

GOLDRUSH LEDGER



CHARLOTTE GEM & MINERAL CLUB

DECEMBER 2012

Prez Sez ...

Where does the time go? My second year as president is about to end and that tends to make me somewhat reflective (our newsletter editor will undoubtedly comment on my reflectiveness being related more to a loss of hair than expanded mental capacity but what does he know?).

All in all, 2012 has been a very good year for the Charlotte Gem & Mineral Club. I recently had a telephone conversation with a former member who came to last month's auction. It was the first time she had been at a club meeting or event in over a year. She said she couldn't help noticing all the new faces and a level of enthusiasm that had been absent in previous years.

This is certainly the most diverse group of members in some time – diverse in terms of age, ethnicity, gender and areas of interest. There were even two

teenagers at the auction who showed a lot of interest in what was going on.

One of the prevailing comments I hear in talking to members of other clubs is that their membership is getting old and "dying off". CG&MC was founded over 50 years ago and the current version is looking strong, active and ready for the next 50 years.

Thanks to the ongoing efforts of our vice-president, Neil Hohmann, we have had a number of fascinating programs and speakers this year. He's already got the first half of 2013 lined up and I promise you will not be bored and will learn a lot at next year's meetings. We also plan to continue the pre-meeting silent auctions that have been quite successful in improving the size of our bank account.

Speaking of our bank account, one of the major reasons for all our fund raising efforts this year is

to build up reserves in anticipation of finding a more convenient location and venue for our cabbng and faceting equipment. We hope to be able to provide a place where members can go for classes or to use equipment they don't have at home. A search has been underway throughout 2012 and we hope to have something set up in 2013. If you

Table of Contents

- 1-2 Prez Sez
- 3 Christmas Party time & date
- 4 Little Pine Garnet Mine
- 5 Annual holiday party
- 6 Field Trip January
- 7 Due due
- 7 2013 Workshops
- 7 -8 Carborundum



2012 CGMC Officers & Board

President

Murray Simon
msimonnc@gmail.com
(704) 668-5658

Vice President

Neil Hohmann
gisusainc@aol.com

Secretary

Pat Walker
704/523-5261

Treasurer

Vivian Philson
Philson05@carolina.rr.com

Directors at Large

Mary Fisher
mefisher@att.net
Brad Glover
glov4305@bellsouth.net

Bulletin Editor

Ron Gibbs
theimage1@aol.com

Past President

Jack King
jackkretired09@gmail.com

CLUB CHAIRPERSONS

SFMS Contact &

StampChair

Pat Walker

Geode Chair

Jimmy Strickland

Workshop Chair

Linda Simon
lsimon1@carolina.rr.com

WebMaster

Ron Gibbs

Librarian

Pat Walker

Field Trip Chair

Jack King
jackkretired09@gmail.com

Christmas Party Chair

Pat Walker

Special Events

Kim Gwyn
gwynk@flashlink.net

WEB Site

www.charlottegem.com

have any specific leads or locations in mind please contact me at your earliest convenience.

The November auction, while not as heavily attended as hoped for, produced record-breaking sales for the club. We were fortunate to have had two collections donated for the auction and the bidding was rather brisk on a number of items. Of course this was no doubt due in large part to my two auctioneer colleagues Kim Gwyn and Brad Glover.

Turns out that with three auctioneers its possible to go through a ton of stuff in approximately two hours. It also helped that the weekend before the auction we met at the storage trailer with Ron Gibbs and spent a few hours organizing and identifying equipment and rough. We even have material left over for next year's auction as well as the silent auctions.

The last event on our 2012 agenda is the annual club Christmas party. Once again it will be held at the Am-

ity Presbyterian Church on Friday evening December 14th. For those who have not previously attended, this is a great opportunity to learn more about the club and your fellow members. In addition to a great buffet dinner, we will install the 2013 slate of officers and award scholarships to UNCC students. This year we will be adding to the festivities with a Las Vegas style after dinner show. Tables are going fast so call Pat Walker now (704-523-5261 between 5-9PM) to make your reservations!

It has been a pretty busy year for the club and its board of directors but the results make it all worthwhile. Thank you all for your efforts and participation. To the unfortunate few of you who might not make it to the Xmas party, I want to wish you all a happy holiday and a great 2013.

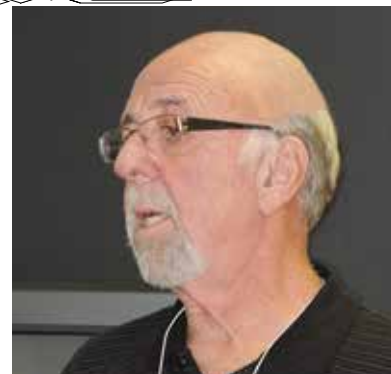
See you soon
Murray

President Charlotte Gem & Mineral Club, Ambassador at Large for Shiny Tops, ...

"(our newsletter editor will undoubtedly comment on my reflectiveness being related more to a loss of hair than expanded mental capacity . . . "

no commnet needed or required ... a picture is worth a 1000 words ...

(editor)



Charlotte Gem & Mineral Club

Monthly Meeting

December 14, 2012 Friday -- 6:30 pm --

Location: Amity Presbyterian Church
2831 N Sharon Amity Rd,
Charlotte, NC 28205-6699

**NOTE
LOCATION !**

2012 ANNUAL CHRISTMAS PARTY

The club will provide the meat dishes, deserts and drinks. Please bring a side dish to pass: salad, vegetable, or ??? Paper plates, glasses and eating utensils will also be provided, but do bring a serving spoon with your dishes. If you have not already done so, please RSVP to Pat Walker and let her know how many are coming (704/523-5261). The club will also be presenting the scholarships for the year. Two going to UNC Charlotte Earth Science/Geology students, and two to club volunteers for use at William Holland or Wild Acres retreats. (Be certain to get your point sheets turned in to Linda Simon as soon as possible to be included in the drawing for the club scholarships!)

Jr Rockounds

Next meeting in January

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



Field Trip: Little Pine Garnet Mine

trip leader: Mary Fisher

The trip to the Little Pine Garnet Mine was highly successful and virtually everyone went home with garnets (that they found themselves.) For those with more stamina there was the mine itself, where the garnets could be chiseled directly from the mine wall. If that was deemed too difficult, then garnets could be collected from older run-off and mine tailings.



This was a Jr. Rockhound sponsored field trip where the rest of the club was invited to attend.

Annual Holiday Party

by ron gibbs

The general guidelines for the Christmas/Holiday Party have not changed, the club will provide the meat dishes (both turkey and ham). Also desserts, drinks, and eating utensils.

If you can bring a dish to pass, salad, veggie, casserole, hors d'oeuvres (look it up in your funk&wagnall's, that's how it is spelled), bread, or just about anything else that can be consumed. Please bring a serving utensil appropriate to the dish!

Two students were selected for this year's UNC scholarship, Michael Mohr, and Suzanne Ching, and each will receive a \$1000 scholarship from the club. Both will likely be in attendance at the party, so take the opportunity to meet them.

For the rest of you, you know who you are ... the one's who worked this year to keep the club operational and provide the monies for the scholarship fund. You need to turn in your point sheets to Linda Simon before the party, or just as you arrive at the event. Sometime during the festivities, we will draw two club members at random from those who turned in point sheets and award two scholarships to William Holland or Wild Acres. If you have turned in your point sheet you do not

have to present to win. So be certain to get the sheets turned in.

The point sheets can be obtained from the club WEB site. Points are awarded for helping with the Matthews Alive booth, the Mint Hill Madness Booth, bringing food to a meeting, cleaning out a trailer (ours not yours), being an officer or appointee to a committee, giving a presentation, attending a bored meeting (sorry Murray I meant "board" meeting), writing an article for the newsletter, bringing a video projector to a meeting, drawing breathe at a monthly meeting, and other categories will be given consideration if you think we forgot any.

The slate of new (well maybe mostly old) officers will be announced for 2013. I have it on some authority there will be major shake-ups in the officer ranks in 2014!

Not required, but available, you can bring one or two small presents to exchange if desired. Each year there is an exchange table and those bringing a gift may then select a gift from the table. Wrap them up in gift paper and (if necessary) indicate on the outside the appropriate sex for the gift. President Murray does not look all that good in ear-

rings! (most fail to match his necklace)

When the gift exchange was first added to the party agenda (early 1970's), there was a limit of about \$5-\$10 for the gift. In today's equivalent dollars that roughly means please keep all of the gifts under about \$30-\$60 or a few beads which ever is less. (yes I know in actual 1970 dollars it would be more like \$200 today)

Although the above math is *designed to be humorous*, (*i.e. do not bring expensive gifts*) according to a true inflation calculator ... \$1 in 1970 is now equivalent to \$5.92 (in 2012 dollars) or \$1 (2012) will buy the same as \$0.17 in 1970. But, in 1970 gold was still \$35/oz, and today it's around \$1700/oz ... that's a 48 to 1 increase so I think the "true inflation" calculator may be a bit deflated itself!

I also have it on authority that there will be some kind of entertainment at this year's party, and there might even be some kind of participation award. Who knows what wild and crazy things might happen. You need to be there to find out.

The sit down dinner starts at roughly 7:00 pm but feel free to arrive a bit earlier and mingle with others.

An Official Field Trip of The Jacksonville Gem and Mineral Society (HOST)

**9:00 AM to 5:00 PM,
Saturday, January 26, 2013
Jackson Crossroads Amethyst Mine
Tignall, GA**

Where: Jackson Crossroads Amethyst Mine, Tignall, GA – see below for directions.

FEE AREA: \$15 per person, per day (as long as we have more than 10 people). All persons are required to sign a release form upon arrival. I will be close to the entrance collecting the fee and having you sign waivers.

- **Children:** No one under the age of 12 allowed on the property even with an adult guardian accompanying them. Minors over 12 years old must be accompanied by paying adult.
- **Pets:** Well behaved dogs may join their owners at the site, please keep on a leash.
- **Collecting:** Amethyst – working the dump piles. No one is allowed in the pit.

WHAT TO BRING:

Clothing appropriate for this time of year in Georgia. That could be almost anything and I would suggest layers that could be removed and something in the event of a shower. Gloves (gems can be sharp), safety glasses (for breaking up rocks), and at least a good pair of shoe. Hand tools (Shovel, pick, hammer and chisel are examples) are allowed, no power tools.

Be aware that this site is very rustic, which means no electricity, running water or bathroom facilities on the property (other than the woods) The closest restroom is 8 miles away in Tignall, so come prepared for that.

General info for dig:

Gates will be unlocked at 9 am by caretaker. Due to liability issues and government regulations, please do not enter areas that are roped off; this is the pit area which is being worked commercially.

- You are welcome to work the many dump piles all over the property.
- Please keep the property clean.

Directions from the North:

Take I-85 south to the second exit in Georgia. Turn right at the top of the ramp. This is 17 South. Follow through Elberton. Take 17 south all the way to Tignall (there is a town limits sign as you enter the town). Turn right at the first (and only) signal in Tignall (Independence). Stay on this road for about 8 miles. You will see a cemetery opposite the Clark Station Church. Turn right onto Hollis Norman Road, just across the road from the church. Go a short distance and you will see a metal gate on the right. Drive past it and turn into the first dirt road you come to. There is a metal gate at this point. If the gate is open, drive in to sign in. This road leads straight to the mine through the woods. It is very bumpy, so go slow – even on the short gravel part. Park wherever you can without blocking the entrance road.

Local Accommodations:

Many visitors stay at the Jameson Inn in Washington, GA, which is about 25 minutes south of the mine on Route 17. They offer a “cleaning station” at the back of their building where guests can rinse off their finds at the end of the day.

- Elberton, GA has a wide variety of hotels, restaurants and stores and is about 30 minutes north of the mine.
- Closest decent campground is Bobby Brown State Park which is about 25 minutes away. They have RV hookups, showers, bathroom facilities and sites with electricity.

Field Trip Contact: Lucy Miller.

LucyAnn323@aol.com

Phone: 904-838-5026

Please leave a message as I am often somewhere where I don't get a signal....

2013 Raffle - Raffle Dues - Due (Dews - Do?)

Club dues will be due starting in January, they are \$20 for individuals and \$25 for families. You can pay your dues at a meeting or send them to our treasurer, Vivian Philson. Her address is on the membership form which can be downloaded from our WEB site. Even if you are paying to renew please include a form with your payment. You only need to fill in your name and "new" or updated data if it is a continuation of membership.



The club has also secured a beautiful citrine and sterling silver necklace with snake chain for a raffle beginning next year. The citrine was cut by our very own Jimmy Strickland is just over 15ct in weight. Tickets will go on sale in the January meeting and continue to be sold through March. You must be a paid member to buy tickets.

SFMS Workshops & William Holland 2013 season opens

The schedule is out and registration has begun for the 2013 William Holland season. Registration opened on December 3rd. A few classes are already near full.

Register early to lock down the time and class of your choice. The tuition increased a little this year, but it's still the best deal on lapidary studies around. \$350 for tuition and room and board for the entire week. That includes a shared room, and three meals a day as well as admission to the week long class of your choice.

Check the SFMS WEB site for announcements about

the 2013 SFMS workshops at both Wild Acres and William Holland. They will publish their schedule sometime in late December.

Several of our club members are teaching classes at either or both of these schools. Sarah Lee Boyce is teaching opals, Ron Gibbs is hosting photography sessions, Jack King is teaching Cabochons. Ex-members Dan Haga (silver) and Kim StJean (cold connections) are both teaching jewelry classes.

For further information about either school talk with Sarah, Jack, or Ron at a meeting.

Carborundum®, Moissanite, Silicon Carbide

*by Zeb William Rike III
from The Pineywoods Rooter
11/2009 via Backbender's
Gazette, 3/2010*

Whatever you call it, silicon carbide was an amazing discovery, and it has revolutionized the world. It was the first manmade abrasive and has made possible our present way of life and the lapidary hobby. "The Man Who Didn't Know When He Had Failed" (1) Our story begins with Dr. Edward Goodrich Acheson who in 1891, in a tiny shop and laboratory in Monongahela City, PA, filled a small iron bowl with a mixture of clay and coke, stuck a carbon arc electrode in the middle, and wrapped one wire around the bowl and the other around the electrode. These were connected to uninsulated wires that went through holes in the floor to a generator in the basement. He then closed the switch and waited a few hours, then turned off the current and examined his results.

When the material had cooled, he was painfully disappointed as he had

only a dull gray mass of fused material. He removed the carbon electrode and examined it, and his trained eye detected a few tiny sparkling crystals, which he scraped off into the palm of his hand, sensing their extreme hardness and sharpness. He collected them on the end of a lead pencil and drew them across a piece of broken window glass and found they scratched it as easily as would a diamond.

He repeated his experiment and produced enough to try as an abrasive. He sprinkled a few crystals into grease on an iron plate in a lathe and ground a facet on the diamond in his ring. Chemical analysis showed the material was silicon carbide, SiC, a hitherto unknown compound. He scaled up the furnace and soon was making ounces per day, and he demonstrated it to gem cutters in New York who saw it as a substitute for diamond dust. They ordered several ounces of the new abrasive at \$0.40 per carat (\$880 per pound), whereas diamond dust sold for \$0.70 per carat.

He tradenamed the material Carborundum® (from his mistaken initial belief that it was a compound of carbon and corundum), formed a company with stockholders, and enlarged his capacity until he was making 45 tons per year. Initial largescale uses were as grinding compound for grinding in or seating of steam valves, and as tiny grinding wheels used by dentists on teeth.

They had a vision of really large uses, so moved to Niagara Falls, NY (for cheap electrical power) and set up to produce it in furnaces 50 feet long, where a mixture of coke (carbon), sand, salt (as a flux), and sawdust (to bum out to leave porosity) was heated to 4000°F by passage of an electric current. Carbon and silicon (from the sand) react to give silicon carbide vapor which crystallizes in cooler parts of the furnace. $SiO_2 + 3C \rightarrow SiC + 2CO$

Thus the abrasive became cheap enough to produce grinding wheels (bonded with clay and fired) for grinding and finishing of castings and precision grinding and shaping

of metals too hard to be shaped in a lathe; up till this time, grinding wheels made from emery were used only for tool sharpening.

Other Uses of Silicon Carbide

(1, 2, 3) Silicon carbide (along with fused aluminum oxide) is used for not only grinding wheels but as loose abrasives to finish and polish monument stones, as "sandpaper" and "sand cloth" for the finishing and polishing of wood and metal objects of all kinds—from car bodies to pen points.

Porous vitrified silicon carbide is used as a filter medium in water purification, in filtration of hot gases, and many like areas.



Silicon carbide is chemically inert and very heat resistant while at the same time being an excellent heat conductor. So it can be used as furnace walls to separate the flame from the material to be heated. It will not melt at any tempera-

ture or pressure but sublimates directly to a vapor. It can conduct electric current and is used in the form of heating elements for glass melting furnaces, etc. It also can be used as a semiconductor to make high power, high temperature electronic devices. Early in the 20th century, it was used to make rectifiers for some of the first radio sets and was made into lightemitting diodes.

Mechanical Uses

Silicon carbide is used in high-temperature bearings, disc brakes in highperformance cars (some of the Ferrari, Porsche, Audi, Bugatti, Bentley, and Lamborghini models), as diesel particulate filters and in composite (Chobham armor) and as ceramic plates in bulletproof vests ("Dragon Skin").

Optical Uses

Silicon carbide is very strong, dimensionally stable with heat and a good heat conductor and has been used in parabolic reflecting mirrors in a number of space telescopes. These are made by chemical vapor deposition and ground and polished to the right curvature. The Hershel space telescope, launched in 2007, has a primary mirror 3.5 meters (11.5

feet) in diameter and was ground to a thickness of 2.5 mm (ca. 1/10 inch) and polished to within 3/100,000th of a millimeter of the calculated shape.



Uses as a Gem

Silicon carbide is rare on earth, being found in traces only in some kimberlite and corundum deposits and in some meteorites, but it is common in space, being a major constituent of "star dust." It was named Moissanite after the discoverer Dr. Ferdinand Henri Moissan. Colorless SiC is called "Synthetic Moissanite" or simply "Moissanite" and is faceted as a gem. It is not quite as hard as diamond (99.5 vs. 10 for diamond) but has a higher refractive index (2.65–2.69 vs. 2.42), hence more brilliance and more fire than a diamond. It is also more heat resistant than a diamond, so it can be "set" in the wax pre-form used in "lost wax" casting, and molten gold can be poured around it without damage. It must be cut at the proper angle from the crystal to minimize birefringent effects.

Footnotes

1. The Romance of "Carborundum"®, The Carborundum® Company, Niagara Falls, New York, NY, 1945
2. http://en.wikipedia.org/wiki/Silicon_carbide http://www.esa.int/esaSC/SEM7W1PGQD_index_0.html



Happy Holidays &
Happy New Year!