

A newsletter for Gem and Mineral enthusiasts in and around the Raleigh, North Carolina area.

Special Interest Articles:

- Program Report
- Gemstone & Mineral of the Month
- Field Trip Report

Individual Highlights:

Program Report	1
July Door Prize Fluorite	1
Field Trip Reports	2
June's Business Meeting Minutes	3
August Birthstone Epidote	5
August Mineral Agate	6
Treasurer's Report	7
Upcoming Shows:	7
Vug Sites:	7

August Program: Ice Cream Social

August is the Ice Cream Social, so bring your ice cream, spoon, and appetite.

Also, Robin Suddaby will be giving a cabbing demonstration.

George Harris

Newsletter Editor, Tar Heel Gem and Mineral Club, Inc.



July Door Prize - Fluorite by Cindy Sanchez

Fluorite is the mineral form of calcium fluoride. It belongs to the halide minerals. It crystallizes in isometric cubic habit, although octahedral and more complex isometric forms are not uncommon

Fluorite is a colorful mineral, both visible and ultraviolet light, and the stone has ornamental and lapidary uses. Industrially, fluorite is used as a flux for smelting, and in the production of certain glasses and enamels. The purest grades of

fluorite are a source of fluoride for hydrofluoric acid manufacture, which is the intermediate source of most fluorine-containing fine chemicals. Optically clear transparent fluorite

lenses have low dispersion, so lenses made from it exhibit less chromatic aberration, making them valuable in microscopes and telescopes.

Continued on page 3



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We're on the Web!

See us at:

www.tarheelclub.org

Program & Refreshments

REFRESHMENT SCHEDULE:

Coordinator: Need Volunteer

August	Ice Cream Social
September	Walt Milowic
October	Hummels
November	OPEN

PROGRAM SCHEDULE:

August	Ice Cream Social AND Cabbing Demonstration by Robin Suddaby
September	The Smithsonian by George & Obsidian Harris
October	Grab Bags
November	Elections & Thank You from The Club

Remember, the club will reimburse you for up to \$75 (bring your receipts to the treasurer).

August B-Day Members

Lorraine Annacone
Ken Fersch
Julie Niederkorn
James Tunney
Kenny Williams

Field Trip Information

Hanson Rocky Mt. Quarry

When: Friday, August 22, 2014, Meet at quarry office at 9:30 am Safety instructions at 9:45.

Where: 10471 NC 97 West, Rocky Mt., NC 27801

Collecting focus: Club trip will be to the fossil area of the Hanson Quarry, looking for pecten and other large and small shells, shark teeth, whale vertebrae and bones, fish vertebrae and jaws, and related fossils.

Requirements: Hard hat, safety glasses, safety vest, steel toed boots, and no one under the age of 18 allowed.

Tools: Primarily surface collecting, but small hand tools such as a spade can be helpful. Bring container, backpack, or bucket for fossil finds.

Directions: From Route 64E, take exit 470 (Atlantic Ave/Route 97) north and follow to its end at a T intersection. At intersection, turn

right onto Rt. 97. After about 1.2 mile, pass through the intersection with Springfield Rd (light and small gas station at intersection). Go about a half mile past intersection and quarry entrance is on right.

Who: Please RSVP to Shirley. 919-274-1837 or Richard60Green@yahoo.com



Membership applications may be mailed to:

Tar Heel Gem & Mineral Club, Inc.

Attention: Treasurer
10609 Chelsea Drive
Raleigh, NC 27603

Tar Heel Gem and Mineral Club, Inc. - June Meeting Minutes

Tuesday, July 15th, 2014

Attendees = 21

Opening of Club Meeting:

The meeting commenced at 7:35 pm.

Program:

"Volcanic Eruptions of Montserrat of the Leeward Islands": Randy Bechtel

Randy talked about why there are volcano's in the Caribbean. And in the chain of lesser antilles.

He also noted how some volcano's become "clogged". And there is a lot of silica in the magma.

Showed a over head photo of Montserrat, with the three volcanic heads. Also talked about the very short air-strip. Where the landing of the planes come in and go out. There was also a photo of the plane used to fly in from St. Kitts?

There was a lot of laughter about the landing of the plane on the island. The group noted the 4 stops that the field trip incurred.

The eruptions started at 1995.. on Montserrat. The island is a UK territory.

10-11,000 before the eruption lives on the island.

The group ventured into Zone 5 where thee is the possibility of eruption occurring. Time allowed is 10 minutes.

There was a photo of the original air strip about Feb. 2010. There was also photos of the ash flow filling in a quarter mile area. There is the original chimney that had 30 ft. of ash covering half the height of the chimney.

When walking upon the ash.. the geologist have to stick a long pole into the ash to locate gas pockets so they do not get harmed by stepping on them. Even if only 3 to 4 ft deep.

There was also pumis collected. The pumis contains black crystalline mineral of Hornblende inside. He also showed a piece of Adasite.

There was also photos of a dome within the volcano. And you could even have either a spike or a whale back visual on the dome.

The group was about 2 miles from the dome of the volcano. No two volcano's are alike.

Two pieces of pumice was passed around along with a bottle of Hornblende crystals.

The group went on to a second exclusion zone. There was also a photo of the crater of the volcano after the ash is sprayed about the ground.

There was photos of gas clouds, the remains of a house after an eruptions.

There was also photos of a resort town where the clock tower was buried in ash. There was also an observatory that was built to withstand a blast. That is occupied 24/7. There is constant contact with members of the community. There are meters that measure magma & gases as they swell up at different locations.

Ghauts are seen along the roads where folks get their fresh water for drinking. The equipment was shown being used to monitor activity.

Volcanic activity occurs North to South or South to North. Suggesting a magnetic alignment? Instead it's a matter of plumbing.

The membership broke for a few minutes of a break for munchies.

Door Prize:

A new attendee won the door prize for the evening.

The Door Prize drawing was done and Cindy Sanchez chose a Fluorite cluster.

Congratulations! Cindy Sanchez.

New Business:

Cyndy called the meeting back to order.

There were two new visitors to the meeting. And they talked about how they got involved with minerals.

Cyndy addressed folks with Birthdays in July.

Cyndy extended a note of appreciation to Linda for providing munchies for the June, and Julie for the July meeting.

Old Business:

Cyndy was going over old business and the site for the club is being worked on currently.

Also, noting the By-Laws are being worked on.

Layne Snolley is donating material that Jack will be picking up to contribute to the grab bags.

Walt proceeded to explain a show about garage being cleaned out of mineral material.

Donnie Moreno... looking to get minerals identified in a garage during a show called "Garage Gold". The club is being noted in the showing is being shown sometime in the Autumn. An array of 8 items were illustrated on a small table of the contents of the garage.

Close of Meeting:

Cyndy called the meeting to a close at 9:10 pm.

Respectfully Submitted

Obsidian Harris,

Secretary, Tar Heel Gem and Mineral Club, Inc.

July Door Prize - Fluorite

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Continued from page 1

Fluorite optics are also usable in the far-ultraviolet range where conventional glasses are too absorbent for use.

Fluorite derives from the Latin noun fluor, meaning a stream or flow of water.

Hiddenite Gem, Mineral and Fossil Show (And Mine Dig!)



Hosted By The Mountain Area Gem and Mineral Association

September 25th - 27th, 2014

At The Hiddenite Center in Downtown Hiddenite, North Carolina
Show hours: 12pm - 6pm Thursday, 9am - 6pm Friday and Saturday

Admission is FREE!

**Gems - Minerals - Fossils - Cutting Rough
Jewelry - Faceted Stones**

This show will coincide with the annual Hiddenite Craft Fair.



**DIG YOUR OWN MINERALS
IN HIDDENITE, NORTH CAROLINA
Every Rockhound's Dream Location!**

**Sharpes Emerald Prospect Mine Dig
September 27th, 2014**

We will have a one day dig at the Sharpes Emerald Prospect in Hiddenite, NC. This is a new mine site. Specimens found on the last dig here included gem grade muscovite mica, green and blue beryl, smoky quartz crystals and cutting grade smoky quartz. We will have a machine in prior to the dig to open new areas.

Date: Saturday September 27th - Location: Sharpes Emerald Prospect
Hours, the dig will begin at 8:00 am and end at 5:00 pm

Fee: \$25 adults, children 12 and under are free.

All attendees should find Jesse or Andrea Sackett upon arrival to fill out a release form and make payment. Directions: From I-40 East, take Exit 132, take Hwy 16 North towards Taylorsville, Take Hwy 64 East towards Hiddenite. Turn left onto Prichard Lane, look for MAGMA sign on right. The mine is approximately 1 mile from the gem show at the Hiddenite Center.



August Mineral - Epidote

By Obsidian Harris

<http://www.galleries.com/Epidote>



Epidote is a structurally complex mineral having both single silicate tetrahedrons, SiO₄, and double silicate tetrahedrons, Si₂O₇. The formula of epidote could be expressed in a such a way so as to reflect this organization; Ca₂(Al, Fe)Al₂O(SiO₄)(Si₂O₇)(OH). The two aluminums represent the parallel chains of AlO₆ and

AlO₄(OH)₂ octahedra that are the heart of the epidote structure. The silicate groups and extra ions connect the chains together. Since the chains are parallel, the crystals tend to be prismatic. The chains are arranged in parallel planes and the perfect cleavage breaks the bonds between these planes. Epidote, while not general known for exceptional crystals can produce some magnificent specimens. Its unique green color which is often described as "pistachio", is quite striking in well colored specimens.

PHYSICAL CHARACTERISTICS:

- **Color** is "pistachio" green to yellowish or brownish green, also brown to black.
- **Luster** is vitreous.
- **Transparency** crystals are transparent to translucent.
- **Crystal System** monoclinic; 2/m
- **Crystal Habits** include long, somewhat prismatic or tabular crystals with a typically dominant pinacoid that the crystal is often flattened against. The terminations are wedge shaped or tapered pyramids. Many clusters show grooved slender crystals or acicular sprays. Also massive, fibrous or granular.
- **Cleavage** good in one direction lengthwise.
- **Fracture** is uneven to conchoidal.
- **Hardness** is 6-7
- **Specific Gravity** is 3.3-3.5
- **Streak** white to gray
- **Associated Minerals** [calcite](#), [biotite](#), [hornblende](#), [actinolite](#), [andradite garnet](#) and other metamorphic minerals.
- **Other Characteristics:** striated to the depth of grooves in some crystals.
- **Notable Occurances** Untersulzbachtal, Austria; Italy; Baja, Mexico and many localities in the USA.
- **Best Field Indicators** only one direction of cleavage, crystal habit, color and hardness.

http://www.healingcrystals.com/Epidote_Articles_110.html

Epidote will enhance the energy of whatever it touches, including other stones. Epidote increases perception and interaction with spiritual beings, and brings spiritual growth. Epidote is a great stone for releasing negativity and raising one's vibrational energy. It is helpful for those stuck in modes of depression, hopelessness, or other negative thinking pattern. Epidote can inject a sense of hopeful optimism into one's emotional body, helping to bring the mind into a higher vibration. Crystal healers like to work with Epidote for its ability to clear congestion and energy blockages in the physical and subtle bodies. Epidote will help to balance and stabilize the energy flow in the body. Epidote is also used to help dissipate tumors by releasing stagnant energies in the area.

Epidote is an excellent stone for attunement with nature and her healing qualities. It puts forth a simple, calming, grounding, "back to Earth" vibration, which is particularly good for those living in a high energy, city setting.

On a more physical level, Epidote's ability to increase energy is useful in strengthening the physical body. Epidote facilitates a more complete assimilation of nutrients. Epidote stimulates the immune system, aids in the healing process, and is a great stone to use for physical recovery. Epidote increases personal power, clears the emotional body aura, and even increases memory, making it a helpful when looking for lost object.

METAPHYSICAL:

Primary Chakra: Heart

Astrological sign(s): Gemini

Vibration: Number 2

GEOLOGICAL:

Mineral Class: Silicates

Family: Epidote

Crystal System: Monoclinic

Chemical Composition:

Ca₂(Al,Fe)Al₂O(SiO₄)(Si₂O₇)(OH) Calcium Iron Aluminum Silicate Hydroxide

Hardness: 6-7

PHYSICAL:

Color: Green (Pistachio green, yellow green to brown green), Brown, Black

Location: Austria, Bulgaria, France, Italy, Mexico, Norway, South Africa, USA

Rarity: Common

Fun Fact: The green color found in Unakite is in fact inclusions of Epidote

August Mineral - Agate

By Obsidian Harris

<http://www.minerals.net/mineral/agate.aspx>

Agate is the banded form of the mineral Chalcedony, which is a microcrystalline variety of Quartz. Agate is the most varied and popular type of Chalcedony, having many varieties on its own. Although the pattern on every Agate is unique, the locality of an Agate will provide resemblances in banding style and color, thus lending many Agates with a geographic prefix. Some examples are Laguna Agate (named after Ojo Laguna, Mexico) or Botswana Agate (after the African country of Botswana). Other variety names used connote specific colors or patterns, such as Fire Agate or Eye Agate.

Agate usually forms in rounded nodules or knobs which need to be sliced open to bring out the internal pattern hidden in the stone. Most Agate is ugly in its natural state; specimens must be polished to bring out their full beauty. Much of the Agate sold to collectors has been treated, in the form of tumbled stones or polished slabs. Popular collector forms of Agate include nodules or geodes sliced in the middle into two polished cross-sections, or thin slabs from nodule or geode cross-sections.

The formation of Agate is most often from deposition of layers of silica filling voids in volcanic vesicles or other cavities. The layers form in stages with some of new layers providing an alternating color. Since the cavities are irregularly and uniquely shaped, each Agate forms its own pattern based on the original cavity shape. When a cavity is completely filled, it forms a solid mass of Agate, but often it is only partially filled, leaving a hollow void which often has crystalline Quartz growths on its innermost layer. This is the cause of Agate forming the outer lining of most geodes.

Agate is often dyed to enhance its colors. This is especially true of Agate from Brazil. Bright neon colors such as bright blue and red are rarely natural.

Agate is named after the Achates River (now known as the Dirillo River) on the island of Sicily, Italy, whose upper waters were an ancient source of this gemstone.

Chemical Formula SiO₂

Composition Silicon dioxide

Color Multicolored in banded formation. Colors include white, blue, red, green, yellow, orange, brown, pink, purple, gray, and black. Some rarer forms of Agate are iridescent.

Streak White

Hardness 7

Crystal System Hexagonal

Crystal Forms and Aggregates Agate is a banded microcrystalline form of the mineral Quartz, and does not occur in visible crystals. It occurs in nodules, in massive form, as botryoidal, mammillary, and stalactitic formations, as smooth rounded pebbles, as amygdules, and as the linings of geodes.

Transparency Translucent to opaque

Specific Gravity 2.6 - 2.7

Luster Vitreous

Cleavage None

Fracture Conchoidal

Tenacity Brittle

Other ID Marks

- 1) Commonly fluorescent, usually green or white. May even show fluorescent banding patterns where some of the bands will fluoresce more strongly than others.
 - 2) Triboluminescent
 - 3) Piezoelectric Complex Tests Dissolves in hydrofluoric acid. In Group Silicates; Tectosilicates; Silica Group Striking Features Banding patterns Environment Agate occurs in all mineral environments, but it is most prevalent in igneous rocks such as basalt. Rock Type Igneous, Sedimentary, Metamorphic
- Popularity (1-4) 1 Prevalence (1-3) 1 Demand (1-3) 1

Agate - Crazy Lace Crystal Healing Properties

<http://www.crystalwellbeing.co.uk/crystalcrazylaceagate.php>

Crazy Lace Agate is also known as Mexican Agate. Like all Agates it is a soothing and calming stone, which encourages self-acceptance and self-confidence.

In addition Crazy Lace Agate is said to relieve emotional pain and to lighten your life. It is believed to clear energy blockages and to bring vitality to major organs.

Crazy Lace Agate is also thought to encourage concentration and to help you to stay focused on the task in hand.

Because of its ability to absorb emotional pain, Crazy Lace Agate should be cleansed frequently

August Treasurer's Report

By Corinne Hummel

August Treasurer's Report

Jun. Ending /	
Jul. Beginning Balance	\$8,977.43

Deposits (+)	
Members	\$89.00

Sub total	\$89.00

Checks Written (-)	
Newsletter	\$116.84
Meeting Food	75.00
Post Office	245.00
NC Craft Center Donation	600.00
Miscellaneous Office	23.40

Sub Total	\$1,060.24

Jul. Ending /	
Aug. Beginning Balance	\$8,006.19

UPCOMING SHOWS

September 25 - 27, 2014: Hiddenite, NC - Hiddenite Gem, Mineral and Fossil Show. The Hiddenite Center in downtown Hiddenite, NC Hours: Thursday, 12pm - 6pm; Friday and Saturday 9am - 6pm. Admission: Free. Minerals and Fossils from around the world. Cutting material, Quality Gemstones, Wire wrapping, settings, Geodes, Jewelry, etc. SLUICE - A real working sluice, \$3 & \$5 sand buckets; perfect for children and adults. Amethyst, Quartz Crystals, Faceted Stones mixed at random in buckets; you must get that special stone or treasure! Contact Show Chairman, Richard Jacquot <rick@wncrocks.com>

October 3 - 5, 2014: Dallas, NC - 36th Annual Gaston Gem & Mineral Show. Gaston County Park, 1303 Dallas Cherryville Hwy, Dallas NC. 28034 (HWY 279), or GPS 120 Leisure Lane, Dallas, NC 28034. Hours: Fri & Sat, 9am - 6pm - Sunday 9am - 5pm. FREE ADMITTANCE and FREE PARKING. Minerals and Fossils from around the world. Cutting material, Quality Gemstones, Wire wrapping, settings, Geodes, Jewelry, etc. SLUICE - A real working sluice, \$3 & \$5 sand buckets; perfect for children and adults.

Amethyst, Quartz Crystals, Faceted Stones mixed at random in buckets; you must get that special stone or treasure! Contact Show Chairman, Rick Perkins, at 704-825-9456 or online at <http://gastongemclub.weebly.com/our-show.html>

November 22 - 24, 2014: Columbia, SC - The Columbia, SC Gem & Mineral Society will hold its 46th Annual Gem, Mineral, & Jewelry Show 2014. Jamil Temple, 206 Jamil Rd. (Exit 106A off I-26), Columbia, South Carolina 29210. Hours: Friday November 22, 10:00 - 7:00. Saturday November 23, 10:00 - 6:00. Sunday November 24, 12:00 - 5:00. Jewelry, beads, loose stones, fossils, minerals, gold, silver, & tools for sale. Geodes sold & cut. Club member's rock collections on exhibit & lapidary demonstrations. Admission is \$5.00 for adults, children sixteen & under are free with adult. All military & their dependants are free. Contact information is: Sue Shrader...Publicity...803-736-9317 ashrader@mindspring.com Fax 803-736-2578. Sharon Sterrett...Dealers...803-356-1472 ssterrett@sc.rr.com The society website is www.cgams.org

Vugsites

The following are some links to Web-Sites that may interest some of our members:

<http://www.amfed.org> / <http://www.amfed.org/sfms> These are the official sites for the organizing body that the Tar Heel Gem & Mineral Club is founded under. I would strongly urge all members to check them out on a regular basis.

http://www.amfed.org/sfms/lodestar_newsletter.html The SFMS Lodestar Newsletter

<http://www.carolinageologicalsociety.org/CGS/Home.html> This site provides numerous downloadable field-trip guide books, maps, and charts of the Carolinas. It will prove to keep any avid rock hound busy for years. Great Site!

http://www.ncminerals.com/ncmineralswebsite_files/page0011.htm And while we are on the subject, try this link. Its titled: Links of Interest to Rock hounds in NC. It will take you to a list of links for North Carolina gems and minerals.

<http://www.rocksforkids.com/> Just like the name says, a nice place to steer the younger members.

Information & photographs of over 6300 specimens from the Glenn & Martha Vargas Gem & Mineral Collection.

<http://www.rockhoundlounge.com> Scott Laborde, a club member maintains his own web site that might be of interest to people collecting in and around Wake County.

http://www.msnbc.msn.com/id/29726500/ns/technology_and_science-science This site highlights a half dozen of the most recent significant fossil finds.

<http://appmodo.com/13971/mole-quest-for-the-terracore-gem-app-review-for-the-iphone-and-ipod-touch/> If you have an iphone or an ipod touch, this rock-hounding may be the game for you.

http://diamonddanpublications.net/index_files/page0009.html Diamond Dan's Mini Miner's Monthly

I would like to encourage all members of the THG&MC that maintain their own presence on the internet to send me a link to their site to be published in future Vugsites so that other club members may learn and enjoy the craft, the art, the interests that many of us have in common.

Park in the Cates Ave. Parking Deck off Jensen Dr. Enter Thompson Building directly across from the parking lot.

**Our Next Meeting is
August 19, 2014 @ 7:30PM
Thompson Building / NCSU Campus.**

About Our Organization...

The Tar Heel Gem and Mineral Club, Inc. was formed in 1974 as a nonprofit educational organization for people who enjoy the lapidary arts, earth sciences, and related subjects. The main objectives of the club are to investigate, preserve, and share knowledge of rocks, minerals, and precious stones, and to promote interest in mineralogy, paleontology, earth sciences, and lapidary techniques, among club members and among the general public. The club pursues these goals through publications, meetings, lectures, field trips, exhibits, demonstrations, and other activities.

Come and be a part of the Fun!



TAR HEEL GEM & MINERAL CLUB
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