

# Tar Heel Tailings

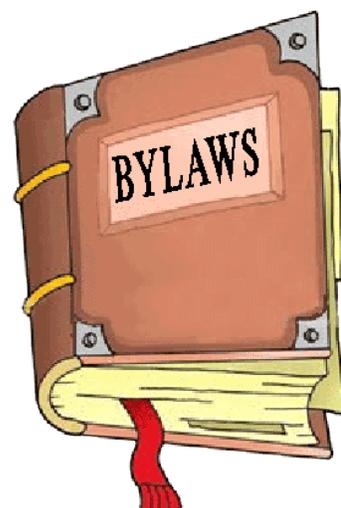
*A newsletter for Gem and Mineral enthusiasts in and around the Raleigh, North Carolina area.*

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

Well, what a good meeting we had. A good voting session, good program, good conversation and good refreshments.

I was unable to go to the field trip at the Simpson Farm. I hope those who went had a wonderful and fruitful time.

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## June Door Prize

By Linda Searcy

### Topaz

Topaz is named from Greek "topazion" for a type of gemstone, probably after Sanskrit "tapas" - fire, alluding to the brilliance of gem-quality material. Topaz has been known from antiquity.

Pure topaz is colorless and transparent but is usually tinted by impurities; typical topaz is wine, yellow, pale gray, reddish-orange, or blue brown. It can also be white, pale green, blue, gold, pink (rare), reddish-yellow or opaque to transparent or translucent.

Topaz Treatments  
Irradiation followed by heat-treatment produces most blue colors. Irradiation also produces

yellow, orange, red, brownish, pinkish and greenish colors: often unstable, may fade upon direct exposure to sunlight. Coated entirely or partially: may show peeled coating at

facet junctions, iridescence (reflecting light), and spotty coloration. Some surface-treatments are removed only with acids (mostly green and blue).

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### Special Interest Articles:

- President's Report
- June Door Prize
- Ruby
- 2014 THGMC Show Date (See Upcoming Shows)

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**We're on the Web!**  
See us at:  
[www.tarheelclub.org](http://www.tarheelclub.org)

**Program & Refreshments**

<b>REFRESHMENT SCHEDULE:</b>	
Coordinators: Mike Troutman; Emily Carabello	
July	<b>Need a Volunteer</b>
August	Ice Cream Social
September	Walt Milowic
October	Hummels
November	
<b>PROGRAM SCHEDULE:</b>	
July	Doris Hall, NC Archives
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).

[We need a volunteer for refreshments for July!!!](#)

**2013 June Treasurer's Report**

Apr. Ending /	
May Beginning Balance	\$8,880.88
-----	
Deposits (+)	
No deposits	
-----	
Sub total	\$0.00
-----	
Checks	
Newsletter	\$138.08
Taxes, etc	1,463.75
Stamps	110.40
Motor Vehicles	24.00
Wild Acres Dep	25.00
Mis Expense	124.79
-----	
Sub Total	\$1,886.02
-----	
May Ending /	
June Beginning Balance	\$6,994.86

**July B-Day Members**

- Becky Davenport
- Ann Davis
- Bill Layne
- Ella Myers
- Barbara Todaro
- Sandy Wenger
- Penny Wheeler



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. - May Meeting Minutes

Tuesday, Jun 18th, 2013

Attendees = 28

### Opening of Club Meeting:

At 7:45 PM Jack Fried called the meeting to order and welcomed newcomers/members to our meeting.

Jack then inquired about the grab bags that we sell at the show and was told that we had sold ALL we had. He then asked all members to be sure to bring any unwanted materials to the next grab bag assembly meeting. He also asked that when we attend any field trips to be sure to collect specimens for the grab bags.

Joe inquired as to the date for the next show and was given the dates of the 28th – 30th of March 2014.

### Old Business:

Amendment to the bylaws

Jack next brought up the proposed amendment to the bylaws: The THG&MC Inc. expects a member's responsibility to the club to include volunteering for a minimum of one duty per year. Once again the proposed amendment met with some vigorous if not in some cases ill informed opposition. The spirited debate was concluded with a vote on the proposal. The amendment to the bylaws was soundly defeated by the attending membership of the club.

John then asked if an amendment to the bylaws could be made to include a wider membership vote when amending the bylaws is proposed, instead of a vote by the attending membership. He was assured that his request would be brought to the board and it would be considered.

### Field Trips:

Tom next spoke briefly regarding how hard it is to get into the quarries in these overly litigious times and requested help from anyone willing to step up to the plate and help get this important group activity going again.

Cyndy brought up the idea of having a longer "Field Trip", one which would be of several days length and would possibly chartering a bus and driver for the expedition.

## President's Report

Continued from page 1

Let's hope they can bring some specimens with them to this month's meeting.

We will be having a program about arrow heads this month. If anyone is interested identifying their own specimens, please bring them along.

I believe our main priorities are the website and grab bag. First we need to discuss a fee we are able to pay for a website service. Then, we can discuss what items you have to donate to the club for grab bags.

### Refreshments:

A big thank you to Linda Searcy for volunteering to get our refreshments for the club meeting! Our continuing need for volunteers to bring refreshments was again spoken of by Jack. The following is the most up to date list. Apparently July is BYOB.

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

### Presentation:

Vince Schneider, Curator of Paleontology at the NC Museum Natural Sciences, presented a very interesting program. His topic was be "A Dinosaur Named Nancy - How the North Carolina Museum of Natural Sciences collected a duck-billed dinosaur from Montana".

### Committees:

The final item visited by Jack during the meeting was that he wanted all of the committees to get together prior to the next meeting and be ready to discuss what they were up to and had accomplished.

### Door Prize:

The door prize was won by Linda Searcy who chose a beautiful bag of faceting rough. 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:

~9:30 marked the close from a motion on the floor made by Mike and seconded by Obsidian.

Respectfully Submitted

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

I think we need to have our members make suggestion and send them to me so I can bring them up at the meetings or make a new section in our newsletter listing them.

Remember, it's the hot season and please make sure that you all stay hydrated.

That's all for me and hope to see you at the meeting.

Jack Fried,

President, Tar Heel Gem and Mineral Club, Inc.

# Ruby

By Obsidian Harris

There's no better way to demonstrate your love than by giving a ruby in celebration of a July birthday. Rubies arouse the senses, stir the imagination, and are said to guarantee health, wisdom, wealth and success in love. Ruby is a variety of the gems species corundum. It is harder than any natural gemstone except diamond, which means a ruby is durable enough for everyday wear. Fine-quality ruby is extremely rare, and the color of the gem is most important to its value. The most prized color is a medium or medium dark vivid red or slightly purplish red. If the gem is too light or has too much purple or orange, it will be called a fancy-color sapphire.

See more at: <http://www.americangemsociety.org/july-birthstone>



The gemstone ruby is the red variety of the mineral Corundum, the second hardest natural mineral known to mankind. Ruby is the July birthstone, and the Capricorn Zodiac stone. Ruby has been associated with the values of love, success, integrity, passion, and promise.

All colors of corundum other than red or white are called Sapphire. The red color in ruby is caused by trace amounts of the element chromium. The best shade of red for ruby is often given the name "pigeon blood red", but ruby can be any shade of red up to almost pink.

Oriented rutile crystal inclusions cause a six-rayed-star light effect (called asterism) to form the popular Star Ruby.

Rubies come from all over the world but good gemstones are found at Thailand, India, Madagascar, Zimbabwe, North Carolina in the U.S., Afghanistan, Pakistan, Sri Lanka, Kenya, Tanzania, Kampuchea, and perhaps most notably, Burma.

Like most gemstones from the antiquities, Ruby is one of the Biblestones. In Exodus, the Breastplate of Aaron is described as containing a "sardius", the ancient name for ruby.

Rubies have a famous place in science - the first lasers were made from artificial ruby crystals. They still are used for this purpose although other materials offer improved efficiency. Some natural ruby crystals show the fluorescence (actually very short term phosphorescence) that makes a laser possible.

See more at: [http://www.galleries.com/July\\_Birthstone](http://www.galleries.com/July_Birthstone)



- Variety Of:** Corundum , Al<sub>2</sub>O<sub>3</sub> .
- Uses:** Gemstone.
- Birthstone For:** July
- Color:** Red, may be brownish, purplish, or pinkish
- Luster:** Vitreous
- Streak:** white

**Crystal habit:** Varies with locality. Terminated tabular hexagonal prisms.

**Crystal system:** Trigonal (Hexagonal Scalenohedral), symbol (-3 2/m), space group R3c

**Index Of Refraction:** 1.76 - 1.78

**Birefringence:** 0.009

**Mohs scale hardness:** 9.0

**Specific gravity:** 4.0

**Cleavage:** No true cleavage

**Fracture:** Uneven or conchoidal

**Crystal System:** trigonal

**Pleochroic:** strongly

**Diaphaneity:** transparent

**Pleochroism:** Orangey red, purplish red

**Ultraviolet fluorescence:** red under longwave

**Melting point:** 2044 °C

**Solubility:** none

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



Ruby opens your heart past the boundaries of personal love and passion to unconditional love. It brings you into alignment with Divine will. It brings freedom, flow and peace for those with a fear of intimacy, repressed emotions and uncertainty in romance. It increases romantic love. It assists you in removing lethargic, dormant energies in your physical body,

emotions and mind. Ruby brings integrity, devotion and happiness. It also enhances generosity and brings prosperity. It protects your home, material possessions, children and anything you feel a deep attachment to, as well as offering psychic protection. It is a stone of high energy and power that promotes healing on all levels!

Chakras: Base, Heart

Astrological sign: Cancer, Leo, Scorpio, Sagittarius

## Star Ruby



All of the properties of Ruby, plus: Star Ruby is an excellent stone for when you need to be assertive and stand your ground! It helps you be grounded in your self love, find your inner strength and feel safe in order to move forward, leaving behind outmoded ways of thinking and being. It's excellent if you are in abusive or threatening situations or if you are leaving relationships where you need to be strong in order to make the change. Rarr!

Chakras: Heart

Astrological sign: None

See more at: <http://www.thatcrystalsite.com/guide/properties-glossary.php>

## Door Prize

Continued from page 1

Physical Properties of Topaz	
Mohs Hardness	8
Specific Gravity	3.49 to 3.57
Cleavage Quality	Perfect
Fracture	Conchoidal
Refractive Index	1.606 to 1.644
Dispersion	0.014
Colour (General)	Colourless, yellow, yellow-brown, reddish-brown, blue, green, pink, red, violet
Causes of Colour	Blue, color centers of unknown structure. Green, yellow and blue color centers. Yellow, color center of unknown nature. Orange ("imperial topaz"), yellow color center and Cr <sup>3+</sup> in octahedral coordination. Pink, Cr <sup>3+</sup> - in octahedral coordination. Reddish brown ("sherry topaz"), yellow and red color centers.
Transparency	Transparent
Lustre	Vitreous

## Emerald



The name emerald derives from Greek "smaragdos" - green stone. It is the most precious stone in the beryl group. Its green is incomparable, and is therefore called "emerald green". Emerald is highly evaluated for its deep bright green colour, transparency and rather high hardness. It has maintained, along with diamond and ruby, the dominant position among gemstones since ancient times.

The crystals are usually small with average length of 2 - 5 cm and width of 1 - 1.5 cm. Larger crystals are usually semitransparent to opaque. Flawless faceted emeralds exceeding 5 carats are rather rare.

The emerald is often clouded by inclusions, they are not classified as faults but show the difference between natural and synthetic stone.

A variety or type of:	Beryl
Chemical Formula	Al <sub>2</sub> Be <sub>3</sub> Si <sub>6</sub> O <sub>18</sub>

## Emerald Treatments

Beware of coated beryl: look for peeled coating (surface-reflecting light) - Blue Chart Gem Identification, Herve Nicolas Lazzarelli, 2010, p 6

Impregnation of the crystal faces with oil is used to conceal minute fractures and improve transparency. Canada balsam, cedar resin, kerosene and other similar materials may be used instead of oil. A technology was developed in Israel, in which fractures were filled with a melt of bismuth and lead under vacuum at high temperature to strengthen raw emerald prior to cutting.

## Emerald Simulants

Glass with groups of gas bubbles creating "fingerprints"

## Synthetic Emerald

Synthetic emerald (flux grown) - Colour - green; transparent; Hardness 7.5 - 8; RI 1.553 - 1.580; Birefringence 0.003 - 0.008; Hexagonal; Uniaxial/+; SG 2.63 - 2.69; Inclusions: flux residues, wisp-like flux "feathers" and "veils", phenakite.

Synthetic emerald - Colour - green; RI 1.563 - 1.585; Birefringence 0.004 - 0.008; SG 2.66 - 2.72; Inclusions: inhomogeneous growth structure (swirl-like or chevron pattern), phenakite crystals, phenakite nails, iron oxide residues.

Synthetic emerald (hydrothermal synthetic emerald overgrowth on colourless beryl) - Colour - green; RI 1.565 - 1.620; Birefringence 0.005 - 0.010; SG 2.66 - 2.71; Inclusions: characteristic pattern of cracks, patchy colour zoning (lighter and darker facets)

Physical Properties of Emerald	
Mohs Hardness	7.5 to 8
Specific Gravity	2.67 to 2.78
Tenacity	Brittle
Cleavage Quality	Indistinct
Fracture	Uneven, Conchoidal
Refractive Index	1.565 to 1.602
Pleochroism	Strong dichroism: yellow green - blue green
Dispersion	0.014
Colour (General)	Emerald green, green, slightly yellowish-green
Colour (Chelsea Filter)	Pinkish to "wine red", depending on chromium content (may remain greenish).
Causes of Colour	Green, Cr <sup>3+</sup> and/or V <sup>3+</sup> in octahedral coordination.
Transparency	Transparent, Translucent, Opaque
Crystal System	Hexagonal
Habit	Hexagonal prisms
Geological Environment	
Where found:	Emeralds are formed by hydrothermal processes associated with magma and also by metamorphism. Deposits are found in biotite schists, clay shales, in limestones, with pegmatites. Mining is nearly from host rock, where the emerald has grown into small veins or on walls of cavities. Alluvial placers are very unlikely to come about as the density of emerald is near that of quartz. Therefore, rare secondary deposits are mostly formed by weathering.

**Tourmaline**



Even though tourmaline has been known since antiquity in the Mediterranean region, the Dutch imported it only in 1703 from Sri Lanka to Western and Central Europe. The gave the new gems a Sinhalese name, Turamali, which is thought to mean "stone with mixed colors".

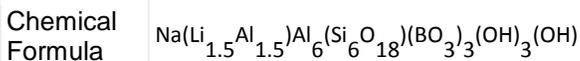
By heating and subsequent cooling, as well as by applying pressure, e.i. by rubbing, a tourmaline crystal

will become electrically charged. It will then attract dust particles as well as small pieces of paper (pyro- and piezo-electricity).

**General Information**

**Varieties/Types:**

- Achroite - A colourless variety of Tourmaline
- Chrome-Tourmaline - An emerald-green variety of tourmaline.
- Dravite - A sodium magnesium aluminium tourmaline species.
- Elbaite - A sodium lithium aluminium tourmaline species.
- Cuprian Elbaite - A copper-bearing Elbaite.
- Paraíba Tourmaline
- Indicolite - A blue gemmy variety of tourmaline (usually elbaite).
- Liddicoatite - A calcium lithium tourmaline species.
- Rubellite - A pink to red gem variety of tourmaline.
- Schorl - A sodium iron aluminium tourmaline species.
- Uvite - A calcium magnesium aluminium tourmaline species.
- Verdelite - A green gem variety of tourmaline
- Watermelon Tourmaline - A variety of Tourmaline with colour zoning showing a pink core and green edges.



**Tourmaline Treatments**

By heating to 842 - 1202 degrees F (450 - 650 degrees C), color changes can be produced in some tourmalines. Some green tourmaline becomes emerald green; other are lightened. The color of tourmalines which have been changed with gamma-irradiation may fade.

**Synthetic Tourmaline**

Synthetic tourmalines are used only for research purposes. The stones, offered as synthetic tourmaline, are rarely tourmaline-colored synthetic spinels.

Physical Properties of Tourmaline	
Mohs Hardness	7 to 7.5
Specific Gravity	2.85 to 3.35
Tenacity	Brittle
Cleavage Quality	Poor
Fracture	Sub-Conchoidal
Refractive Index	1.614 to 1.666
Pleochroism	Pink tourmaline - distinct: colorless-pink - pinkish-red; Orange/brown tourmaline - strong: yellowish-brown - dark(greenish)-brown; Yellow tourmaline - distinct: pale yellow - dark yellow; Violet/purple tourmaline - strong: light purple - purple; Blue - strong: light blue - dark blue; Green - strong: yellow-green - dark green
Dispersion	0.017
Chatoyancy	Tourmaline cat's eyes exist in various colors, but only in the green and pink varieties. Chatoyancy is usually strong, caused by thin tube-like inclusions. Some tourmalines show a slight change of color in artificial light. They have a vitreous sheen on crystal surfaces, a greasy sheen on fractured surfaces.
Colour (General)	Multi-colored crystals are common
Transparency	Transparent, Translucent, Opaque
Lustre	Vitreous
Crystal System	Trigonal
Habit	Prismatic to acicular crystals
Inclusions in Tourmaline	
Thread of fiber-like capillaries often plaited in net-like pattern. Angular thin film mirror-like inclusions. Tube-like 2 phase inclusions running parallel to crystal's length: may create chatoyancy	
Flat, film-like liquid inclusions, parallel oriented hollow tubes, needle-like mineral	



## UPCOMING SHOWS

**July 12 - 14, 2013: Raleigh, NC** - Gem & Jewelry Show. NC State Fairgrounds, Scott Building. Dealers will offer a variety of gems, jewelry, crystals, minerals and beads for show and sale. Rare minerals, giant sharks teeth, and fossils will be on display. Show hours: Friday, Saturday and Sunday, 10 a.m. to 5 p.m. Admission: Free admission. [www.frankcoxproductions.com](http://www.frankcoxproductions.com); 941-954-0202; [frankcox@comcast.net](mailto:frankcox@comcast.net)

**July 27 - August 5, 2013: Spruce Pine, NC** - 29th Annual Grassy Creek Gem and Mineral Show. Parkway Fire and Rescue Department at 12966 Hwy. 226 South, Spruce Pine, NC, halfway between US 19E and the Blue Ridge Parkway (exit 331). There are 72 dealers who have all kinds of gemstones, mineral specimens, jewelry, beads, fossils, and lots more. Mine tours available. Admission is FREE. Parking is FREE. BBQ and silent auction of items donated by the dealers on Saturday to raise funds for the fire department. Hours are from 8 to 6 all days. Contact Donna Collis at [collisdonna@yahoo.com](mailto:collisdonna@yahoo.com) for information.

**August 3 - 4, 2013: Raleigh, NC** - Bead Mercantile Show. NC State Fairgrounds, Scott Building. Visit our event for a great selection of beads and bead related items from vendors from across the country and world selling everything from hand-made artisan glass beads to direct imports such as beads (seed, pewter, semi-precious

gemstones), findings, threads/cord and everything else you need to make beaded jewelry. Workshops also available. Show hours: 10 a.m. - 5 p.m. Saturday and 10 a.m. - 4 p.m. Sunday. Admission: General Admission of \$6 is discounted to \$3 with registration at door or online - children under 16 admitted free but must be accompanied by an adult. [www.beadmercantile.com](http://www.beadmercantile.com); 610-909-2674; [beadmercantile@yahoo.com](mailto:beadmercantile@yahoo.com)

**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](http://www.TreasuresOfTheEarth.net); (804) 746-7663; [tote1523@treasuresoftheearth.com](mailto: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](mailto:mchummel@mindspring.com); [www.tarheelclub.org](http://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](http://www.amfed.org/sfms/lodestar_newsletter.html) The SFMS Lodestar Newsletter

<http://www.carolinageologicalsociety.org/CGS/Home.htm> 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](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](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](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.

