne Sukow produced this culmination of Pete's work, revealing iris from unexpected as well as ordinary sources.

At the end of the program, is an easy to understand explanation of the "iris" phenomenon.

Charlotte Gem & Mineral Club Junior Rockhounds

The junior rockhounds are taking the summer off for a well deserved vacation and will start again in the fall.

They now meet at the Matthews Community Center when in session. For further information please contact **Mary Fisher at mefisher@att.net**

Phenomenal Gems

by Wanda Tilsit

When you hear the phrase "phenomenal gems", what do you think the meaning is? The dictionary definition of phenomenal gives the impression that these are really great stones, by gem standards very exceptional. In some respect that is correct. However, in gemological circles, the term "phenomenal" holds a very special meaning. It is minerals or gemstones classified in a way which it exhibits special optical characteristics -- or phenomena.

Special optical characteristics... what do we mean by special optical characteristics? Well if you see a star sapphire, the star effect, which is referred to as asterism, is an optical characteristic or phenomenon

Asterism

A star may have four, six, or 12 legs (rays) radiating outward from a central point. They will also follow the light source as it travels over the surface of the stone. To fully exhibit this effect, gemstones or minerals need to be cut en cabochon, a style that has a dome-like appearance on top. While many minerals and gemstones exhibit stars,



Star Sapphire

some are extremely rare and highly prized by collectors and jewelry designers. Stars can be found in Quartz, Garnet, Sapphire, Ruby, Scapolite, Spinel, and Diopside.

Chatoyancy

Another type of phenomenon, is where some gemstones exhibit the optical effect called chatoyancy.

A chatoyant gemstone, if properly fashioned, will display a line of varying thickness that will glide over the surface of the host material as it follows the light source. To fully appreciate chatoyancy, materials need to be fashioned in the same way that stars are -- en cabochon.



Chrysoberyl

The word chatoyant is derived from a French phrase that translates as "eye of a cat." Large or small, feral or domesticated, all cats have one trait in common -- a characteristic slit that runs through the center of the eye; hence the more well known term "cat's eye". It should be noted that the term cat's eye always refers to the mineral Chrysoberyl. However there are other minerals which exhibit this

effect. Such as Tourmaline, Quartz, Tigereye, zircon and moonstone.

So how do stars and cat's eyes occur? They are due to a special arrangement of inclusions in the mineral. As incoming light strikes the surface of the host material, it comes into contact with and reflects off of a series of fine fibers or needles. If the needles are arranged parallel to one another, this creates a Cat's Eye effect. If the layers of parallel needles or fibers are arranged at definite angles throughout the material, stars are produced. In case of simple chatoyancy, for instance Tiger's eye, most pieces are a yellow to light brown color, but enhancements can create reds or other colors, and a naturally occurring variant called "hawk's eye" has a grey-blue to greenish color. Less familiar to many, but greatly admired for their displays of chatoyancy are the Charoite, Pietersite, and Seraphinites.

Seraphinite

The gem variety of Clinochlore, is a lovely dark green stone that changes sparkle and light as you view it from different positions. It comes from mine Korshunovskaia which is situated not far from Baikal Lake in



Seraphinite

Eastern Siberia, Russia. This mineral got its name from the Greek words for inclined and green since its structure is monoclinic and its common color is green.

Charoite

From Russia, discovered in 1978 in the Murun Mountains in Yakutia. Named after the nearby Charo river. It is opaque bright purple, with wild swirls of fibrous material and is one of the strangest looking natural gemstone.

Pietersite

Pietersite crystallizes in the form of masses, the structure a result of inclusions in jasper where the inclusions are pseudomorphs after asbestos. The color is blue/black/red/ yellow with a strong chatoyant quality. It was discovered by Sid Pieters, on his farm in Namibia.

Color Change

Another very important phenomenon is color change. You may occasionally hear the more

technical term photochromism (photo : light and chromism: color) used to describe the effect. The most famous color-change gemstone is Alexandrite, a member of the chrysoberyl



Alexandrite
(incandescent light)



Alexandrite
(daylight)

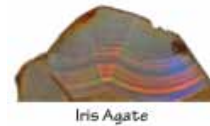
species. When exposed to daylight and then incandescent light, it will change colors. The most highly prized material changes from a bluish green to a reddish color. The more intense the change, the more valuable the material becomes. Color change, while highly prized by collectors, is not present in many mineral species. In some cases, such as Tourmaline, the phenomenon is extremely rare. While Alexandrite is the most well known and expensive color-change mineral, there are less expensive alternatives, such as color change Garnet or Sapphire.

Iridescence

Iridescence is a phenomenon which shows as a multicolored, surface effect, which is caused by diffraction. As white light passes through very small openings such as pores or slits, or through thin layers of material which differ in refractive index, a prism effect causes it to separate into spectral colors. These may then be seen on the surface, or in some cases in the materials interior. Sometimes when combined with interference, i.e where the slightly out of phase color waves bounce off of different layers overlap as they reflect, a loss of some colors or a reinforcement of others colors can take place giving rise to dramatic color

blocks, which may shift with viewing angle.

Iridescence is the most wide-spread of the optical phenomena, we see its effects in pearls, the display of fire agate, "rainbow calcite", certain obsidians, and iris agate. It also creates the rainbow display of fractures, the beautiful colors of Labradorite, and, the most well known occurrence in Iris Agate the "color play" of precious opal.



Iris Agate

Pearls

The orient of pearls, is a delicate, shifting, iridescent color layer that is distinct from the basic body color of the pearl or from its luster. Both luster and orient are a function of the thickness and perfection of the layer of nacre on the pearl's surface. Nacre is composed of thin plate-like layers of Aragonite crystals accounting for over 90% of its weight, along with conchiolin protein, and water. Although most pearls have that characteristic "pearlyluster", only fine quality pearls have orient. It can also be present in the "mother of pearl" lining of shells, and is especially vivid in the shells of some species of abalone.

Fire Agate

The aggregate quartz known as fire agate, gets its



Fire Agate

iridescence from thin coatings of iron oxide (limonite) layered over its botryoidal chalcedony surface. The best specimens

of this material can be very striking.

Ammolite

This gem is the result of the fossilization of extinct, shelled mollusks, called ammonites. Although many ammonite fossils are found, only a certain type from a restricted area in Canada shows the iridescent effect, which has preserved, and enhanced, the thin, tablet-like aragonite crystal layering of the shell.

The thickness of the preserved layers controls the colors that will be seen.



Ammolite

Thicker layers produce red or orange colors, and thinner ones, the blues and violets. Due to the fragility of the thinnest layers, specimens with blue or violet color are especially rare and costly.

Phenomenal obsidian

Most obsidian is pretty plain looking, in mostly drab shades of brown and black. Certain types, however, display iridescent patterns due to dense congregations of minute suspended inclusions that act like diffraction gratings. This is sometimes

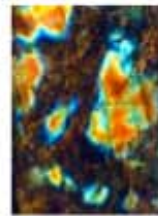


Rainbow Obsidian

given the trade names of "velvet" or "rainbow" obsidian.

Labradorescence

Labradorescence is a type of phenomenon, whereby a form of iridescence caused by repeated, microscopically thin layer (lamellar) twinning in Labradorite feldspar. One of the characteristics is that the twinning is very specifically oriented within the crystal, thus making the iridescent display highly directional. At some angles the light encounters no thin layers and no effect is seen, in other directions of view we see a bright blue, gold, green or multicolored surface.



Labradorite

Adularescence

Adularescence is another phenomena from which occurs when a gem displays a billowy floating light which appears to come from below the surface. The name comes from the most prominent gem displaying the phenomenon: moonstone, known historically as "adularia". The term "shiller" or "schiller" is sometimes used to describe the light. In Moonstone, adularescence is due to a layer effect, where thin inner strata

of two types of feldspar intermix, (exsolution regions of sodium feldspar in potassium feldspar). These layers scatter light either equally in all spectral regions producing a white shiller, or as in the most valuable specimens, preferentially in the blue or the blue and orange. As in so many cases of optical phenomena the size or distance from layer to layer influences the colors we see.

Aventurescence

Aventurescence is a phenomenon which owes its beauty and distinctiveness to structural features which diffract or scatter light. Aventurescence is a consequence of reflection. When disk or plate-like inclusions of another mineral are present, and are of a highly reflective nature, they act as tiny mirrors, which causes the gem to sparkle and glitters. This glitter is called adventurescence.

The term shiller, is also used to describe this sparkly glow. The most common reflectors are copper, hematite and mica. The name is derived from the Italian word for "chance" or accident, and has no "d" in it, but the word is mispronounced as "adventurine". The most commonly encountered species showing this effect are certain feldspars and one variety of quartz.

"Goldstone", a manmade aventurescent glass with copper particles deliberately added to it, has been an inexpensive and popular gem imitation since the Victorian period

Article from the Gem Cutter News - Baltimore, Maryland. Vol 59 Number 6, June-July 2010

MY RECENT TRIP TO VAIL, COLORADO

by Neil Hohmann

I highly recommend this trip to anyone who is traveling West. The Hohmann families: my wife, Katy, me, and my two sons and families, stayed at the wonderful and delightful Sebastian Hotel in Vail Village. I will briefly mention the hikes and trails we took during the visit which were to old mine areas near Leadville and Glenwood Springs.

Not much collecting, but a lot of fun with my son, Neil, and grandsons. The National Mining Museum in Leadville is worth the trip to see some of the local collections, two completely rigged mines, and a history of mining in the area.

The highlight of the mineral portion of our trip, however, occurred when Katy, and I stopped at the Colorado School of Mines Geology Museum, in Golden, Colorado. This is an absolute must if you are in the area.

Several original collections are on display: the Ethiopian Opals; and, the Betty Llewellyn gold and silver items and a rhodochrosite necklace. Also there are collections from local mines; and the most unbelievable display of exquisite and rare gems, minerals and jewels from all over the world.

The museum provides a terrific section for paleontologists, fossil collectors, and specimen hunters which contain dinosaur bones, shark teeth, and a plethora of flora and fauna fossils found from local and foreign locales. Additional displays include meteorites, radioactive materials, moon rocks, student contributions and rock and mineral content, configuration and details for education and study.

Upcoming NC Shows

July 26-29, 2012: Franklin, NC. 47th Annual Macon County Gem-boree: Thursday -Saturday 10am -6pm Sunday 11am-4pm. Macon County Community Building. Fine Gemstones and Jewelry, Rough and Cut Gemstones, Mineral, Fossils & More.

September 7-9, 2012: Winston-Salem, NC. Forsyth Gem and Mineral Club. Forty-first Annual Gem, Mineral and Jewelry Show and Sale, Educational Building, Dixie Classic Fairgrounds. Free parking through gate #9 from 27th Street only. Hours: Friday and Saturday, 10-7, Sunday, 12-5. Contact W. A. Marion, Show Chairman at MarionA1@yadtel.net

Yes - it's another reminder!

The club is still seeking your help in manning the two summer events (mostly) in September. We have spots open to help out with the Matthews Live (Labor Day Weekend - Aug 31 - Sept 3) and the Mint Hill Madness (Sept 28th and 29th).

We will set up for the usual geode cutting in Matthews and we will have limited geode cutting, and a full set up of our sluice for Mint Hill.

If you can please sign up for one or more time spots during these events. Ask Murray how to get your free club T-shirt, and you can earn lots of points toward our club scholarship drawing.

Unless it rains, it's really not a bad way to pass a few hours, and even the water failed to dampen "most" of our spirits last year. We will also make a display show off club members work, and use it to entice potential new members by showing them the array of crafts we create in our hobby.

Sign-up sheets will be available at the meeting. (*Due to the number of external events in September there will be no regular meeting that month.*)

Iris Agate - so what makes the color?

by ron gibbs

Fortification Agates are made up of concentric ring patterns that are created by the growing silica. The patterns are periodic, and there are several theories as to the cause of their formation.



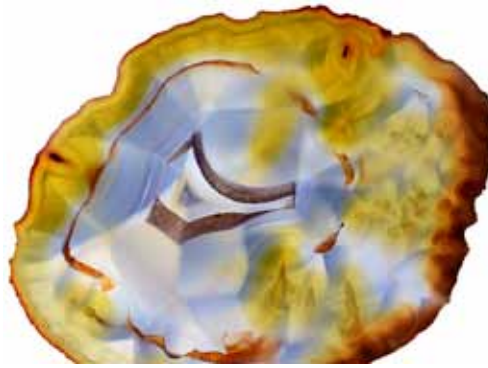
typical fortification agate

When the lines form in regular, close formation, a slice of agate may exhibit what we call the "turtle back" effect. When a slab of this type of agate is observed while moving it from side to side, the lines produce an optical effect.

When an agate is sliced at normal (~1/4") thickness it is too thick to produce an "iris effect", but may produce a "turtle back" pattern. The regularly spaced agate lines concentrate light in areas between the bands that appear to move as the agate's position is shifted.

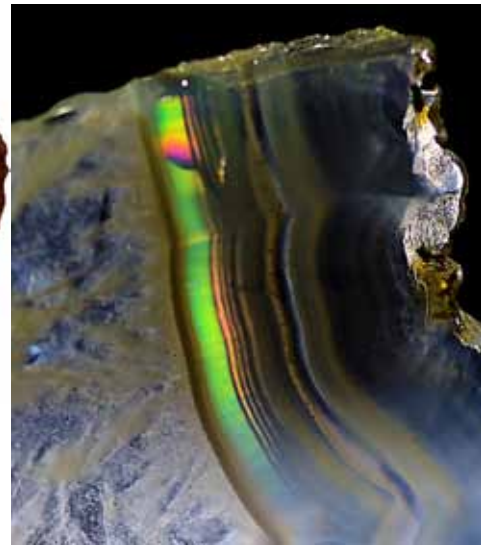
An agate that has a regular distribution of lines, proper spacing, and is thinner may be able to produce an "iris

turtle back agate



effect" where the light entering the slab is broken into rainbow color patterns. Instead of moving light and dark areas, this type of agate can produce moving rainbows. Typically such slices must be 1/16 of inch or less to make good diffraction patterns. These are fairly rare agates and often sought after by collectors.

To photograph either type of agate you need to light them with a full spectrum lamp from behind. The light must pass through the ag-



iris agate

ate to show either the turtle back effect or to see the color play in the iris effect. If the slabs are not polished try using a thin coat of olive oil to simulate a polish and give more intense colors.

Look at the reflected light from the pattern on the surface of a CD or DVD to see a similar effect.

Polymer Clay Class at the Tyvola Sr. Center (our club's monthly meeting spot)

by Linda Simon

July 23rd and July 26th

10-12:30 each day

We will be making bracelets, cuffs and tiles using transfers. We can include 3 members of our club in the class.

If you are interested in attending please call Linda at 704-543-6651 to reserve one of the three spaces.