GOLDRUSH LEDGER

CHARLOTTE GEM & MINERAL CLUB

OCTOBER 2012

Prez Sez ...

The sluice, saws, geodes and sluicing bags are back in the CG&MC trailer getting ready for their winter hibernation. Hopefully the ever-dedicated special events crew has had a few days to rest up from their setup/selling/teardown efforts. Mint Hill Madness (MHM) turned out to be a fun time but it also suffered from somewhat disappointing attendance coupled with a lot of work.

Thanks to Jimmy Strickland and his amazing "Bigaflexatent", our booth was easily the most attractive and attention-getting display to be seen. The sluice was colorful and worked like a charm and the volunteers in their green tee shirts added a nice consistent color accent.

There seems to be a noticeable difference in the makeup of the crowd at this event versus Mathews Alive (MA). MA is more family-oriented i.e., moms and dads bringing in the kids to buy a geode; MHM tends to have kids running loose or in packs. I often had the feeling that MHM parents were using the vendors and booths as baby sitters. Unfortunately some of those kids showed a distinct lack of discipline or respect and had to be booted out of the booth area.

Several people need to be thanked for their strong efforts at MHM, but in particular I want to single out Kim Gwyn, Brad Glover, Jimmy Strickland, Mary Fisher, Ron Gibbs and Neil Hohmann. Without their tireless support it would have been all work and no play and very dull indeed.

One of the biggest highlights of this event for me was the number of brand new members who showed up and volunteered their time. It was a chance to get to know them and show what the club has to offer. We are a growing organization and I am quite pleased with the direction that growth is taking. Both MA and MHM produced some new members for the club and I expect to see new faces at our October meeting. Please make every effort to approach these people to introduce yourself and welcome them.

Speaking of new directions, the board of directors has

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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

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lsimon1@carolina.rr.com
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jackkretired09@gmail.com
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Pat Walker
Special Events
Kim Gwyn
gwynk@flashlink.net

WEB Site
www.charlottegem.com

been working on establishing a dialogue with the geology department at Appalachian State University in Boone, North Carolina. The university represents a very interesting potential opportunity for us to access new speakers for our meetings plus serve as a source for faculty-guided field trips in the Appalachian Mountains for our members.

Our first effort in that direction will take place at the upcoming October 18th meeting with Sarah K. Carmichael, professor of geology speaking on "The Minerals of North Carolina". In order for this relationship to develop and be fruitful it is important that we represent ourselves as an active and highly motivated group. Please make every effort to attend this next meeting and, by all means, express your appreciation to our speaker for making such a long journey to speak to us.

The mountain leaves are taking on their beautiful fall hues and this is a fine time for a hike and a bit of mineral collecting. I've found King's Mountain to be a convenient, nearby site offering a pleasant day in the fresh air with beautiful vistas and an occasional collectible lapidary discovery. Enjoy

Murray
President Charlotte Gem & Mineral Club, Newly Appointed Leige of the Lake, and Gallery Gadfly.

Rainforest Jasper - (actually a green rhyolite with mini-thunderegg inclusions (Australia)) I publish photos 2 or 3 times a month on my Google+ account for "RockSaturday". If you want to see some slab photos have a look.
https://plus.google.com/u/0/102479920996524562919/photos

ron gibbs

Charlotte Gem & Mineral Club Monthly Meeting

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

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

Dr. Sarah K. Carmichael

(Appilachian State University, Department of Geology)

Minerals of the Blue Ridge Mountains.

Dr. Carmichael joined the department in 2007, after exploring the bottom of the ocean in the DSV Alvin and with the ROV Jason while a postdoc at the University of New Hampshire. A lover of high tech lab equipment, her work heavily involves scanning and transmission electron microscopy, and cathodoluminescence microscopy, as well as Fourier-transform infrared spectroscopy, mass spectrometry, and a variety of X-ray techniques.

Gemstone Word Search

Source: Pick & Pack, 2/2007

Birthstones are precious and associated with a calendar month. Look for the following birthstones in the word search puzzle -->

Garnet (Jan)
Amethyst (Feb)
Aquamarine (Mar)
Diamond (Apr)
Emerald (May)
Pearl (Jun)
Ruby (Jul)
Peridot (Aug)
Sapphire (Sep)
Opal (Oct)
Topaz (Nov)
Turquoise (Dec)

J R L O R K Z E G Y X U T U N M
S Z U P Z E A E M T O D I R E P
I A F L B F P N B E N R V K O J
H P K C T N C E O J R P U M L Y
W O N P M M T S G D D A E Q R L
I T X G Y I A U O O X F L A A B
K L A P O M H Q R D A O A D E K
I H C N V F T J U Q J I Q W P P
M Z B J U A Z E P A U J W R V R
A M E T H Y S T R Q M O H Z I Q
F G B Q L B Z D S I D A I Y N G
A T A K L U F Z X N H Q R S O R
K H I R Q R D D W F U P M I E T
B P C C N D I A M O N D P G N E
V W J K Y E N I Q G L J E A T E
V D Y T L P T C T D N V J Y S W

Charlotte Junior Rockhounds

Returning to the normal meeting location
Matthews Community Center
100 McDowell St.
Matthews, NC 28105
704-321-7275

Saturday, October 20th

Mary will be aided by Brad Glover and Kim Gwyn as they discuss

Field Trip Oppotunities: Where to look, what you can find

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

November and Decmber Meetings on Track

by ron gibbs

It's that time of year again and several things are now fixed on our schedule. November is the month for our annual club auction where members bring in their "extras" and we have a fun and often entertaining evening trying to figure-out what we can or can't live without.

Members bring their excess or extra items for sale and proceeds go to the club general fund. Member materials are usually supplemented with other material donated in the past or given to the club by former members.

There will be the usual array of slabs, minerals, fossils, jewelry, etc. etc. So come on out and have some fun at our auction this year and maybe walk away with a good deal

We had a nice donation of some lapidary equipment to the club this year too, and some of it will be up for grabs at the auction.

This brings us to the following December meeting where the club will have it's annual holiday party. We are currently negotiating a place to handle the party. Watch next month for the date, location, and mark it on your calenders.

It's also time to download a copy of the "club point sheet" from the WEB site. Members earn points throughout the year by donating their time for various events (Matthews Live, Mint Hill Madness) or for providing food for a meeting, giving a presentation to the club, or just showing up at monthly meeting.

Those who accumulate sufficient points are placed in an end of year drawing for a couple of week long scholarships to Wild Acres or William Holland. The totalled points should be submitted by the end of the November meeting. The winners will be announced at the holiday party.

Mint Hill Maddness - Sluice and Geode Cutting Success!

by ron gibbs

September came and went with a bang for the club and its events. We did the Matthews Alive Art festival followed later in the month by the Mint Hill Madness event (see photos)

All in all a good September hall and we were well staffed by volunteers for each event. *(Thanks to all who helped out and donated some of their time!)* It was appreciated and it was "*almost fun*" according to some.

We managed to sell a bit over $4500 for the combined events which provides money for our yearly scholarship funds. We are on fertile ground for another season and can now sit back and enjoy the remainder of the year.

Mint Hill was mainly a sluice event with a few geodes sold. We sold over 100 bags at the sluice with about 15 items per bag - 1500 items needed identifying by the assayors! Did you ever not want to see one more piece of rose quartz! Two or three of us did!

Booth was staffed

photo by Pat Walker

Sluice in operaton

Operational field supervisors present

photo by Pat Walker

Assay Office Open

Found in North Carolina

by ron gibbs

So what about the minerals of North Carolina? First lets get the facts straight ...

1.) North Carolina's Mt. Mitchell is the highest point east of the Mississippi River at 6.684 feet.
2.) The State ROCK is granite
3.) The State PRECIOUS STONE is Emerald
4.) There is no official State Fossil
5.) Mining is a half-billion dollar industry in the State
6.) NC leads in the production of feldspar, mica, and pyrophyllite
7.) The first gold discovered in the US was in NC
8.) The largest emerald ever found in North America was in NC
9.) In 1823 NC funded the first geologic and mineralogic survey
10.) 13 diamonds have been found in NC
11.) All colors of corundum (ruby & sapphire) have been found in NC
12.) Hiddenite (variety of spodumene) is only found in NC (in the US)
13.) Ultra High Purity Quartz from NC is used in electronics, and the large Palomar telescope mirror was made from NC mined quartz.
14.) Olivine is been mined in NC
15.) High quality kaolin clay is mined here for porcelain manufacture.

The Blue Ridge belt of mountains through the state is a billion to about 1.5 billions years old. It represents the remains of an old, much higher, mountain range that has now been weathered down to expose it's core constituents.

The Inner Piedmont belt is a deformed and metamorphosed segment of the Piedmont. It's rocks range from about 500 to 750 million years in age.

The King's Mountain belt is the remains of metamorphosed volcanic and sedimentary rocks between 400-500 million years.

The Milton Belt is metamorphosed intrusive igneous rocks, and the Charlotte Belt consists mainly of igneous rocks between 300 and 500 million years in age.

The Carolina State Belt was once the site of a volcanic island chain (some 550-650 million years ago) and is the main source for the gold within the state. The Raleigh Belt contains granite, gneiss and schist.

The Eastern Slate Belt contains lightly metamorphosed rock with a coastal plain sediment covering. The older underlying rock is between 500-600 million years intruded by younger igneous rocks of about 300 million years.

Finally the Coastal Plain is mainly a marine sediment and cover almost 45% of the entire state.

Important Economics

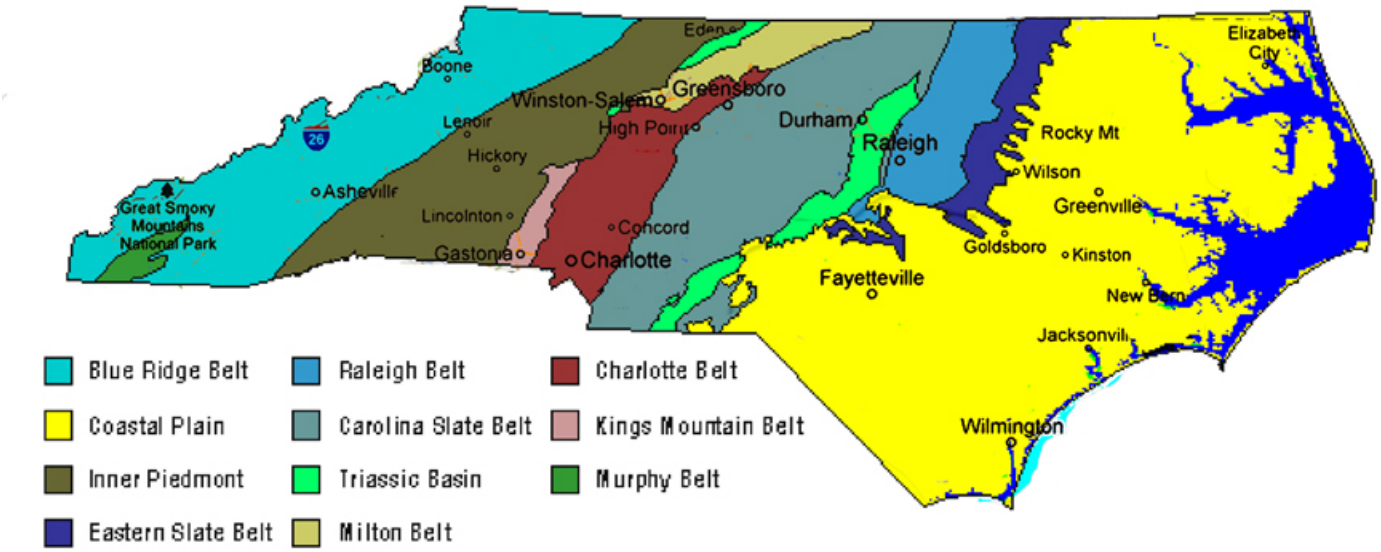
Clay is mined over much of the state and is used in the production of bricks. NC is the nation's annual leader in brick production. The clay is also used for fine ceramics and tile.

Feldspar is mined mainly in the Spruce Pine area of the state, and again NC is often the national leader in production. It is mainly used in the production of whiteware, glass fiber insulation, and many ceramic glazes.

Mica has been mined in the state since the 1860's. Today NC produces mostly scrap mica, producing about 60% of that mined in the U.S. Dry ground it is used in the production of paints, plaster board, and wet ground it is used in cosmetics, paint and plastic.

Lithium became a industry for the state in about 1942 and NC has about 80% of the known lithium reserves in the U.S. It is important in the manufacture of greases and batteries. Some of the

North Carolina Geology



lithium minerals (varieties of spodumene) are gem materials.

Olivine is produced from only a few areas in the state but again NC leads the U.S. in its production. It is used mainly in high temperature environments and in refractories.

Phosphate is mined in the costal regions of the state and NC is now second only to Florida in phosphate production. It is used mainly in the fertilizer industry and in the chemical industry in the form of phosphoric acid.

Of more interest to our lapidary club, but far less in economic importance, is the mining of **gemstones** in NC. Alexander county has emeralds and hiddenite, Macon county contains rubies, sapphires and garnets, and Mitchell county has emeralds and beryl. There are many small fee collection areas now open to the public in all of these areas. Many are, however, augmented with minerals imported from all over the world.

There are also numerous deposits of quartz throughout much of he state and fine facet grade quartz, smoky quartz, amethyst, and some citrine can be found.

In general there are a few deposits of jasper in the state, and a few areas where agates have been found. These are typically not of high lapidary quality and more collector grade specimens.

Although 13 diamonds have been found in the state, the largest was just over 4 ct, the precise source has never been discovered. They have been found in Burke, Cleveland, Lincoln, McDowell, Franklin, Rutherford, and even our own Meklenberg counties.

In 1852 a white one carat diamond was found in Todd's Branch, Meklenberg County. The 4 ct whopper was found near Dysartville and a second 2.3 ct stone was found near there in 1877.

For more detailed info please see the source materials below:

Resources:

Geologic Survey Staff Geologist Page : http://www.geology.enr.state.nc.us/Mineral%20resources/mineralresources.html

Minerological Society of America: www.minsocam.org/ammin/AM18/AM18_148.pdf

USGS Maps

Virgin Valley Opal

By Evelyn Cataldo

Hidden in the high desert region of the northwest corner of Nevada, lies the famous Virgin Valley precious opal mines. The area is famous for black opal, known to occur in only two places on Earth: Virgin Valley, Nevada and New South Wales, Australia.

It is believed that this area was once a large lake surrounded by a forest filled with a variety of tree species. Over time the forest was devastated by a series of volcanic eruptions. Twigs, limbs and rotting wood collected in the coves of the lake. The forests, the lake and the driftwood were buried under layer after layer of ash. The buried wood decayed and left cavities. Over millions of years, heat and pressure filled the cavities with silica that percolated through the ash; gradually hardening into opal. Under the right conditions, precious opal was formed. Over time, the entire area has been uplifted and eroded, exposing the opal deposits. It is said that it took Mother Nature twenty million years to make a Virgin Valley black opal.

The Virgin Valley area has been inhabited by man for more than 10,000 years. In the southwestern portion of the valley lies the "Last Supper Cave". Its bones and artifacts have been carbon dated to 10,000 to 12,000 years.

There is evidence that the Chinese sent an expedition to mine the precious black opal approximately 4,500 years ago. During the late 1800's and early 1900's a few specimens were collected by cowboys and sheepherders.

These specimens were reported to the press and soon prospectors found their way to Virgin Valley. Opals were first mined commercially in the area in 1905 with the discovery of the Bonanza Mine. Other early mining operations included the Rainbow Mine. Both are still in production today.

Most of the opal found in Virgin Valley is in the form of replaced wood and limb casts. Opalized bones of vertebrate animals have also been found, as well as opalized bark, roots, pine cones and seeds. The opals are found in layers of clay. The precious opal bearing layers may be as much as 10-30 feet below the surface and range in thickness from 2-12 feet. Common opal is abundant throughout the layers of clay and ash, but only specific conditions produced the precious opal.

Anything that resembles petrified wood should be carefully examined and kept. Look for specimens that are glassy looking. The background color does not matter. ***Some of the most beautiful opal specimens do not show color immediately.*** Collect everything glassy looking --- black, clear, milky, brown, etc. Sometimes, good pieces of opal are covered with a white, chalky coating.

A small percentage of the opal found in Virgin Valley is valued at more per carat than diamonds. Keep your eyes open for other fossils and artifacts.

Virgin Valley is high desert. Expect warm days and cool nights. Be prepared with a variety of clothing, plenty of liquids, sun screen, hat, and chap stick. Food, fuel and lodging can be found at Denio, Nevada (35 miles away).

Dry camping is available at the CCC campground with is about five miles from the mines. The campground is free.

There are no hookups but outhouses are available, a shower room and swimming in the hot spring. There are fire pits for the cool evenings, but you need to bring your own wood.
Other items you will find useful are a small pick, small garden rake, small shovel, spray bottle with water, a bucket for sitting on, gloves and some ziplock bags to store your specimens.

The opal mines at Virgin Valley are fee dig areas. Some mines allow digging through the tailings, some allow digging in the clay wall and Rainbow Ridge offers loads of virgin material. Prices range from $50 per day for going through tailings to $400 for a load of virgin material.

Resources: michelle@goldnuggetwebs.com, nevadaopal.com, royalpeacock.com From The Geode, 4/07 (From The Rockcollector: - Newsletter for the Rochester Lapidary Society – April, 2007)