

Tar Heel Tailings

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

Special Interest Articles:

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

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

Hello all! I hope you all have been having a wonderful summer. It's that time again for grab bags. Please bring all your colorful odds and ends which you have been saving up, to this month's meeting. We will be putting together those wonderful packets that the children love to open.

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August Door Prize

By Mary Obenchain

Polychrome Jasper

Polychrome jasper is a type of opaque, multi-colored chalcedony which develops in massive formations. The formations found in Madagascar are few in number. It also goes by the name of Royal Savannah Jasper and Desert Jasper. It is believed to be one of the rarest jaspers in the world. In addition to the new pockets found in Madagascar, some deposits are also located in Australia.

Jasper, a form of chalcedony, is an opaque, impure variety of silica, usually red, yellow, brown or green in color. Blue is rare. This mineral breaks with a

smooth surface, and is used for ornamentation or as a gemstone. It can be highly polished and is used for vases, seals, and at one time for snuff boxes. When the colors are in stripes or bands, it is called striped or banded jasper. Jasper is basically

chert (a variety of silica that contains microcrystalline quartz) which owes its red color to iron inclusions. The specific gravity of jasper is typically 2.5 to 2.9.

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We're on the Web!

See us at:

www.tarheelclub.org

Program & Refreshments

REFRESHMENT SCHEDULE:

Coordinators: Mike Troutman; Emily Carabello

October Hummels
November

PROGRAM SCHEDULE:

October Grab Bags
November Elections

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 September Treasurer's Report

Report is delayed until next month

October B-Day Members

Gerald & Carolyn Beck
Mark Davis
John Everette
Brian Gray
Larry Jackson
Joe Moylan
Caissa Niederkorn
Alan Santala
Robin Suddaby



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. – September Meeting Minutes

Tuesday, September 17, 2013

Minutes are postponed until next month's newsletter.

President's Report

Continued from page 1

I hope you all had a good time at the Bradford Farm Dig. I hope that you will bring some specimens that you collected to this month's meeting for all to see. It's probably too late, however I hope many of you were able to secure a spot for the up and coming dig at Glendon. Only the first 120 applicants are able to go. Good Luck.

On the web site front, I believe we have been almost able to procure a new Web Master. I should be able to tell you more at our next meeting.

August Door Prize

By Mary Obenchain

Physical properties of Jasper:

Stone Type/Family:	Silicates
Crystal System:	Trigonal
Chemical Composition:	SiO ₂ Silicon Dioxide with various inclusions/impurities
Hardness:	7
Color:	Usually red, brown or yellow and colored by oxides of iron
Location:	Worldwide
Rarity:	Common (except for blue)

Until this month's meeting, I hope you all stay well and have a wonderful time.

Respectfully Yours,
Jack Fried,
President, Tar Heel Gem and Mineral Club, Inc.

Use it for:

- Stability
- Balance
- Grounding

All jaspers help balance the emotional energy in the body.

September Door Prize

By Marion Broadway

Calcite

Calcite: from the Greek-meaning lime, and is also known as limespar.

Being the most common carbonate, calcite deposits are likely found in many environments; sedimentary, metamorphic and hydrothermal veins.

It's MOHs hardness is #3 (middle range) which means it scratches and can be damaged easily. Even dust with quartz particles can damage a calcite specimen;

therefore it must be stored or worn with care.

Calcite's refraction index is 1486-1658. It fluoresces red, pink, orange, white or yellow.

Crystals are from transparent to translucent, with a density of 2.69-2.71, Ca(CO)₃ has a vitreous luster and streaks from white to grayish.

The manufacturing of steel, cement, and glass all depend on calcite.



October Birthstones

Tourmaline



Tourmaline has become a favorite gemstone among jewelry designer, and gem collectors the world over. Since it is available in a wide variety of colors, it is ideally suited to almost anyone's taste. Tourmaline also is known for displaying several colors in the same gemstone. These bi-color or tri-color gems are formed in many combinations; gemstones with clear color distinctions are highly prized.

One multi-color variety is known as watermelon tourmaline, and features green, pink, and white colors bands; to resemble its namesake, the gemstone is cut into thin slices having a pink center, white ring, and green edge. Tourmaline is found in many localities including Brazil, Afghanistan, East Africa, and the USA.

Opal



The name opal derives from the Greek Opallos, meaning "to see a change (of color)." Opals range in color from milky white to black with flashes of yellow, orange, green, red, and blue. An opal's beauty is the product of contrast between its color play and its background. Opal is a formation of non-crystalline silica gel that seeped into crevices in the sedimentary

strata. Through time and nature's heating and molding processes, the gel hardened into the form of opals. The opal is composed of particles closely packed in spherical arrangements. When packed together in a regular pattern, a three-dimensional array of spaces are created that give opal its radiance.

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

Tourmaline



Tourmaline is the traditional birthstone for October, and is given as the gemstone for the 8th anniversary. It is associated with balance, endurance, and safety.

Most people consider tourmaline to be a single mineral. But in fact it is a group named for several different, but closely related minerals. Members of the

Tourmaline Group are favorites among mineral collectors. Their rich and varied colors can captivate the eye. Even the black opaque tourmalines can shine nicely and produce sharp crystal forms. Tourmalines are cut as precious gems, carved into figurines, cut as cabochons, sliced into cross-sections and natural specimens are enthusiastically added to many a rock hound's collection.

Tourmaline can be nearly any color of the rainbow, a fact used to colorful effect in some tennis bracelets. Elbaite is the tourmaline

mineral that is most often found in jewelry, as its color is extremely variable with the most common colors being red, pink, green, blue, orange and yellow. Elbaite has many variety names based on color. A beautiful blue variety is called indicolite (also known as indigolite), the pink to red variety is called rubellite, and the green variety is known as verdelite. Often a specimen can have more than one color zone in the same crystal, with the most famous variety being a pink and green combination called watermelon tourmaline.

There are many unique properties of tourmalines. First, they are piezoelectric which means that when a crystal is heated or compressed (or vibrated) a different electrical charge will form at opposite ends of the crystal (an electrical potential). Conversely if an electrical potential is applied to the crystal, it will vibrate. Secondly they are pleochroic which means that the crystal will look darker in color when viewed down the long axis of the crystal than when viewed from the side. This property goes beyond the idea that the crystal is just thicker in that direction. Even equally dimensioned crystals will demonstrate this trait. This property can be used as an advantage by gem cutters who may wish to enhance a crystal's pale color or weaken a strongly colored crystal.



The four most common and well known tourmalines are distinguished by their color and transparencies.

Elbaite is the gemstone tourmaline and comes in many varied and beautiful colors. It is transparent to translucent and is highly prized as minerals specimens and as gemstones. Elbaite is easily the most colorful of all the gemstones.



The iron rich schorl is the most abundant tourmaline and is black and opaque. It is a common accessory mineral in igneous and metamorphic rocks and can form nice crystals. Although too opaque to be used as a gemstone, schorl is used as an ornamental stone when found as inclusions in quartz, a stone is called "tourmalinated quartz". Usually when someone refers to tourmaline they are referring to either elbaite or schorl.



The two other more common tourmalines; dravite and uvite are much less common than elbaite or schorl, but they are getting noticed for their beautiful specimens. Some of dravite's crystals are nicely formed, translucent brown and they can reach a rather large size. Uvite is a green translucent to opaque tourmaline that is growing in popularity and is being cut as a gemstone.



Most people consider tourmaline to be a single mineral. But in fact it is a group named for several different, but closely related minerals. Members of the Tourmaline Group are favorites among mineral collectors. Their rich and varied colors can captivate the eye. Even the black opaque tourmalines can shine nicely and produce sharp crystal forms. Tourmalines are cut as precious gems, carved into figurines, cut as cabochons, sliced into cross-sections and natural specimens are enthusiastically added to many a rock hound's collection.

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The Tourmaline Group has a general formula of $AX_3Y_6(BO_3)_3Si_6O_{18}(O, OH, F)_4$. The A can be either calcium or sodium. The X can be either aluminum, iron, lithium or magnesium. The Y is usually aluminum, but can also be chromium or iron. Some potassium can be in the A position, some manganese can be in the X position and some vanadium can be found in the Y position, but these elements are usually not represented in the formulas of the tourmaline members.

These are the members of the Tourmaline Group of minerals:

- Buergerite (Sodium Iron Aluminum Boro-silicate Hydroxide Fluoride)
- Chromdravite (Sodium Magnesium Chromium Iron Aluminum Boro-silicate Hydroxide Fluoride)
- Dravite (Sodium Magnesium Aluminum Boro-silicate Hydroxide)
- Elbaite (Sodium Lithium Aluminum Boro-silicate Hydroxide)
- Feruvite (Calcium Iron Magnesium Aluminum Boro-silicate Hydroxide)
- Foitite (Iron Aluminum Boro-silicate Hydroxide)
- Liddicoatite (Sodium Lithium Aluminum Boro-silicate Oxide Hydroxidem Fluoride)
- Olenite (Sodium Aluminum Boro-silicate Oxide Hydroxide)
- Povondravite (Sodium Iron Boro-silicate Hydroxide Oxide)
- Schorl (Sodium Iron Aluminum Boro-silicate Hydroxide)
- Uvite (Calcium Sodium Magnesium Iron Aluminum Boro-silicate Hydroxide Fluoride)

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

Opal



Opal has been a popular gem for many centuries and has a very interesting structure. Opal is considered a mineraloid because this structure is not truly crystalline. The chemistry of Opal is primarily SiO_2 and varying amounts of water. The amount of water varies from 5% to 10% and sometimes greater. This water

can help geologists determine the temperature of the host rock at the time the opal formed.

Although there is no crystal structure, (meaning a regular arrangement of atoms) opal does possess a structure nonetheless. Random chains of silicon and oxygen are packed into extraordinarily tiny spheres. These spheres in most Opals are irregular in size and inconsistent in concentration. Yet in Precious Opal, the variety used most often in jewelry, there are many organized pockets of the spheres. These pockets contain spheres of approximately equal size and have a regular concentration, or structure, of the spheres. This has the effect of diffracting light at various wavelengths, creating colors. Each pocket produces a different color and with a different intensity, depending on the angle from which a viewer sees it. The multicolored flashes of light that Opal emits gives it a truly beautiful and valuable look. This effect is called a "play of light", and not "opalescence". The latter term describes the milky nature of the translucence of opal, and is more properly compared to the appearance of water to which a few drops of milk have been added.

The name opal probably is derived from the Sanskrit name for precious stone; upala. It has been mined for centuries, at least since Roman times when they extracted the opal from areas now within the Czech Republic. The Aztecs made use of local Mexican sources as did the Spaniards when they exported the material back to Europe. Today most precious opal comes from Australia with significant sources from Mexico and the Western United States.

Not all opal is so precious however. Common opal lacks opalescence, color or luster and is . . . after all . . . common. Opal is often imitated, forged and "enhanced". Fluorescence, while somewhat unreliable is a good method to determine authenticity.

Opal is the modern Birthstone for October.

Variety Of:	Hydrated Silicon Dioxide, $SiO_2 - nH_2O$.
Uses:	Gemstone
Birthstone:	October
Color:	white, colorless, pale yellow, pale red, gray or black when impurities are common. Diffraction can cause flashes of any color of the rainbow (play of light).
Luster:	Vitreous to pearly.
Transparency:	Specimens are transparent to translucent (opalescent).
Hardness:	5.5 – 6
Specific Gravity:	2 - 2.5 (light)
Cleavage:	absent
Crystal System:	Does not apply because opal is amorphous
Fracture:	conchoidal

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

Tourmaline



Black Tourmaline (Schorl) clears negative emotions and thoughts and opens you up to joy and honesty. It aids in the receptivity of inspiration and allows it to flow freely into your mind. It does not hold a charge or store energy and so doesn't absorb negative energy- it repels it! Carry this stone when you feel surrounded by

negativity. It's great for use in times of crisis or for periods of extreme stress, and it is a powerful protector until you are strong enough in your own power. It's good for those who are highly sensitive and easily influenced by inharmonious energies. It helps you break through old patterns and fears, and cultivates inner wisdom, courage, stability and patience.

lightens your aura so that dramatic Earth changes can be accepted and integrated without causing undue physical or emotional stress. Opals instill acceptance of anything which cannot be seen, connecting you to your Higher Self and opening you to the wisdom of ancient cultures. Because Opal is watery and translucent it works with your emotions, bringing up deep emotional states to be faced and loved free. If you are able to control your mind and focus your attention, Opal will develop this aspect of your mind. Opal can be unsettling for wearers, as it attracts to you anything you carry in your heart and mind, positive or negative! Always wear it consciously and when you carry a positive attitude with you.

Chakras: Base

Astrological sign: Leo, Ophiuchus

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

Opal



Opal is a Quartz, consisting of colloidal silica and large amounts of water. They don't like arid conditions, and will crack if they 'dry out'. Opal is a crystal of the New Age, assisting you in adapting to Earth changes and allowing inner balance to take place. It

Chakras: Crown, Earth Star, Frontal, Heart, Link, Soul Star, Thymus

Astrological sign: Cancer, Aquarius

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

September Program

Cyndy Hummel gave a presentation on what she learned and created at Wildacres. Here are some pictures of what she showed.





Some of Cyndy's Tools

UPCOMING SHOWS

November 22-24, 2013: Columbia, SC - 46th Annual Gem, Mineral, & Jewelry Show 2013. Jamil Temple (206 Jamil Road, Exit 106A off I-26), Columbia, SC 29210. Jewelry, beads, loose stones, fossils, minerals, gold, silver, & tools for sale. Geodes sold & cut. Club member's rock collections on exhibit & lapidary demonstrations. Show hours: Friday: 10 am - 7pm, Saturday: 10 am - 6 pm; Sunday: 12 pm - 5 p.m.; Admission: Adults \$5 - under 16 admitted free with adult. All military & their dependants are free. www.cgams.org; Sue Shrader (803) 736-9317; ashrader@mindspring.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.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 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.

