

GOLDRUSH LEDGER



CHARLOTTE GEM & MINERAL CLUB

MARCH 2013

Prez Sez ...

Two things happened within the past week that reflects well on the direction the club is presently taking. The first was a strongly attended general meeting at the senior center where we were privileged to hear a unique presentation by Dr. Steven Hageman of Appalachian State University.

His talk on the mineralization of fossils was initiated at the suggestion of his faculty colleague, Dr. Sarah Carmichael who achieved the distinction last October of presenting the first ever CG&MC outdoors/under the stars lecture (with the help of our ever-resourceful newsletter editor Ron Gibbs). This is a new direction for our club – developing a mutually rewarding affiliation with ASU.

Based on these first two encounters, I think there are a number of interesting potential events to be explored and initiated. Dr. Hageman has issued

an open invitation to club members for guided tours of the university's geology museum with the added potential to sit in on classroom lectures. He also recommended another faculty member for a potential future meeting presentation and emails are already internetting (?) their way back and forth to set that up.

There were so many positive comments in the days following Dr. Carmichael's October talk that at the November CG&MC board meeting it was proposed to split our scholarship awards between UNCC and ASU. The motion passed unanimously. It should be rather interesting to see what happens when you bring together geology faculty members from two state universities at a Christmas party. How about an academic arm wrestling competition?

The other event worth noting is mentioned elsewhere in this newsletter. As she does several Saturdays throughout the year, Mary Fisher held a Junior Rockhound meeting the morning of February 23. It turned out to be somewhat of a joint meeting between club members and a local scout group.. It was probably a record attendance with Neil Hohman giving a talk

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on fossils. Those who were there said it was very well received. Appreciate your efforts Neil (and Mary). The schedule and topic for future Jr. Rockhound meetings are posted every month in this newsletter and if you haven't attended, you should drop in. This is a very important adjunct for the CG&MC and you should share in the pride that comes from seeing these kids get excited as they explore the earth sciences.

Hardly a month goes by that I don't receive emails from teachers, scout leaders or librarians asking for help in presenting talks. This spring and summer Mary Fisher, Neil Hohman and Jimmy Strickland will be representing us at various venues in response to these requests. There is no

compensation for their efforts; they do it as a means of sharing their love of earth sciences and the lapidary arts with kids who are fascinated by nature.

In this era of electronic communications media and PlayStations - that's a good thing. If any members have an interest in participating in some of these presentations please let me know. You don't have to be a geologist or master jewelry maker. A little bit of knowledge (and some tumbled rock giveaways) can go a long way to spark interest in our fascinating hobby.

Murray Simon, President Charlotte Gem & Mineral Club, Prevalent Past President of Charlotte Gem & Mineral Club, and Potential Pre-Post Past President of same.



Imperial Jasper from Mexico - found in Zacatecas, Mexico about 50 miles north of the city of Guadalajara

Charlotte Gem & Mineral Club Monthly Meeting

March 21, 2013 Thursday -- 7:00 pm --

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

Coober Pedy - The Opal Capitol

Opal was first found in Coober Pedy on the 1st of February 1915 and since then has been supplying the world with the majority of gem quality opal. Coober Pedy was originally known as the Stuart Range Opal Field, named after John McDouall Stuart, who in 1858 was the first European explorer in the area. In 1920 it was re-named Coober Pedy, an anglicised version of Aboriginal words "kupa piti", commonly assumed to mean "white man in a hole". Coober Pedy is probably best known for its unique style of underground living. There is a range of underground accommodation (as well as above ground if you prefer). There are authentic underground homes to explore as well as underground museums, opal shops, art galleries, underground churches and, of course, opal mines

Red Hot Books for Sale!

Our rock and gem club has maintained a lending library for many years. It has over 100 books related to collecting, polishing, making, or just enjoying the lapidary arts.

There are books on jewelry making, mineral identification, fossils, stone cutting, faceting, etc. The library has been maintained for the last few years with almost zero-use by the member-

ship. It is a bit of problem to maintain the storage of such a good sized (read that has *heavy*) collection without any tangible returns.

It was decided to sell off the library over the remainder of the year. The first six (6) coffee-table style books will be available (first come first serve) at the Treasurers table at the next meeting. Prices are marked on

the books. A few additional books will be added to the silent auction at this meeting, and more will be offered at the silent auctions throughout the remainder of meetings this year. Most of what remains of the library will then be put up to bid at the November auction.



Jr. Rockhounds Discover Fossils

by Jack King & Mary Fisher

On Saturday, Feb. 23, despite it being a cold rainy day, I decided to leave my warm home on Lake Norman and brave the traffic on I-77 to Charlotte for my Harbor Freight tool fix for some items that I did not necessarily need but sure wanted. Remembering that this was the day for Mary Fisher's Junior Rockhound meeting with special speaker, Neil Hohmann giving a talk on fossils, I had my second justification.

I arrived at the Matthews Community expecting to see Mary's typical small group of dedicated rock kids. When I walked into the room was I ever surprised! The room was absolutely packed to full capacity. In addition to Mary's normal group, we had a new family with four kids AND an entire cub scout den.

In addition we had a man with the Big Brother volunteer organization with his charge in tow and an exchange student from Thailand. I sat and watched as Neil had the kids captured with not only his knowledge of fossils but his very effective way of getting them hands on involved. Neil

gave each kid a chocolate chip cookie not to eat but as a very effective learning tool. Each was given a toothpick and told to imagine that the little chocolate chips were the fossils and that the cookie was the matrix.

The challenge to each was to carefully dig out the chips from the cookie without destroying them. This was one of the most effective teaching moments that I have seen in a long time. Mary Fisher spends a LOT of time preparing for these meetings as well as a lot of energy and passion to what she does. Mary had pre-



pared sheets showing different fossils that later the kids would get to pick their own to take home.

Mary brings so much stuff to her meetings that she uses a little red wagon to haul all of her supplies and freebies for the kids. Thanks to donations from club members, Mary had lots of fossils to hand out even with the huge number of folks on hand.

Our club thanks Mary for her continuing efforts for the youth in our community and a very big thank you to Neil for sharing his knowledge on a level that both kids and adults in the room could understand.

101.73 ct "D" grade Diamond going up for sale.

The rough stone originally weighed in at 236 ct, and after 21 months of work it is now appear shaped faceted stone. Expected to bring in about \$20 million dollars at auction in May. (By the way grade "D" means flawless!)



Charlotte Jr. Rockhounds

**Saturday March 23, 2013
10-11:00 a.m.**

Origin of Agates and Jaspers by ron gibbs

Location: Matthews Community Center
100 McDowell St. East
Matthews, NC 28105
704-321-7275

Contact: Mary Fisher
for further information
at: mefisher@att.net

Upcoming North Carolina Shows

March 22-24—HICKORY, NORTH CAROLINA: 43rd annual show; Catawba Valley Gem & Mineral Club; Hickory Metro Convention Center; I-40 Exit 125; Fri. 9-6, Sat. 9-6, Sun. 10-5; adults \$4, students and children free; exhibits, demonstrations, cabbing, faceting, tumbling, kiddie corner; contact Baxter Leonard, 2510 Rolling Ridge Dr., Hickory, NC 28602, (828) 320-4028; e-mail: gailandbaxter@aol.com

April 5-7—RALEIGH, NORTH CAROLINA: 37th annual show; Tar Heel Gem & Mineral Club; State Fairgrounds; Kerr Scott Bldg., Blue Ridge Rd.; Fri. 3-8, Sat. 10-6, Sun. 10-5; free admission; raffle, door prizes, rock candy, mineral grab bags, geode cutting, silent auction, club member demonstrations; contact Cindy Hummel, 10609 Chelsea Dr., Raleigh, NC 27603, (919) 779-6220; e-mail: mchummel@mindspring.com; Web site: tarheelclub.org

April 2-5—SPRUCE PINE, NORTH CAROLINA: 2nd Annual Spring Grassy Creek Gem & Mineral Show; Parkway Fire and Rescue Fire Dept.; PFRFD; 129 66 Hwy. 226 S; Thu. 8-6, Fri. 8-6, Sat. 8-6, Sun. 8-5; free admission; 30 dealers, gemstones, mineral specimens, jewelry, beads, fossils; contact Donna Collis, 12966 Hwy. 226 S, Spruce Pine, NC 28777, (828) 765-5519; e-mail: collisdonna@yahoo.com

April 10-12—FRANKLIN, NORTH CAROLINA: Show and sale; Franklin Chamber of Commerce; Macon County Community Bldg.; 1288 Georgia Rd.; Fri. 10-6, Sat. 10-6, Sun. 11-5; adults \$2, children (12 and under) free; rough and cut gemstones, gold and silver jewelry, door prizes, demonstrations, jewelry repair on site; contact Linda Harbuck, 425 Porter St., Franklin, NC 28734, (828) 524-3161; e-mail: lindah@franklinchamber.com; Web site: www.visitfranklinnc.com

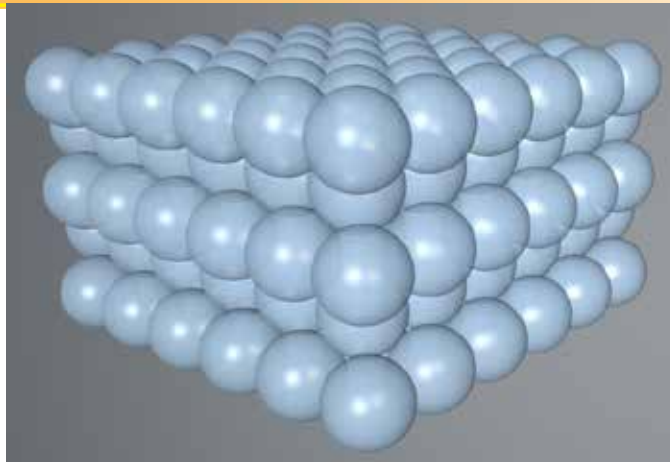
Facts about Opal

article from Wikipedia
photos r gibbs

Opal is a hydrated amorphous form of silica; its water content may range from 3% to 21% by weight, but is usually between 6% to 10%. Because of its amorphous character it is classed as a mineraloid, unlike the other crystalline forms of silica which are classed as minerals. It is deposited at a relatively low temperature and may occur in the fissures of almost any kind of rock, being most commonly found with limonite, sandstone, rhyolite, marl and basalt.

Opal is the national gemstone of Australia, which produces 97% of the world's supply. This includes the production of the state of South Australia, which amounts to around 80% of the world's supply.

The internal structure of precious opal makes it diffract light; depending on the conditions in which it formed it can take on many colors. Precious opal ranges from clear through white, gray, red, orange, yellow, green, blue, magenta, rose, pink, slate, olive, brown, and black. Of these hues, the reds against black are the most rare, whereas white and greens are the most common.



Precious opal consists of spheres of silica of fairly regular size, packed into close-packed planes that are stacked together with characteristic dimensions of several hundred nm.

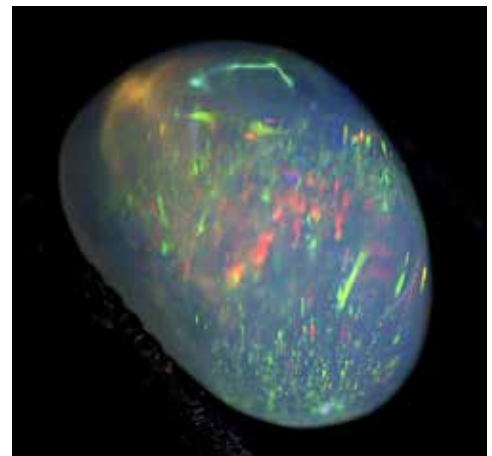
It varies in optical density from opaque to semi-transparent. For gemstone use, its natural color is often enhanced by placing thin layers of opal on a darker underlying stone, like basalt. Common opal, called "potch" by miners, does not show the display of color exhibited in precious opal.

Precious opal

Precious opal shows a variable interplay of internal colors and even though it is a mineraloid, it has an internal structure. At micro scales precious opal is composed of silica spheres some 150 to 300 nm in diameter in a hexagonal or cubic close-packed lattice. These ordered silica spheres produce the internal colors by causing the interference and diffraction of light passing through the microstructure of the opal.

It is the regularity of the sizes and the packing of these spheres that determines the quality of precious opal. Where the distance between the regularly

packed planes of spheres is approximately half the wavelength of a component of visible light, the light of that wavelength may be subject to diffraction from the grating created by the stacked planes. The spacing between the planes and the orientation of planes with respect to the incident light determines the colors observed. The process can be described by Bragg's Law of diffraction.



precious opal

The veins of opal displaying the play of color are often quite thin, and this has given rise to unusual methods of preparing the stone as a gem. An opal doublet is a thin layer of opal,

backed by a swart mineral such as ironstone, basalt, or obsidian. The darker backing emphasizes the play of color, and results in a more attractive display than a lighter potch.

Combined with modern techniques of polishing, doublet opal produces similar effect of black or boulder opals at a mere fraction of the price. Doublet opal also has the added benefit of having genuine opal as the top visible and touchable layer, unlike triplet opals.

The triplet-cut opal backs the colored material with a dark backing, and then has a domed cap of clear quartz or plastic on top, which takes a high polish and acts as a protective layer for the opal. The top layer also acts as a magnifier, to empha-

size the play of color of the opal beneath, which is often of lower quality. Triplet opals therefore have a more artificial appearance, and are not classed as precious opal.

Common Opal

Besides the gemstone varieties that show a play of color, there are other kinds of common opal such as the milk opal, milky bluish to greenish (which can sometimes be of gemstone quality); resin opal, which is honey-yellow with a resinous luster; wood opal, which is caused by the replacement of the organic material in wood with opal; menilite, which is brown or grey; hyalite, a colorless glass-clear opal sometimes called Muller's Glass; geyserite, also called siliceous

sinter, deposited around hot springs or geysers; and diatomite or diatomaceous earth, the accumulations of diatom shells or tests.

Fire Opal

Fire opals are transparent to translucent opals with warm body colors of yellow, orange, orange-yellow or red. They do not usually show any play of color, although occasionally a stone will exhibit bright green flashes. The most famous source of fire opals is the state of Querétaro in Mexico; these opals are commonly called Mexican fire opals.

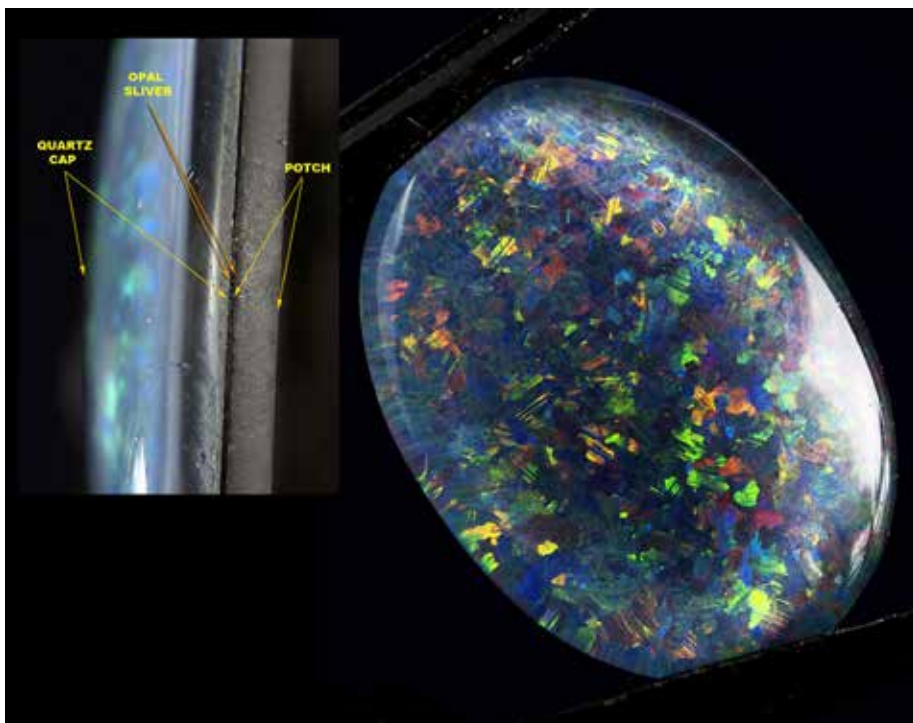


fire opal

Fire opals that do not show play of color are sometimes referred to as jelly opals. Mexican opals are sometimes cut in their rhyolitic host material if it is hard



opal in rhyolite



opal triplet

enough to allow cutting and polishing. This type of Mexican opal is referred to as a Cantera Opal. There is also a type of opal from Mexico referred to as Mexican Water Opal, which is a colorless opal which exhibits either a bluish or golden internal sheen.

Girasol opal is a term sometimes mistakenly and improperly used to refer to fire opals as well as a type of transparent to semi-transparent type milky quartz from Madagascar which displays an asterism, or star effect, when cut properly.

However, there is a true girasol opal that is a type of halite opal, that exhibits a bluish glow or sheen that follows the light source around. It is not a play of color as seen in precious opal but rather an effect from microscopic inclusions. It is also sometimes referred to as water opal as well when it is from Mexico. The two most notable locations of this type of opal are Oregon and Mexico.

Peruvian opal (also called blue opal) is a semi-opaque to opaque blue-green stone found in Peru which is often cut to include the matrix in the more opaque stones. It does not display pleochroism. Blue opal also comes from Oregon in the Owhyee region as well as from Nevada around Virgin Valley.

Graves Mountain "Rock Swap and Dig" 2013 Dates

8 am to 6 pm, Fri, April 26, 2013
8 am to 6 pm, Sat, April 27, 2013
8 am to 6 pm, Sun, April 28, 2013

8 am to 6 pm, Fri, Oct 4, 2013
8 am to 6 pm, Sat, Oct 5, 2013
8 am to 6 pm, Sun, Oct 6, 2013

"You are invited to field collect minerals at Georgia's premiere mineral location!"

The caretaker in charge of Graves Mountain, Clarence Norman Jr., has announced plans to hold a three day dig and rock swap on the Mountain during April and October of 2013. He will have the mountain open to collecting from 8 am to 6 pm each day. All participants must stop at the welcome table in the Hospitality tent to sign a liability release and make a small contribution to defray the cost of opening the mountain and providing port-o-lets. There will be several golf cart type, four wheeled vehicles available to transport those participants who have trouble walking long distances. The dig will cease and everyone is expected to be off the mountain by around 6 pm each day. Participants will be allowed to park in a designated area on the mountain.

Rock Swap and Hot Food/Drinks:

Junior will set aside an area in the upper parking lot for tables to be setup for daily rock swaps. Anyone who would like to setup a table(s), please contact Junior at the phone numbers listed below. Hot food cooked on the grill, cold drinks and chips will be available for purchase on the mountain during all three days of these events.

Contact Information:

Clarence Norman Jr. (Junior) - 706.359.3862 (his business) or 706.401.3173 (his cell)

DIRECTIONS:

From Atlanta's I-285, take I-20 east to the exit for Washington, GA SR 78 (SR 10, SR 17) and turn left. Travel north to Washington, turn right onto SR 378 and drive 11 miles to the Graves Mountain area. The entrance to Graves Mountain is on your right about 8/10 mile past the Lincoln county line sign. The entrance is a paved road that goes through a gate and up a hill. Please park along the access road and then proceed to the "Welcome Tent" at the end of the pavement to obtain a liability release form and to make a donation for the portable bathrooms, etc.

