

# GOLDRUSH LEDGER



CHARLOTTE GEM & MINERAL CLUB  
SEPTEMBER 2012

## Prez Sez ...

And a great time was had by all. Matthews Alive is over, the geodes and saws are back in the trailer and a group of CG&MC members know each other better than they did before. While working in the booth this year I came to the realization that although raising money for college scholarships and seeing the look of excitement and wonderment on the faces of the kids is very rewarding, it's the interaction and camaraderie of club members that make it a particularly valuable and unique experience.

At a very busy time on Saturday afternoon Ellen Gwyn is at the front table taking money and handing me the geodes to be cut / I pass those geodes on to Jimmy Strickland at the big saw and Lindsey Worden at the small saw / they hand me back the cut geodes which get passed (behind Jimmy's back) to Chuck Borawa who washes off the saw oil in the water buckets and hands

them back to me / I hand the cut geodes back to Ellen who wraps them after the child has had a chance to Ooh and AAh over their carefully chosen souvenir. Talk about a feeling of teamwork and accomplishment!

On Sunday we are having a quiet spell when a little girl hands me a \$10 geode she has chosen after carefully examining all the geodes in that particular bin. She tells me she gets one every year and hopes this one is special. I cut it, wash it and hand it to her to be the first to see inside . . . . her excited reaction is priceless. It is a hollow with amethyst crystals and amethyst is her birthstone. She is quickly surrounded by CG&MCers in green T-shirts who ask to see her new prized possession and share in her joy. Her mother takes a picture and thanks us.

There are so many "nice moments" going on at these

events. Pat Walker with her visiting sister, sitting there all day with the cash box on her lap keeping it safe and secure. Catherine Peterson shouting out "Get your geodes here" and obviously enjoying telling customers the story of how geodes are formed (Who knew they're found in dumpsters behind bowling alleys?). Margaret Moore could only work a

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[www.charlottegem.com](http://www.charlottegem.com)

few hours on Saturday but she was all over the place showing customers how to tell the difference between solid and hollow, wrapping, taking money and basically doing anything that needed to be done. Lindsay Werden suited up for serious geode cutting with a soft boot/brace on one foot and an impressive pair of heavy-duty long black gloves. Our webmaster Ron Gibbs with us on all three days answering any and all geological questions, cutting some geodes and occasionally sawing away at one of those huge turkey legs for lunch (they're especially tasty when seasoned with a fine mist of cutting oil).

Just when things get a bit hectic and almost out of control along come Gale and Tom Blevins who immediately identify the gaps in our "production line" and fill them. Clarence Johnson telling potential customers "geodes are like a box of chocolates" and "they will outlast them and their kids and their kids' kids" (I haven't quite figured that context out yet). Ever present and quietly working the "backroom" of the booth are Kim Gwyn and Brad Glover- keeping an eye out for any problem that may turn up/ filling those wash buckets / doing so much of the "heavy lifting" (I get tired just watching them). Harrel Suggs who, when

he's not loading and unloading those heavy saws and crates, is sniffing, weighing and searching for the perfect banded agate geode.

Yuri Godin cutting anything he can get his hands on (had to tell him to leave my apple alone) while son Nathan stands by growing taller by the minute The sight of Mary Fisher helping to pull down a big tent is something you don't want to miss.

And then there's Jimmy Strickland with his amazing "Flexatent" that can be configured to withstand whatever problems the weather and heavy attendance might throw at us. When it comes to MA and MHM, this guy is our coach, team captain, equipment manager and historian (and we get Becky thrown in for free). The next time you run into him give him a pat on the back and a big "Thank you!!!"

If you were away over the holiday weekend this year and couldn't make it to Matthews Alive we understand. There's always Mint Hill Madness at the end of the month for the next dose of fun and team spirit. See you there!

**Murray Simon, President  
Charlotte Gem & Mineral Club,  
Master bard & story teller, creator of illustrious fictions, and spinner of tall tales.**

# **Charlotte Gem & Mineral Club Monthly Meeting**

**\*\*\* NO SEPTEMBER MEETING \*\*\***

Due to the Matthews Live and the Mint Hill Midnight Madness there is no regular Thursday night meeting this month.

# **Charlotte Gem & Mineral Club Monthly Meeting**

**(October Preview)**

October 18, 2011 Thursday -- 7:00 pm --

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

Dr. Sarah K. Carmichael (Appalachian State University, Department of Geology) will be talking about the minerals of the Blue Ridge Mountains.

*Editor's Note: In the future our club will be accepting scholarship requests from the students in the geology department of Appalachian State University. We will be supporting both Appalachian State and UNC Charlotte with our scholarship pro-*

# ***Charlotte Junior Rockhounds - RETURN!***

**Welcome to another season of the Charlotte Junior Rockhounds!**

## ***September – Gem Hunt!***

To begin the season, September 28 and 29, the Charlotte Gem and Mineral Club has a booth at Mint Hill Madness. We will have a gem sluice and are also cutting geodes. The gem sluice provides a moving water trough and a tray of mixed rocks so you can hunt for gems and minerals, and have your finds identified by an expert. Come out to see our club's booth, and join in the fun!

***If you would like a free ticket for your child/children, send me their names, and I'll issue a special ticket for each person.***

***For further information please contact Mary Fisher at [mefisher@att.net](mailto:mefisher@att.net)***



*photo by Mary Fisher*



## **Matthews Alive A Success!**

We had a great member turn-out to staff the Geode Booth at Matthews Alive, and as a result we sold a couple hundred geodes. We made a little over \$3000 for the three days which was a slightly better than average weekend for the club. Thank you to all the volunteers who gave up some of their valuable weekend time to fill out the longer than usual schedule.

We were so successful with certain geode size ranges that we nearly sold out of the \$15 and \$20 sizes. As expected we sold a large number of the less expensive Moroccan geodes, but we balanced them with higher than expected sales of the \$60 size.



## **Editor's Notes**

*by ron gibbs*

1.) Don't forget that our November meeting will be the annual club auction. If you have any extra minerals, slabs, rough etc. please set it aside and bring it to the November meeting. We once again have a good supply of tools that were donated to the club and will be up for sale at the auction.

2.) Mint Hill Madness will be on Friday and Saturday, the 28th and 29th of September. Please remember your schedules for the two days and come out and have some fun.

3.) We are approaching the end of year and it's almost time to nominate the next slate of club officers. We are always looking for new people, so don't be timid, if you would like to join that slate in some capacity step forward and be counted. There are also some committee chair positions that need to be filled each year so we would be more than happy to accept volunteers of any of those too. (see the list on the left edge of page 2 of this (and every) newsletter.)

4.) There will be no regular December meeting, instead there will be our annual Christmas/Holiday party. Although the precise date

has not yet been set, it is usually on the 2nd or 3rd Friday of December. We will secure the facilities and then announce the date. This meeting is where we will announce the winners for our external scholarships and the scholarships for our internal SFMS (William Holland or Wild Acres) weeks. That means that the "point sheets" for club participation will be due in November. (Mint Hill is a great place to pick up a bunch of extra points to pad those sheets!)

5.) There is a "Graves Mountain Rock Swap and Dig" scheduled for October 5-6-7 (Friday through Sunday). Further information can be found here: <http://www.gamineral.org/commercial-gravesmountain.htm>

6.) Field trip to the Vulcan Materials Company, Bartow Quarry, Cartersville, GA on Saturday, November 3, 2012. Sponsored by the Macon GA club, a member of SFMS. The main material of interest is a blue quartz in an metamorphic gneiss formation. For additional information contact Jay Batcha at [rocky1s@cox.net](mailto:rocky1s@cox.net).

7.) An October field trip to collect fossils around Taylorsville, KY. This trip will be on Saturday, October 13, 2012. To collect "Ordovician rocks and fossils" in vari-

ous road cuts in the area. For further information and examples of the of the fossil species that can be collected see the hosting clubs WEB site at: <http://kyana-geo.org/ordovician.html> For field trip informaton contact : Charles Oldham at : [charlesoldham@ymail.com](mailto:charlesoldham@ymail.com)

8.) **Show** - 34th annual show; Gaston Gem & Mineral Club; Gaston County Park (Biggerstaff Park) - October 5-7, 2012 - Fri. 9-6, Sat. 9-6, Sun. 9-5

9.) **Show** - Gem & Mineral Society of Franklin; Macon County Community Bldg, Fri. 10-5, Sat. 11-4, October 26 - 28, 2012.

10.) **Show** - Annual show; Columbia (SC) Gem & Mineral Society; Jamil Temple; 206 Jamil Rd., I-26 Exit 106A; Fri. 10-6, Sat. 10-6, Sun. 12-5 November 16-18, 2012.

11.) **Show** - Annual show; Cobb County Gem & Mineral Society; Cobb County Civic Center; 548 S. Marietta Pkwy.; Fri. 10-6, Sat. 10-6, Sun. 10-5 November 16-18, 2012.

12.) **Show** - Wholesale and retail show; Intergalactic Bead & Jewelry Show; Charlotte, NC, Metrolina Tradeshow Expo; Bldg. B, 7100 Statesville Rd.; Sat. 10-5, Sun. 10-5; November 17-18, 2012.



## Ripple Marks On Your Slabs?

via Rock Chip Reporter 10/97 & Amador Nugget  
June-August, 2001 via The Rockcollector 9/01

There are several possible reasons for this problem:

**1 - the carriage (or arbor) may be out of alignment.**

**2 - the blade may be dished.**

**3 - the bearing may be faulty.**

**4 - the blade may not fit the shaft properly.**

**5 - the feed speed may be too fast.**

To find a remedy, slow the feed speed. At the same time, make sure the blade is sharp. If it is not sharp, dress by running a piece

of brick or grinding stone through several times. If this doesn't help, check the alignment. Check the bearings by trying to wiggle the shaft. If it wobbles, the bearings are faulty.

Be sure there isn't any dirt under the shaft collars. If your check indicates misalignment, and you don't have the experience to realign the carriage, contact your supplier or manufacturer.

Don't let the blade slow down during cutting. Variation in rpm destroys accuracy, reduces cutting efficiency and dulls the cutting

edges of the blade. Use ample motor power. When running the piece through by hand, use only light, firm pressure.

Tighten vise clamps after every few cuts for a smoother cut. Successive slabs are sawed from one piece of rough.

To cushion rocks in a vise, use rubber composition such as stair treads, boot soles etc. If blocks must be used, line with the composition for a snug fit.

To mark rocks for trim sawing, use a Flair pen instead of the aluminum pencil. It is easier to see and doesn't run in oil coolants. It is also water soluble.

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## Obsidian: A Biography

by Terry Yoschak

This article originally appeared in The Rollin' Rock, July 2004

If we were to tell the life story of a piece of obsidian, one of the millions of pieces native to California, it might go something like this: born in a volcanic eruption, quarried and carved into a scraper for tree bark, traded for ocean shells, chipped into an arrowhead, lost during a deer hunt, buried by debris and sediments, dug up by an archeologist, mailed to a laboratory for testing, and finally laid to rest in a museum collection. That sounds like a use-

ful, well-traveled life. But a short one, since its lifespan as described above could be a mere 20,000 years or so – quite a youngster compared to most rock and mineral specimens. Yet few other minerals have had as much cultural, historic and scientific importance as obsidian. The key to obsidian's impact lies in two factors: its homogeneity (uniformity or sameness) and its ability to hydrate (to absorb water from the surrounding air or soil).

When obsidian is born in a rhyolitic lava flow, where the lava cools so fast that no crystals form, the resulting chemical composition is homogenous across the flow.(1) Every flow will contain slightly different amounts of trace elements than every other flow, so each flow has a chemical "fingerprint" of its own.

Two pieces of obsidian from the same flow will have identical fingerprints, no matter how far apart they were discovered. Obsidian "sourcing" (determining exactly where a piece of obsidian originated) is ac-

complished by the use of Neutron Activation Analysis (NAA), which bombards the specimen with a field of neutrons. The trace elements within the sample become radioactive and the radioactive emissions are used to identify dozens of different elements and the amounts of each element.

Since no two flows anywhere in the world have exactly the same trace elements in exactly the same amounts, comparing the specimen to a database of previous specimens solves the mystery. According to the Worcester Polytechnic Institute, "fingerprinting of obsidian artifacts by NAA is a nearly 100 percent successful method.(2)

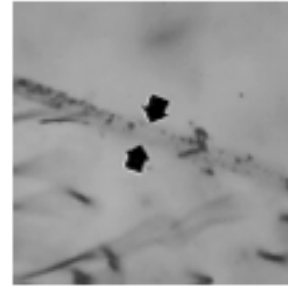
Obsidian sourcing has been a primary means of determining patterns of migration and trading among prehistoric peoples in California. If the same obsidian fingerprints exist on samples formed at Lassen Peak and excavated near Alameda, trading surely occurred during that 250 mile trip. People near the coast who had no local source of obsidian often traded their coastal treasures, such as shells, for the prized spear point and arrowhead-making material.

Just as homogeneity has enabled us to determine the "where" in the life of a piece of obsidian, hydration has given us clues about the

"when." As soon as obsidian is formed, its exposed surface begins to absorb water from the atmosphere. The absorption continues steadily over time, dependent on variables such as local temperature and humidity. By microscopically measuring the depth of the absorbed water layer, called the "hydration rim," we can determine the date of an obsidian artifact, either relative to another artifact, or – sometimes – with an absolute date.

When obsidian is quarried or flaked in the process of becoming an artifact, new surfaces are suddenly exposed to the atmosphere, beginning new hydration processes. In our biography above, the tree bark scraper would have been hydrating longer than the arrowhead – but how would we know the true age of the artifact when different hydration depths and layers exist on the same specimen?

In addition, without knowing how the climatic variables may have changed over thousands of years, the process of the hydration dating method has "major limiting problems.(2) Some of these pitfalls have given rise to wildly conflicting and controversial theories about the age of the first human settlements on our continent.



### **Hydration Rim (between arrows)**

A new technique called Secondary Ionization Mass Spectrometry (SIMS) involves slowly penetrating into the obsidian sample with an ion beam and measuring more precisely the distribution of hydrogen (in the absorbed water), and the depth of the hydration rim. (3)

As science develops even more sophisticated laboratory techniques and computer models to analyze hydration variables, we will gradually be able to refine and revise the "when" of obsidian specimens, and then perhaps every piece of obsidian can have its own true biography.

#### **References:**

1. Glascock, Michael. Archaeology, Geology, and Geochemistry of Obsidian for Provenance Research. Oct 2002. <[http://www.peak.org/obsidian/abstracts\\_g.html](http://www.peak.org/obsidian/abstracts_g.html)>
2. "Neutron Activation Analysis." Worcester Polytechnic Institute. <<http://www.wpi.edu/Academics/Depts/ME/Nuclear/Reactor/Labs/Rnaa.html>>
3. "The Obsidian Clock." Oak Ridge National Laboratory. <<http://www.ornl.gov/info/reporter/no7/clock.htm>>

Photo from "Introduction to Obsidian Hydration Studies." <[http://www.obsidianlab.com/info\\_oh.html](http://www.obsidianlab.com/info_oh.html)>