

THE ROCKET

deadline for next issue
November 8

OCTOBER 2019

Club email: secretary.hrc@gmail.com
Newsletter email: Edrocket18@gmail.com

Next Meeting: Friday October 25- 7PM Hastings Community Center Hall

Workshop Hours

Lapidary

Date & time.

Instructors

Backup instructors

Monday 6:30 pm to 9:30 pm.

Thomas Hui

Olivier Wong

Wednesday 1:00 pm to 4:00pm.

Vivian Rickey

Vera Schmedding

Thursday. 6:30 pm to 9:30 pm.

Sante Gasparin

Saturday. 1:00 pm to 4:00 pm.

David Myers

Metalwork

Date & time

Instructor

Backup instructors

Sunday 10:30 am to 1:30 pm.

Michael Ma

Diane Crowe

Monday 9:30 am to 2:00 pm

Michael Ma

Grazna Rougeau

Silversmithing

Date & time

Instructor

Backup instructors

Wednesday 9:00 am to 12:00 noon

Backup instructors

Marilyn Sztankovics

Saturday 9:00 am to 12:00 noon.

Crystal Chow

Vera Schmedding

Vivian Rickey

Note: A special Silversmithing Project will be inserted in a Saturday Silversmithing workshop.

It will be delivered by a guest instructor Dave Foster on a project basis.

Check with Thomas Hui for project dates: 604-209-8715

Soapstone Carving

Contact Linda Foy for opening

Date & time

Tuesday 6:45 pm – 9:30 pm

Workshop notes from Thomas Hui

Reminder: Please submit entries on **toxic minerals** not allowed to be done in the workshops. Entries should include names of the stones, chemical formula, reasons for not allowing to be done in the workshops.

Submit entries to Thomas Hui either by email to thomascwhui@gmail.com; or by text message to 604-209-8715.

Upcoming Events of Interest: Shows

October 19 & 20, **Surrey Rockhound Club**, Sullivan Hall, Surrey

October 26 & 27, Port Moody Rock & Gem Club, **Kyle Centre, Port Moody**

November 2 & 3, Delta Rockhound Gem & Mineral Club, **South Delta Recreation Centre, Tsawwassen**

November 16 & 17, Abbotsford Rock & Gem Show, **Peardonville Hall, Abbotsford**

December 7, Creative Jewellers Guild of BC, **VanDusen Botanical Gardens, The Floral Hall, Vancouver**

Projects

(reprinted from September newsletter)

Linda is thinking about our club Show

Hello fellow members: It is not too early to start thinking about our show next year.

One way to volunteer by making some grab bags for the show. The rewards will be two- fold; first our grab bags are always a great hit at the show, so you will feel good in helping the club with their fundraising efforts, and second, it is great to see the excitement of the kids as they (and adults too) pick their special bag to purchase.

I am sending out the dimensions for the grab-bags so you can get to making them in your spare time. I can finish and string them if you like. I am crocheting strings and putting beads on them.

Also, if anyone wants to donate small stones for the bags, they are certainly welcome. No toxic rocks, and please, no obsidian since it can become dangerous if dropped and it shatters.

The kiddies (and adults too) love soft and fuzzy fabrics, like flannel. Fun patterns are great, but sometimes whatever is cheap and available will work. The plan is to make 300 again this year, and- if we can put them together either in late January or early February, then we have some time until then, to make as many as we can. Thanks in advance! Linda linmfoy@yahoo.ca

Dimensions for the grab bags are:

17 1/2 inches x 7 1/4 inches (44 cm x 18.5 cm)

Just fold over the ends and sew to form a loop for a string (tie) to go through- please make sure a string can go through, sew it inside out. The finished bag will be 7 1/2 inches x 6 1/4 inches. Have fun!



Pink Tourmaline

is a modern birthstone for October. It is also the alternate for celebrating a 5th Anniversary. Tourmaline is for celebrating the 8th Anniversary and is a birthstone for a 6^{am} birth. Green Tourmaline is for the 10th Anniversary.

pictures <https://www.gia.edu/tourmaline>



The name Tourmaline comes from the Sinhalese word *tora malli* which means “stone with mixed colours”. It was applied to the gemstone when the Dutch began importing them from Sri Lanka in 1703, but it really wasn't completely new to Europe. The name *Shorl* had been applied to a black, iron rich tourmaline from Germany and had been known for centuries though rarely used in jewellery.

Tourmaline is a mineral group of crystal silicates compounded with elements such as aluminium, iron, magnesium, sodium, lithium, or potassium. The Gemological Institute of America (GIA) says the chemical formulas of the 4 groups of gem interest is as follows:



One of the best quotes about the complexity of the chemical composition of Tourmaline is from John Ruskin (1890) who said: “the chemistry of [tourmaline] is more like a mediaeval doctor's prescription than the making of a respectable mineral”.

All that complexity gives us a wide spectrum of colours available in one group. The different elements affect the colour of each tourmaline crystal. In 2000, in Malawi a vivid yellow variety was found so tourmaline has almost every colour represented in the group of 33 minerals. The International Mineralogical Association updated the list of names of types of tourmalines as recently as 2011.

Tourmaline is found as long prisms of column-like crystals. They are really hexagonal (six sided) but some of those sides are so shallow and with heavy vertical striations so they look like a rounded triangle in cross section. The crystal shape or form is one of the easiest ways of identifying Tourmaline. Another way to identify tourmaline is to examine the crystal colour. It can often look darker looking down the length of the crystal and lighter looking at the crystal perpendicularly to that first view.



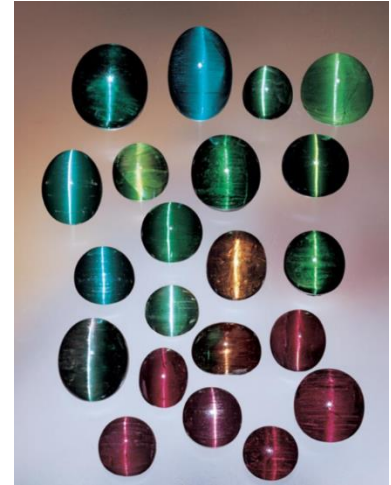
Photo: [nytimes.com/1998/03/20/](https://www.nytimes.com/1998/03/20/)
Another case of mistaken identity: “Caesar's Ruby” given to Catherine the Great in 1777 and believed to have once been Caesar's, is actually a rubellite tourmaline.

Colour is the most important quality factor for Tourmaline. It is often the way a tourmaline is named too. Rubellite is a pinkish to red tourmaline that is reminiscent of Ruby. Indicolite is a blue/green to blue form of tourmaline. Sometimes the source of the tourmaline is part of its name and gives you a clue to the colour. Paraiba tourmalines come from the Paraiba mining area in Brazil and are bright, electric green, blue, and violet. The International Gem Society (IGS) says that nearly every pink, red, and blue tourmaline gem stone is heat-treated and some are irradiated to enhance the colour. The treatment mimics processes that occur underground naturally and the colours are stable.

Tourmaline is often colour zoned through the cross section or along the crystal's length. Watermelon Tourmaline is a term for red and green tourmaline, but the tourmaline might be red at one end and green at the other end of the crystal or have a green outer zone (like a rind) and a pinkish red interior. This may be the most common combination of colours, but there are many others.

Clarity is the second important quality factor for tourmaline. Clarity doesn't mean transparency; it refers to imperfections or inclusions. Generally green tourmalines should be "eye-clean" (no inclusions visible to the naked eye), but imperfections are more common in pink, red and blue tourmalines. Some inclusions can be desirable. In some tourmalines there are long hollow, gas or liquid filled tubes that run the length of the crystal. If there are enough of them, and they are bundled close together, they can create a cat's eye effect when the tourmaline is cut en cabochon.

Picture: <https://www.gia.edu/tourmaline>



The cut of a tourmaline gem is done to highlight the best features of the stone. Often a tourmaline crystal is faceted, but sometimes a slice is made as a cross section of the crystal to show something such as its watermelon similarity. When a tourmaline is faceted the cutter may choose to highlight its darker colour through the length of the crystal, or its lighter colour along the length of the crystal.



Carat or weight of the tourmaline is another quality factor. Lots of tourmalines are under 5 carats. Bigger tourmalines will cost more if they have all the other quality factors covered. The Guinness World Records designate the "Ethereal Carolina Divine Paraiba" (cut by Canadian jeweler Kaufmann de Suisse) as the world's largest Paraiba tourmaline at 191.87 carats. (pictures source: <https://www.nationaljeweler.com/fashion/style/1564-world-s-largest-paraiba-tourmaline-set-in-necklace>). There are other large stones such as a 258.08 green cat's eye tourmaline in a private collection according to Wikipedia and, according to geology.com, some crystals can be over 100 kilograms. (Not all tourmaline crystals are gems though.)

Tourmaline is 7 to 7.5 on the Mohs hardness scale and is suitable for most jewellery and everyday wear. Some are even considering it for engagement rings (article on IGS website) even though it is not as hard as diamond (10) or Ruby and Sapphire (9). Inclusions may make the stone less durable as that might be an area where it would break. Generally, warm water, mild detergent and a soft brush are all that is needed for cleaning. Interestingly, for store displays, rubbing or heat from things like lights, can make tourmaline get a slight electric charge so it attracts extra dust. Some say the electric properties are also a way to identify tourmaline as it can attract ashes or light pieces of paper if the charge is built up enough by rubbing along the crystal length.

Tourmalines are found in coarse granite or granite pegmatites and in metamorphic rocks like schist and marble. The crystals form when hot waters and vapours carry the elements needed for tourmaline into pockets, voids and fractures. Because of its hardness, tourmaline is resistant to weathering. Gem rough is mined from stream sediments in many areas of the world.

Gem and specimen tourmaline are mostly mined in Brazil and Africa. Tourmaline is also mined in Afghanistan. Placer material comes from Sri Lanka and India. In North America some tourmaline is found in Ontario, Maine, California and BC. In BC It has been found north of Cranbrook, and north of Castlegar and according to the cigem.ca article "Gemstones of BC" tourmaline has been found in "Pegmatite dykes on Mica Mt. south of Tete Jaune Cache and Mount Begbie south of Revelstoke contain black, green and red tourmaline." In the US, Native Americans used pink and green tourmaline as funeral gifts for centuries.

In 1822 discoveries were made in Maine and in the early 1900's California became a large producer of tourmaline, especially pink tourmaline. Some say the San Diego mines sent 120 tons of pink tourmaline to Imperial China between 1902 and 1910 because the Chinese Dowager Empress Tz'u His (some say Cixi) loved its vibrant colour. It was used to make snuff bottles, carvings, jewelry and other items.

Early 20th century tourmaline snuff bottle, from the Tourmaline Queen Mine, Pala, CA.

