

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

President's Report - Tar Heel Gem & Mineral Club, Inc.

Special Interest Articles:

- President's Report
- July Door Prize
- August Birthstones
- 2014 THGMC Show Date (See Upcoming Shows)

I hope you are still having a great summer. As I understand, this month is the ice cream social, so I hope you bring your appetites.

I have been informed that our Field Trip Chairperson has unfortunately had to step down because of an employment change.

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July Door Prize

By Mike Franklin

Tetrahedrite

Tetrahedrite is a copper-iron-antimony-sulfur mineral with formula: $(\text{Cu}, \text{Fe})_{12} \text{Sb}_4 \text{S}_{13}$. It is most frequently the antimony endmember of the continuous solid solution series of arsenic bearing tennantite (4 As atoms substitute for the 4 Sb atoms). Pure endmembers of the series are seldom if ever seen in nature. Of the two, the antimony rich phase is more common. Other elements also substitute in the structure, most notably iron and zinc along with less common silver, mercury, bismuth, and lead. The equilateral-triangle four-faced crystals are steel grey to black and appear

metallic with Mohs hardness of 3.5 to 4 and specific gravity of 4.6 to 5.2.

The door prize specimen from Peru was formed on pink calcite that transitions to pure white calcite (flower-like) crystals. The tetrahedrite

crystals have formed on the surface of the calcite crystals. Since tetrahedrons may contain arsenic which is quite toxic, the specimen should be displayed in such a manner to prevent anyone from removing a tetrahedron and ingesting it.

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We're on the Web!
See us at:
www.tarheelclub.org

Program & Refreshments

<u>REFRESHMENT SCHEDULE:</u>	
Coordinators: Mike Troutman; Emily Carabello	
August	Ice Cream Social
September	Walt Milowic
October	Hummels
November	
<u>PROGRAM SCHEDULE:</u>	
August	Ice Cream Social
September	
October	Grab Bags
November	

Please Contact Mike Troutman at 919.676.3161 to volunteer. Remember, the club will reimburse you for up to \$75 (bring your receipts to the treasurer).

2013 July Treasurer's Report

May Ending /	
June Beginning Balance	\$6,994.86

Deposits (+)	
Members	\$70.00

Sub total	\$70.00

Checks	
Newsletter	\$138.08
Meeting Food	59.19
Wild Acres Dep	25.00
Food supplies	38.41
New Checks	33.50
Roberts rule of order(s)	28.24

Sub Total	\$322.42

June Ending /	
July Beginning Balance	\$6,742.44

August B-Day Members

Michael Boykin
Bobby Chronister
Ken Fersch
David Schulman
James Tunney
Kenny Williams



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 16th, 2013

Attendees = 20

Opening of Club Meeting:

At 7:40 PM Jack Fried called the meeting to order and welcomed newcomers/members to our meeting.

Jack then introduced Delores Hall from the North Carolina Department of Cultural Resources, State Department of Archeology who gave us a wonderful presentation on abandoned, historical and endangered sites across the state.

Old Business:

Jack stated that there was movement on the Web-Master front and that the board needs to meet to approve the monies to be spent.

New Business:

Dan Cathey has completed the educational display of North Carolina Minerals. This display is to be used for educational purposes at schools and club meetings.

The Education Committee headed by Doc Franklin has given a presentation at both the Eva Perry and West Regional Libraries for ~30 some school-aged kids.

Clare Anderson has donated a poster on the types of aboriginal arrowheads found in North Carolina.

President's Report

Continued from page 1

We will dearly miss his past great efforts. This position is open and I hope we will have a few members interested in taking over the position. Maybe, we will have a few people form a committee.

I spoke with Terry Ledford the other weekend at the Spruce Pine, Grassy Creek Show, and he tells me that the Jackson Crossroads mine will be opening, for digs, this September. I will be checking in with his caretaker to find out the particulars.

July Door Prize

Continued from page 1

Tetrahedrite crystals usually occur in low to moderate temperature hydrothermal veins/vents. It is a minor ore of copper



Refreshments:

A big thank you to Angelina (a new club member) for volunteering to get our refreshments for the July club meeting! Our August meeting is the Ice Cream Social.

Refreshments	
Month	Volunteer
20-Aug	Ice cream Social
17-Sep	Walt Milowic
15-Oct	Hummels
19-Nov	

Door Prize:

The door prize was won by Doc Mike Franklin who chose a beautiful piece of tetrahedrite. As a reminder, if you happen to win the door prize, please compose a short article for publication in our newsletter on what you won.

Meeting Close:

~9:13 marked the close of the meeting from a motion on the floor made by Mike and seconded by Dan.

Respectfully Submitted

Michael Troutman, Secretary, Tar Heel Gem and Mineral Club, Inc.

While we enjoy our ice cream we might be able to talk about some things we would like to do in the up and coming cooler season. We will need grab bag donations, etc. I will be happy to accept them at any meeting. If you need me to meet you somewhere to pick them up, please let me know.

I hope to see you all at the next meeting.

Jack Fried,

President, Tar Heel Gem and Mineral Club, Inc.

and associated metals. It was first described in 1845 for occurrences in Freiberg, Saxony, Germany.

June Door Prize

By Linda Searcy

Rutilated Quartz



Rutilated quartz, is a variety of Quartz with needle-like rutile inclusions, embedded in it. The rutile needles can be reddish, golden, silvery, or very rarely greenish.

Tsavorite - Garnet



Green to emerald green variety from Kenya and Tanzania; discovered in the early 1970s. It takes its name from Tsavo area in Kenya.

General Information	
A variety or type of:	Quartz
Chemical Formula	SiO ₂
Physical Properties of Rutilated Quartz	
Mohs Hardness	7 to 0
Specific Gravity	2.6
Cleavage Quality	None
Fracture	Conchoidal
Refractive Index	1.544 to 1.553
Dispersion	0.013
Colour (General)	Brown, black, colourless, green, pink, violet, white, yellow, orange, purple
Transparency	Transparent, Translucent, Opaque
Luster	Vitreous
Crystal System	Trigon
Habit	Prismatic
Inclusions in Rutilated Quartz	
Golden needles of rutile.	

General Information	
A variety or type of:	Grossular, which is a variety of Garnet
Physical Properties of Tsavorite	
Mohs Hardness	7 to 7.5
Specific Gravity	3.55 to 3.73
Refractive Index	1.735 to 1.744
Optical Character	Isotropic
	Anomalous double refraction
Colour (General)	Emerald green
Colour (Chelsea Filter)	May appear pinkish-red if chromium-rich
Causes of Colour	Green, V ³⁺ in octahedral coordination.
	W. William Hanneman, Pragmatic Spectroscopy For Gemologists (2011)
Crystal System	Isometric
Inclusions in Tsavorite	
Rows or "feathers" of tiny negative crystals, fluid inclusions, asbestos fibers	

August Birthstones

Peridot

Peridot is said to host magical powers and healing properties to protect against nightmares and to bring the wearer power, influence, and a wonderful year. As peridot is a gemstone that forms deep inside the Earth and brought to the surface by volcanoes, in Hawaii, peridot symbolizes the tears of Pele, the goddess of fire and volcanoes. Today, most of the peridot supply comes from Arizona; other sources are China, Myanmar, and Pakistan. This gemstone comes in several color variations ranging from yellowish green to brown, but most consumers are attracted to the bright lime greens and olive greens. Peridot, in smaller sizes, often is used in beaded necklaces and bracelets. Peridot

Sardonyx

Sardonyx is a form of onyx and is recognized by its layers of reddish brown and white banding. It was popular with the ancient Greeks and Romans who carried into battle talismans of sardonyx engraved with images of heroes such as Mars or Hercules, believing that this would bring courage and victory. Because of its attractive banding, sardonyx has long been used to fashion cameos (carved raised figures) and intaglios (the reverse of cameos). This gemstone is found throughout the world. The most attractive specimens are found in India, but material also is mined in Czechoslovakia, Brazil, Uruguay, Germany, and in the United States.

See more at: <http://www.americangemsociety.org/august-birthstones>

Peridot



Peridot (pronounced pair-a-doe) is the gem variety of olivine. Peridot is the birthstone for August and the Zodiac stone for the constellation Libra (astrological sources refer to peridot as Chrysolite). Peridot is associated with the values of fame, dignity, protection, and success.

Olivine, which is actually not an official mineral, is composed of two minerals: fayalite and forsterite. Fayalite is the iron rich member and forsterite is the magnesium rich member. Olivine's formula is written as $(Mg, Fe)_2SiO_4$ to show the substitution of the magnesium and iron. Peridot is usually closer to forsterite than fayalite in composition although iron is the coloring agent for peridot. The best colored peridot has an iron percentage of less than 15% and includes nickel and chromium as trace elements that may also contribute to the best peridot color.

Gem quality peridot comes from the ancient source of Zagbargad (Zebirget) Island in the Red Sea off the coast of Egypt; Mogok, Myanmar (formerly known as Burma); Kohistan, Pakistan; Minas Gerais, Brazil; Eifel, Germany; Chihuahua, Mexico; Ethiopia; Australia; Peridot Mesa, San Carlos Apache Reservation, Gila County, Arizona and Salt Lake Crater, Oahu, Hawaii, USA. The best quality peridot has historically come either from Myanmar or Egypt. But new sources in Pakistan are challenging that claim with some exceptional specimens. The Arizona gem material is of lesser quality, but is far more abundant and is therefore much more affordable. An estimated 80 - 95% of all world production of peridot comes from Arizona. The Myanmar, Pakistani and Egyptian gems are rarer and of better quality and thus quite valuable approaching the per carat values of top gemstones. Possibly the most unusual peridot is that which comes from iron-nickel meteorites called pallasites. Some are actually faceted and set in jewelry.

Peridot is perhaps derived from the French word peridot which means unclear, probably due to the inclusions and cloudy nature of large stones. It could also be named from the Arabic word faridat which means gem. In either case, peridot has been mined as a gemstone for an estimated four thousand years or better, and is mentioned in the Bible under the Hebrew name of pitdah (see Biblestones). Peridot gems along with other gems were probably used in the fabled Breastplates of the Jewish High Priest, artifacts that have never been found. The Greeks and Romans referred to peridot as topazion and topazius respectively and this name was later given to topaz, to end the confusion with the two gems. Historical legend has it that peridot was the favorite gemstone of Cleopatra. Pliny wrote about the green stone from Zagbargad Island in 1500 B.C.. Even until recently jewelers have used the term "chrysolite" (Latin for golden stone) in referring to peridot gems for some reason. This term has also been used to refer to other gemstones, of a more golden color.

Zagbargad (Zebirget) Island has been known as St John's Island and was mined for centuries. Before World War I, this island was extensively mined and produced millions of dollars worth of gems. Since then the mining has been off and on and at present is all but nonexistent. Still, specimens from here are available at times and it certainly is a classic mineral locality.

Throughout time, peridot has been confused with many other gemstones, even emerald. Many "emeralds" of royal treasures have

turned out to be peridots! And although peridot is distinctly a different shade of green, many jewelers refer to peridot as "evening emerald". Emerald is a dark green as opposed to a yellow green and always contains inclusions. Other green gemstones confused with peridot include apatite (which is much softer); green garnets (have no double refraction), green tourmaline and green sinhalite (both of which are strongly pleochroic), moldavites (no double refraction) and green zircon (significantly heavier). All of these gemstones rarely have as nice a yellow component to their green color as does most peridot, but darker green peridot can be confusing when good crystal form is not discernible.

Peridot is a beautiful gemstone in its own right and is widely popular. Its popularity is said to be increasing yearly and with new finds in Pakistan producing exceptionally well crystallized specimens, peridot can be fun to collect for years to come.

Olivine has the same overall composition as the Earth's mantle, and thus can be considered to be the most common mineral INSIDE the Earth (the 1600 mile wide solid iron core is second). In a sense then, peridot may be by far the most common gemstone. Some volcanoes, including Hawaii, occasionally produce sands which are composed of transparent green grains of peridot. On the Big Island, the sands mostly appear black except on a beach near the southernmost tip of the island.

See more at: http://www.galleries.com/August_Birthstone

Variety Of:	Olivine , $(Mg, Fe)_2SiO_4$.
Uses:	Gemstone
Birthstone:	August
Color:	Shades of green usually from yellow-green to greenish yellow.
Index Of Refraction:	1.630 - 1.695
Birefringence:	0.037
Hardness:	6.5 - 7
Cleavage:	usually not discernible
Crystal System:	orthorhombic

See more at: <http://www.galleries.com/Peridot>

Sardonyx



Sardonyx is a banded variety of chalcedony (cryptocrystalline quartz), with layers alternating between Sard and Onyx (orange and white bands). It is an impure fine-grained quartz whose crystals are too small to see.

The color is usually a yellow-brown alternating with white, but other variants are also called sardonyx.

The banded nature of sardonyx is used to advantage by lapidaries and artisans, as a careful selection of material and design allows the creation of bas-relief art, where one layer is left as a foreground, and another is used as the background for a carving.

Sardonyx is the traditional birthstone for August. It is associated with relaxation and security.

Sardonyx is only one of several chalcedony (cryptocrystalline quartz) varieties.

Variety Of: Crypto-crystalline Quartz , SiO₂.
Uses: Gemstone and ornamental stone
Birthstone: August
Color: Alternating bands of yellow-brown and white.
Hardness: 7
Cleavage: None
Crystal System: None visible (actual crystals are microscopic)

See more at: <http://www.galleries.com/Sardonyx>

Sardonyx

Sardonyx assists you in bringing lasting happiness and stability to marriage and partnerships. It attracts friends and good fortune, encourages self-control and provides courage. Sardonyx is a stone of strength and protection and it can be used to enhance willpower, integrity, stamina and vigour. It can be used for protection by gridding or placing a piece in each corner of your house, at doors and windows in order to prevent crime and misfortune.

Chakras: Base

Astrological sign: Virgo

See more at: <http://www.thatacrystalsite.com/guide/properties-glossary.php?init=s>

Peridot

Peridot is associated with your Heart Chakra, and can be used to balance and stimulate its energy. It is a stone of compassion and has a friendly energy that is excellent for healing. It assists in rebirth and renewal of all kinds. Peridot also brings abundance and prosperity. It enhances the healing and harmony of relationships of all kinds, but particularly marriage. Peridot can lessen stress in relationships, anger and jealousy, slow the aging process, and heal ulcers and digestive problems. It assists in finding lost objects and knowledge, and strengthens psychic abilities. It creates a shield of protection around your body, especially potent for protecting your emotional well being.

Chakras: Heart

Astrological sign: Leo

See more at: <http://www.thatacrystalsite.com/guide/properties-glossary.php?init=p>



UPCOMING SHOWS

August 30 - September 2, 2013: Raleigh, NC - Treasures of the Earth Gem, Mineral & Jewelry Show. NC State Fairgrounds, Scott Building. This show offers precious and semi-precious gem stones, pearls, beads and findings, minerals, fossils, and finished jewelry in gold and silver. Wirewrappers and jewelers on site. Show hours: Friday: noon - 7, Saturday: 10 a.m. - 6 p.m.; Sunday: 11 a.m. - 6 p.m.; Monday: 10 a.m. - 5 p.m. Admission: Adults \$5 - under 16 admitted free. www.TreasuresOfTheEarth.net; (804) 746-7663; tote1523@treasuresoftheearth.com

March 28-30, 2014: Raleigh, NC - 38th Annual Capital Area Gem & Mineral Show. Tar Heel Gem and Mineral Club, Inc. Kerr Scott Building, NC State Fairgrounds, Raleigh, NC. Hours: Fri 3-8; Sat 10-6; Sun 10-5. Admission: Free and Free Parking. Contact: Cyndy Hummel; 919-779-6220; mchummel@mindspring.com; www.tarheelclub.org;

NEW THGMC Show Information just above!!!

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.

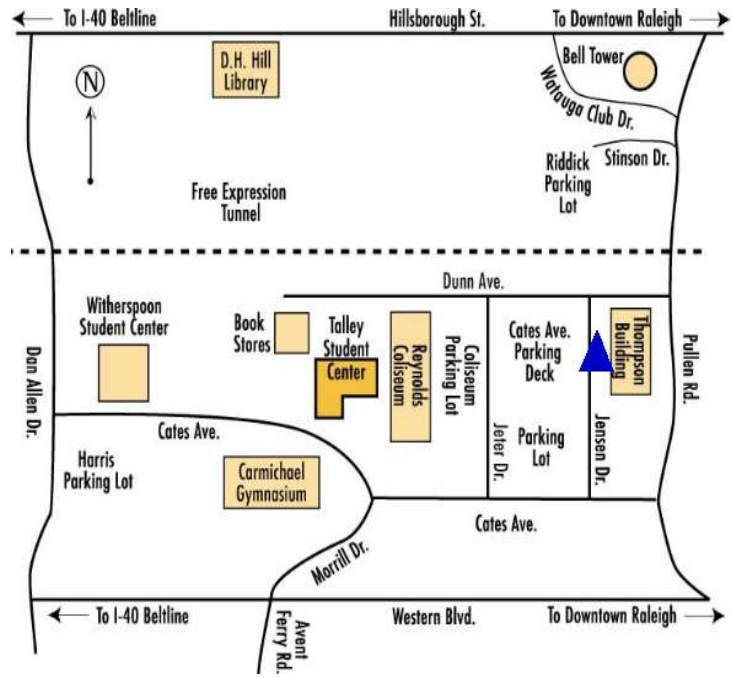
Park in the Cates Ave. Parking Deck off Jensen Dr. Enter Thompson Building directly across from the parking lot.

Our Next Meeting is August 20, 2013 @ 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
10609 Chelsea Drive
Raleigh, NC 27603

