

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

Special Interest Articles:

- Prez Sez
- More Show Information
- Field Trip
- Door Prize Reports

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Prez Sez By Cyndy Hummel

It is Show Time! As you can see by the volunteer list at the show, we need a lot more folks to help. Remember, this is how we generate funds to give away to various charities, including the great weeks to Wildacres & William Holland for a lucky show volunteer. The minimum time needed for a chance at these prizes is 8 hours of donated time at the show. Please either sign up at the meeting or contact the chairperson directly to volunteer.

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February Door Prize - Diopside By Tom Todaro

Brief

Diopside has been regarded only as a collector's gemstone until recently, when the deep forest-green Chrome Diopside variety has made its way into the mainstream gemstone market. Although its intense green color rivals that of Emerald, its low hardness makes it prone to scratches, thus limiting it from overwhelming the gemstone industry.

Overview

Although Diopside occurs in a variety of colors, the green color is the most common form. A purple type known as Violane is occasionally used as a gemstone, and Star Diopside is very

dark green to black. But the form of this stone that puts this gemstone on the map is the deep green Chrome Diopside form. Diopside also occurs in white to light green, gray or greenish black, reddish brown and yellow-brown.

Chrome Diopside in limited quantity is known from several localities, but a large commercially exploitable

deposit discovered in Siberia in 1988 made this gemstone readily available to the market. Since then, Pakistan has also become a significant producer of Chrome Diopside. Chrome Diopside is an affordable gemstone that has an intense forest-green color which rivals that of more expensive Tsavorite and Green Chrome Tourmaline.

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Tar Heel Gem & Mineral Club, Inc.

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We're on the Web!

See us at:

www.tarheelclub.org

Program & Refreshments

REFRESHMENT SCHEDULE:

Coordinator: Need Volunteer

March TBD

PROGRAM SCHEDULE:

March	Grab Bags & Postcards
April	Potluck & Show discussion
May	Gary McCutcheon: Silversmithing
June	Vince Schneider: Triassic Basins and Their Fossils
July	Fred Booth: Geology Trip to Yellowstone, Wyoming
August	Ice Cream Social AND Auction
September	Scott LaBorde: Quartz Collecting
October	Grab Bags AND (short) Program
November	Elections & Thank You from The Club

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

March Treasurer's Report

Jan. Ending /	
Feb. Beginning Balance	\$6,693.43

Deposits (+)	
Dealers	\$732.00
Members	395.00

Sub total	\$1,127.00

Checks Written (-)	
Post Office Box	\$228.00
Newsletter	138.08

Sub Total	\$366.08

Feb. Ending /	
Mar. Beginning Balance	\$7,454.35

March B-Day Members

Alexa Hagen
Kayla Johanson
Fredora Jones
Fred Lentz
Bruce Norcross
Eathan Pointer
Cindy Sanchez
Ron Simmons
Joseph, Joey, and
Cathy Stephens



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. - February Meeting Minutes

Tuesday, February 16, 2016

Attendees = 25

Opening of Club Meeting:

Meeting was called to order by President Cyndy Hummel at 7:35.

New Business:

The sign-up sheets for volunteers for the big show April 1, 2nd, and 3rd were made available. PLEASE consider volunteering. There will be a big prize to two lucky volunteers: Scholarships to Wildacres or William Holland, both beautiful mountain retreats that conduct a wide variety of gem and mineral related classes (from geology to lapidary and more!)

Tom Todaro discussed Field trips – Saturday February 20th Trip is to the Lehigh Hanson Quarry in Princeton (outside Selma) where you can find agate, calcite and more. Cyndy asked that participants think about collecting grab bag type pieces from the quarry (color and unusual specimens welcome!)

WE NEED refreshment volunteers – there were no refreshments since there was not a volunteer. We have a \$75 budget for refreshments and you will be reimbursed. Please help us with this important part of our monthly meetings.

Setup details for the big show were discussed. Even if you can't work the booths please consider helping with setup and breakdown for the show.

Needed updates for the website, especially for the show, were discussed. Melissa Whitfield, site webmaster, requests that any updates and corrections be sent to her at sanfordsgal@gmail.com.

Dr. Mike discussed the danger of snakes and had handouts with photos for members – NC has five times the national average of snake bites. Copperheads are the most common. We get 2000 snakebites a year but almost no deaths. It was interesting to note that the antidote is very expensive (10000 a shot!)

Program:

Patricia Weaver, the Collections Manager for Geology/Paleontology at the North Carolina Museum of Natural Sciences, did a presentation on The Ediacaran Period. This period dates between 635-542 million years ago and represents the evolutionary leap from single cell to multicellular life. Her digital presentation included photos of fossils from this time period and she passed out casts of fossils to examine.

More Show Information

By Cyndy Hummel

Club Members, this is who I have confirmed for volunteers at the show so far.



Old Business:

Best Wishes to our birthdays in February!



Door Prize:

Tom Todaro won the door prize and chose a Diopside specimen.

Close of Meeting:

The meeting was closed at 8:50.

Respectfully Submitted

Melissa Whitfield,

Secretary, Tar Heel Gem and Mineral Club, Inc.

Sign up sheets will once again be at the meeting. If you are unable to make the meeting, contact your chairperson as they will have their sign up sheet (once I update it).

Display cases NEED MORE VOLUNTEERS

Walt Milowic – 2 cases (fluorescent & Antarctic)
 Robert Neyland – 1 case
 Joe Moyland – 1 case
 Harris Family – 1 case

Demonstration area (all 3 days) NEED MORE VOLUNTEERS

Cyndy Hummel
 Obsidian Harris
 David Tomlin

THURSDAY at Secure Storage (this will be enough people) 3PM sharp

Cyndy Hummel
 Robert Neyland
 Joe Moylan
 John Nigro

THURSDAY at Kerr Scott Bldg NEED MORE VOLUNTEERS

Cyndy Hummel
 John Nigro
 Robert Neyland
 Clea Gallian
 Melissa Whitford

SUNDAY pack up at Kerr Scott NEED MORE VOLUNTEERS

Cyndy Hummel
 John Nigro
 Robert Neyland

SILENT AUCTION NEED MORE VOLUNTEERS

FRI – Dan Cathey 3-8PM
 SAT – Dan Cathey 10-2PM, Melissa Whitfield 10-12
 SUN – Dan Cathey 10-2PM, Melissa Whitfield 10-12

HOSPITALITY NEED MORE VOLUNTEERS

FRI – Robert Neyland 3-8PM
 SAT – Robert Neyland 10-6PM
 SUN – Robert Neyland 10-5PM, Susan Korn 10-12, John Nigro 2-5PM

GEODE NEED MORE VOLUNTEERS

George Harris

SHOW HOURS FOR CUSTOMERS ARE -

Friday, April 1 3PM – 8PM
 Saturday, April 2 10AM – 6PM
 Sunday, April 3 10AM – 5PM

Remember, ENJOY the show. This is a rewarding and exciting time!!!

2016 Show Chairpeople

If you are unable to make the meeting, contact these people to volunteer in their areas.

Jack Fried - Ask that anyone interested in a display case to please let me know!

Greg Dillon - The Geode section could really use extra help on Friday morning & clean up on Sunday evening after show is over. I just purchased 650 pounds of Geodes and we will need all the help we can get painting them & preping for the show. We can always use extra hands once the show closes as usual. Last year was great! I will be getting a flat screen TV this year and John will be donating a camera so we can show live feed of us cutting the geodes!

Hospitality	Linda Searcy	(919) 909-0750	LJS0928@gmail.com
Geode	Greg Dillon	(919) 931-3518	wygunsmoke@aol.com
Silent Auction	Jack Fried	(919) 761-9390	jacklfried@aol.com
Display Cases	Jack Fried	(919) 761-9390	jacklfried@aol.com
Demonstration	Obsidian Harris	(919) 674-0243	foxivy@nc.rr.com
Refreshments	Gerald Beck	(919) 848-3319	gbeck23@nc.rr.com

Prez Sez

Continued from page 1

March will be the meeting to make the final batch of grab bags before the show. Bring your grab bag materials. Also, bring your items to donate to the silent auction. The club has purchased a batch of flats for the purpose of new boxes for the silent auction items. I will take them, box & label them and take them to the storage unit. Silent auction pieces should have some kind of crystal structure to it to make it valuable for bidding. I presently have 6 boxes from the items given to Shirley Green recently. The smaller items are packaged for the grab bags.

If you have cardboard flats for the grab bags, remember to bring those for packing.

Also at the meeting, the show mailing list of post cards will be labeled and postage will be put on.

The 40th anniversary burgundy t-shirts will be available at the show on sale for \$10 each.

If we want to have something to drink and have a snack while we work, we will need a volunteer for refreshments. Remember, the club will reimburse your shopping list up to \$75. The club provides the paper products.

Thursday set up at Kerr Scott building begins at 5PM.

See you at the March meeting,
 Cyndy Hummel
 President,
 Tar Heel Gem and Mineral Club, Inc.

Field Trip Information

By Shirley Green

Hanson Gardner Quarry Field Trip with Cape Fear Club

When:

April 9 2016, Saturday from 09:00 am – 11:30 am. We must arrive at the quarry no later than 8:45am. for for the safe ty briefing. No Latecomers!! DO NOT ARRIVE LATE IF YOU WISH TO PARTICIPATE. Everyone out of the quarry and gone by noon

Information:

Cape Fear Gem & Mineral Club has been given permission to have a field trip to HANSON GARDNER QUARRY in Bunn Level. Since this is a new manager there have been changes on how this will work. The quarry is active on Saturday's so he will have to partition off a section for us with a worker guiding us around.

At our next Cape Fear Gem & Mineral club meeting on March 17th, I will have RELEASE FORMS for anyone who is interested to fill out and sign. I will gather these up that night and return them to the plant manager.

You must be a member of Cape Fear Gem & Mineral Club in order to attend, having paid your yearly dues. No exceptions; no friends can come along; and we must have the release form from you before I return it the following week. If you can not attend the meeting on the 18th you will be responsible for letting me know and somehow getting a form from a club member. We will have extras. I will scan and email a copy of the release form to those who want one. Fill it out and mail it back to me. I plan to take the completed forms to the plant manager on Friday the 25th of March. Only those forms that I return on the 25th will be allowed to attend the field trip. You can not show up on the day and expect to fill in the form then. Manager's rules!!!!

Collecting:

Purple fluorite, pyrite, galena

Diopside

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Deep green color combined with transparency give a stone more value. Except in lighter colored stones, the faceting of larger cuts is generally avoided because the deep green color tends to make its tone too black. Careful cutting is also necessary in larger stones to keep the facet angles shallow to improve brilliance. The deep green color of Chrome Diopside is natural and not enhanced. Chrome Diopside has a similar color to both Tsavorite and Chrome Tourmaline, but is softer than those gemstones. The color is also a more forest-green hue than Emerald.

Uses

Chrome Diopside is faceted into gemstone cuts mainly for earrings and pendants. It is generally not used for rings and bracelet due to its low hardness. Star Diopside and the purple variety Violane are faceted into cabochons mostly as collectors gems.

Requirements:

- Everyone must comply with any and all safety requirements or directions as set forth by the quarry operator and staff.
- Everyone must stay away from quarry edges and rock walls
- No climbing on rock face's
- Everyone must have and wear a hard-hat
- Everyone must have work boots with steel toe. - Note: Sorry but do not show up wearing sneakers or boat shoes, etc. and expect to go down into the quarry.
- Everyone must have safety goggles or glasses.
- Everyone must have vest.
- Please arrive prior to 9:00 am as this will provide the quarry operator time for safety briefings and waiver signoffs.
- We are guests of this site so please do not leave any litter behind.

Tools:

- Sunscreen
- Bug spray - not sure if we will need or not
- Rock hammer
- 3 pound hammer or sledgehammer
- Backpack or bucket or both
- Newspaper to wrap your specimens in
- Plenty of fluids to drink
- Snacks
- Chisel or pry bar
- Long screwdriver
- Hand truck

Who:

Please RSVP to Shirley Green. richard60green@yahoo.com (919) 848-1085

Or

Jeanne Burnham, jeannenmi@yahoo.com

Specifics

Chemical Formula	CaMgSi ₂ O ₆
Color	Green, Yellow, Brown, Black
Hardness	5 - 6
Crystal System	Monoclinic
Refractive Index	1.665 - 1.730
SG	3.3 - 3.5
Transparency	Transparent. Star Diopside is opaque.
Double Refraction	0.028
Luster	Vitreous
Cleavage	1,2 - prismatic. May also exhibit parting in one direction.
Mineral Class	Diopside

Healing Natures

It is said that Diopside is used by healers to assist in regeneration after a surgery or physical trauma. Women experiencing menopause find it helpful in calming the emotions and physical changes. It is used as an aid in

healing after a heart attack or other heart troubles. It has been used for regeneration to heal the lungs from damage caused by smoking. It is said that Black diopside is used to establish a connection and grounding with the earth, while green diopside is used for balancing and healing. It energizes the third eye, heart and sacral hara chakra. Green diopside

promotes emotional well being and the wherewithal to love oneself and others.

References:

- Minerals.net
- crystal-cure.com

Door Prize - Facet Rough

Bob Bendelow

My selection after winning the Tar Heel Gem and Mineral Club door prize drawing was a packet of faceting rough. The packet had some Tsaveite, emerald, topaz and a piece of rutilated quartz.



Faceting shows how different minerals can be. Each of this group of garnet, beryl, topaz and quartz must be cut and polished (especially polished) with different techniques.

The pieces of rough are small, and will cut different size finished gemstones.

Tsaveite is a green garnet which was originally found in the Tsavo National Game Park in Kenya, Africa. Presently, mines in Tanzania are producing more of this stone than those in Kenya. Generally considered a color variety member of the grossular garnet family, some gemologists do argue for tsaveite being a distinct type of garnet, such as pyrope or rhodolite. It can be hard to actually know what type of garnet you have as the various elements in them are quite mixed up. Happily, garnet is one of the easiest stones to cut and polish. It cuts easily and polishes brightly, given the proper equipment.

Emerald, though also green, is a beryl and quite different from tsaveite or any other garnet. However, like tsaveite, a medium to slightly dark green is considered the best color. Emeralds are found in greens from pale to dark green. Unlike most every other gemstone, emerald is almost always included, with a variety of inclusions called in the trade as "garden". Also, most every emerald you see as a cut gemstone has been treated to improve appearance. Experts in the emerald trade say that 95% of all emeralds are treated. In some locations ALL stones are treated as it's not worth looking for the very few clean stones. Generally cedarwood oil is used to treat the emeralds, but multiple other treatments with resins, epoxies and other materials are in use also. If you want to know with what your emerald was treated, there are some excellent labs, such as AGL (American Gemological Laboratories) in NYC, which can determine this for you.

In general, the treatment involves putting the stones in the treatment material, such as oil, and using a vacuum chamber to remove any air from the stone. After some time, usually days, the vacuum is ended and (hopefully) the oil both seeps into the stone through cracks and/or is pushed into the stone by the returning air. In major professional places, the oil may be put under great pressure to push it into the stone. Generally treated stones are called 'oiled' whatever the treatments.

Both emerald and tsaveite are colored by small amounts of chromium and/or vanadium atoms in the crystal structure. The geological world is still arguing about what defines an emerald – is it only stones colored by chromium? Or are beryl stones colored by vanadium also emeralds? In general the trade does consider a beryl stone colored by either to be an emerald. This determination was made a few years ago and seems even more correct as recent research has found that a mixture of chromium and vanadium is found in nearly every stone examined.

It's not being picky as it might sound at first. The natural color of aquamarine is greenish blue (or bluish green). There is also a green beryl that is not aquamarine or emerald. Both this type and aquamarine are colored by iron.

For years, Columbia was the major producer of emeralds. Then emeralds were found in Brazil and for decades both countries were the main source for the stones. Then a MAJOR find was located in Zambia, Africa. Zambia now is tied with Brazil as the second largest supplier. Emeralds are found in many places the world over, such as Russia, Kazakhstan, Pakistan and North Carolina.

A historical note: Cleopatra's emeralds were NOT emeralds, but peridot. Similarly, the great ruby in the Royal Crown of England is NOT a ruby, but a red spinel. This was only recently (in historic times) determined. We have much better understanding and tools today.

In December of 2014, at a trade auction in Hong Kong for rough and cut stones, top quality – and only if well cut – emeralds were sold for \$20,000 a carat, while mid grade stones from Zambia sold for \$2000 to \$4000 a carat. It was noticed that sales of top quality but poorly cut stones were few, with much unsold at any price.

Topaz comes in many colors and from many many locations. The blue topaz seen in jewelry sales is almost 100% treated. There ARE locations where a very light blue topaz is found naturally, such as Texas, but none as dark and blue as you see in a store. Back in historic times the favored topaz color was yellow. So much so that there are still places on earth where any yellow stone is 'named' topaz.

Probably the most common color found today by rockhounds is clear/white. Certainly anyone who goes "mining" in the west of our state has found some in their sluice. The topaz in the packet is a light beige, also a common color. But this color topaz gives a surprise when faceted, as the sparkles and flashes you see in the finished stone are very often pink! Imperial topaz, mined mostly in Brazil, is colored from light pink (with no brown) to bright pink. The

darker the pink the more expensive the stone will be. Imperial topaz is prized!

Cutting topaz into a gemstone requires knowledge of topaz as it has what is called "perfect cleavage". The stone has to be cut with the cleavage plane 7-10 degrees off of any facet angle. There is great temptation when cutting topaz because often that perfect cleavage leaves a nice flat surface that begs to be used as the table. Nope! The stone can be polished on the cleavage plane very very rarely. So, and it seems to happen to every faceter sooner or later, the entire stone has been cut and polished, except for the table, which is usually polished last – Nope! It won't polish!!

Every type of gemstone has it's own characteristics.

Rutilated quartz has needles of rutile in the rough stone. These needles are usually bright gold, though there are some other colors and sometimes the needles are a different mineral, such as black

tourmaline. Our own Linda Searcy recently won a national award for a rutilated quartz trillion she cut. If the rough is clean, the needles bright and there are not too many, and the faceter cuts and polishes right, the resulting stone is always a crowd pleaser!

Faceting is taught in the Craft Center three class a year on machines donated to the Craft Center by the Club. For members who have learned how to facet there are club loaner machines, with one now available.

There are also cabbing classes, also on machines donated by the club.

Any person who has been a member for a year or more is entitled to a rebate of part of the class fee upon successful completion of a class.

Oxalic Acid

Kenny Gay, PG

If any club member needs any free oxalic acid to clean quartz crystals, contact Kenny Gay 919-604-2376

Kenny Gay, PG

Geologist/Mineralogist/Paleontologist

North Carolina Department of Environmental Quality

kenny.gay@ncdenr.gov

UPCOMING SHOWS

April 1-3, 2016: Raleigh, NC - 40th Annual Capital Area Gem & Mineral Show. Tar Heel Gem and Mineral Club, Inc. Kerr Scott Building, NC State Fairgrounds, Raleigh, NC. The show is sponsored by the Tar Heel Gem & Mineral Club and includes 29 dealers. The Hospitality area sells grab bags with mineral specimens. Buy a rock at the Geode booth and be the first to see what is inside. The on-going Silent Auction has new items every hour. Dealers provide minerals, fossils, finished jewelry, gemstones, findings and beads for sale.. 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;

May 6-8, 2016: Marietta, GA – 48th Annual Mother's Day Weekend Gem, Mineral, Jewelry, and Fossil Show. Sponsoring Clubs: The Georgia Mineral Society. Cobb Civic Center, 548 South Marietta Pkwy SE, Marietta, GA. EXCITING AUCTION SATURDAY AT 1 PM. Over 30 Dealers! Door Prizes! Free Demos! Special Door Prizes for Students! Win a Great Prize for Yourself and for Your School! Free Parking! Free Admission! Hours: Fri & Sat 10AM-6PM / Sun Noon-5PM. Show Contact: www.gamineral.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
March 15, 2016 @ 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

