

THE ROCKET

deadline for next issue
April 12

March 2019

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

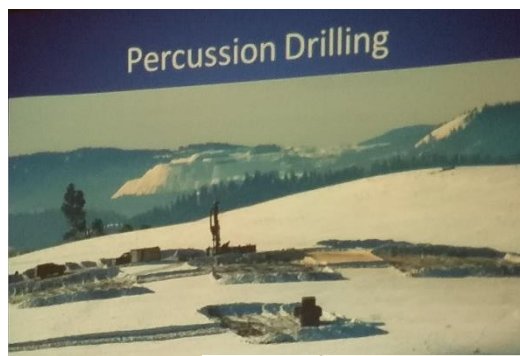
(nothing is wrong with your computer... My computer does not have patterns or textures available, so I chose "gradient" which is sort of accurate for Bloodstone – this month's Birthstone.)

Members are reminded to bring their membership cards to meetings and the workshop as there is an attendance requirement at meetings in order to attend the workshop. Any concerns, please contact the Executive.

Next Meeting: Friday – March 22 at 7PM
at Hastings Community Center Hall

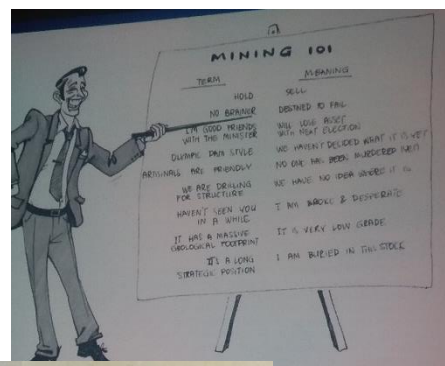
PROGRAMS

Erica Williams of the Port Moody Rock and Gem Club is our presenter. She will bring specimens to illustrate various ores and talk about the products that they are used for. Paul saw her presenting at the Port Moody Annual Show last October, was most impressed.



Last meeting Programs:

Our feature speaker at the last meeting was **Paul Stevenson of Sego Resources**, a Vancouver-based mining company.



Thanks
Allison for
Photos



Workshop Hours

Lapidary:	Monday	6:30pm – 9:30pm
	Wednesday	1:00pm – 4:00pm
	Thursday	6:30pm – 9:30pm
	Saturday	1:00pm – 4:00pm
Metalwork:	* Monday	9am – 2 pm
	* Sunday	10:30am – 1:45 pm
Silversmithing:	Wednesday	9:00am – 12:00 noon
	Saturday	9:00am – 12:00 noon
Soapstone Carving:	Tuesday	6:45 pm – 9:30 pm
	There is room for 10 people. Please contact Linda Foy before showing up for the first time.	

Hastings Rockhounds Gem and Mineral Show 2019 March 16 & 17 at Hastings Community Centre

Hastings Community Centre
Rockhounds Club
Presents

CRYSTALS AND THEIR FRIENDS

March 16/17 2019

From 10am to 5pm | Entry by donation

Knowledgeable Vendors
Children Activities | Prizes
Book Sale | Refreshments
Demonstrations | Displays

Hastings Community Centre,
3096 East Hastings Street
Vancouver, BC

Sante is our Show Chairman. **Those who have not volunteered already can contact Sante at squintog10@gmail.com**

Members can **show support for the club** by helping us put on a great show.

Your participation is needed.

Members can assist by giving even a few hours each day to relieve others. **Food and beverage items** also help. Everything needs to have contents clearly labelled and Sante knows what is still needed.

contact Sante at squintog10@gmail.com

Thanks for your cooperation and participation to make a great show in 2019.

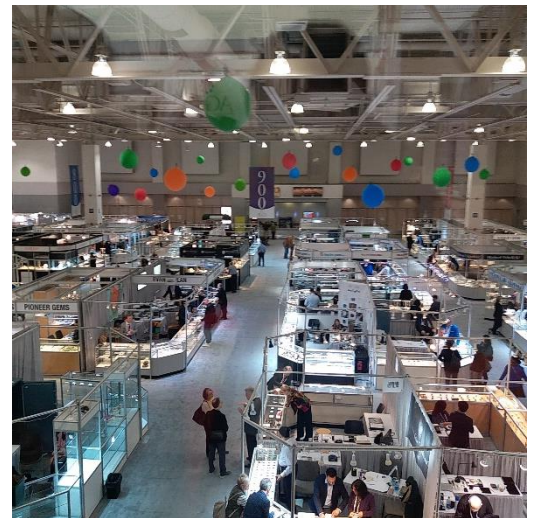
FIELD TRIPS

Allison Ku went to Tucson for this year's show. She has shared some pictures with us.

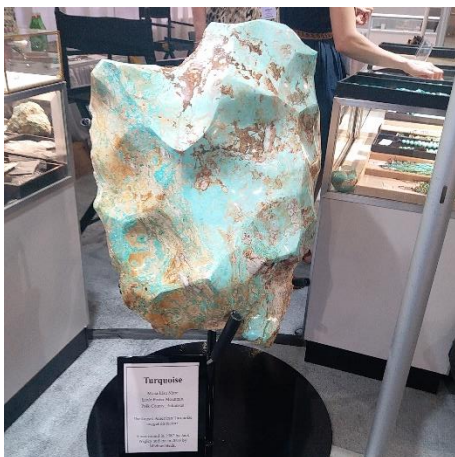
Definitely not
Vancouver



Kino Park where the white tents hold vendors from all over the world: Australia, Brazil, Madagascar, Mexico...



The main hall



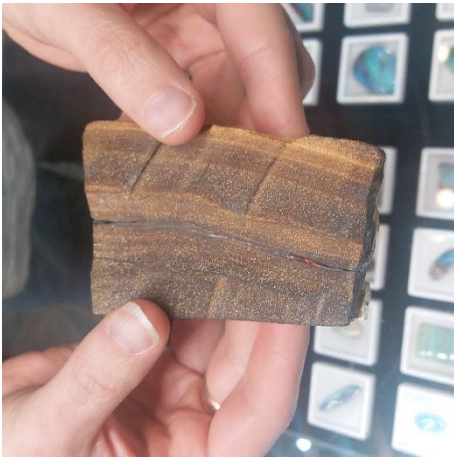
Biggest turquoise seen was from



nephrite from Washington

Mona Lisa Mine

As seen at Tucson: What happens when you open a piece of an opal vein



Recent News:

Summer Camp is a Go!

Galloway, BC



We are excited to announce that Summer Camp 2019 will be taking place in Galloway, BC, August 5-10. This is the first time we have hosted Summer Camp in this region of the province. The area is famous for a number of significant fossil (trilobite) deposits and mining camps. Local members of the East Kootenay Chamber of Mines have agreed to lead field trips to interesting sites. Home base will be the [BC Mountain Hideaway](#).

Registration information can be found on our web site:
<http://www.bclapidary.com/rock-hunting-summer-camp.php>

An agenda will be made available on our web site as we approach Summer Camp weekend. Should you have questions, please contact Linda at 250-777-1399, or email at lindamarcelet50@gmail.com.

Upcoming Events of Interest: Shows and Rendezvous

The following clubs are having shows and sales. For more information visit the BC Lapidary Society website or the club websites.

Hastings Rockhounds Gem and Mineral Show 2019 March 16 & 17 at Hastings Community Centre

April 12, 13 & 14, **BC Gem Show**, BC Lapidary Society. Abbotsford:
Theme "*History of Mining*"

April 13 & 14, **Courtenay Gem & Mineral Club**, Legion Branch 367, Courtenay
May 4 & 5, **Richmond Gem & Mineral Club**, Arts & Cultural Centre, Richmond
May 12 **Creative Jewellers Guild of BC**, VanDusen Botanical Gardens, Vancouver
June 1 & 2, **Ripple Rock Gem & Mineral Club**, Community Hall, Campbell River
June 7-10 **Rendezvous**, Rock Creek, Penticton Geology and Lapidary Club & BCLS
July 7 **Tailgate Sale, Surrey Rockhound Club**, Sullivan Hall, Surrey
July 19 – 21, **Okanagan Gem Show**, Rutland Centennial Hall, Kelowna

By 1120 Rock Club of Kelowna and the Vernon Lapidary & Mineral Club

Rendezvous is the British Columbia Lapidary Society's annual gathering and features field trips, displays, auctions, and our annual general meeting.

Rock Creek, BC, June 7 - 10, 2019
Rock Creek Fairgrounds
380 Kettle Valley Road South
Rock Creek, BC

This year Rendezvous is being organized by the Penticton Geology and Lapidary Club with the BCLS. See the BCLS webpage for more information.

Crystals

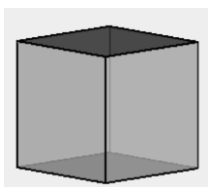
*In honour of our show theme I asked **James MacLean, P. Geo** to give me an article on crystal forms. I gathered the photos.*

Many people refer to any rock that is transparent or has a sharp edge as a crystal. This isn't accurate as geology and physics define a crystal very specifically as "a solid material whose constituents (such as atoms, molecules, or ions) are arranged in a highly ordered microscopic structure, forming a crystal lattice that extends in all directions." (*Stephen Lower. "Chem1 online textbook—States of matter". Retrieved 2016-09-19.*) Every example of a specific mineral will have the same shape unless it twins or its growth is impeded.

Crystals have many different geometric shapes and are divided up into 6 groups of shapes called systems. The systems are defined by axes, their length, and the angle between them. An axis (plural axes) is an imaginary line drawn through the centre of an object horizontally or vertically. The symmetry of a crystal defines the axes. The relationship between the axes defines the crystal system. Many crystal systems have one axis at right angles to others. Usually this single axis is the longest axis of the crystal and is the reason many crystals are long and slender.

The crystal systems are discussed here in order of increasing complexity.

Some crystal shapes are very well known, such as the cubic (or isometric) form that Halide (table salt) forms. This cubic form is shared by Galena. Isometric means that there are **three axes at right angles (90°) to each other that are the same length**. Because each axis is the same length the resulting crystal is a perfect cube. When the crystal is broken it forms smaller cubes.

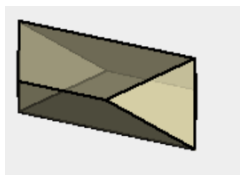


Minerals.net



Pyrite crystal from Minerals.net

The second system, Orthorhombic, has **three axes at right angles** to each other like the Cubic system but **the axes are all different lengths**. This leads to the crystal shape of sulfur, barite, and olivine.

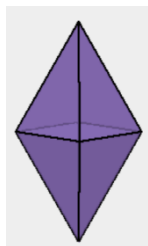


Minerals.net



Sulfur crystals from
Arkenstone/
www.iRocks.com
found on geology.com

The next crystal form is called tetragonal. There are **two axes of equal length** and **one that is not equal to them**. All the **axes are 90° from each other**. Some minerals that have this crystal form are rutile and zircon (the birthstone in the February 2019 newsletter).

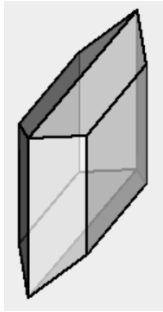


Minerals.net

zircon from Wikipedia

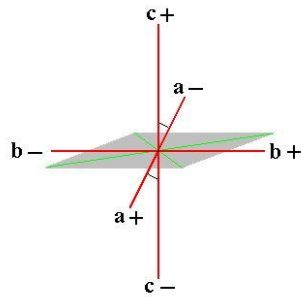


The next increase in complexity is the Monoclinic system. There are **three axes, none the same length. Two of the axes are at right angles to each other** but the **third axis is not at right angles to the other two**. Micas, epidote and hornblende are in this system.

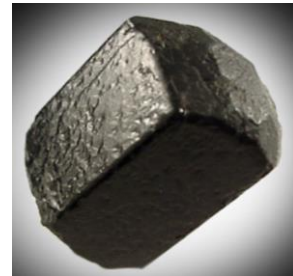


Minerals.net

http://metafysica.nl/monoclinic_1.html

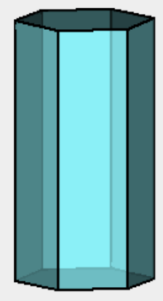


Hornblende crystal:



<http://www.johnbetts-fineminerals.com/nyc/mineralmuseum/picshow.php?id=12869>

Many gemstones form in the next crystal form, Hexagonal. This form has **three axes at 120° from each other** and **another axis at 90° to these axes**. This results in the instantly recognizable forms of quartz, beryl, calcite and tourmaline.

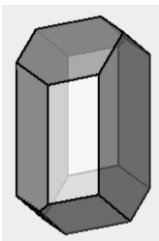


Minerals.net

tourmaline
from
gia.edu



The most complicated system is Triclinic. The **three axes are unequal** and **none of them is at a right angle** to any other. This means that none of the faces of the crystal will be 90° to any other face. Two common members of this group, rhodonite and plagioclase feldspars can be found in BC



Minerals.net



Rhodonite crystal from Geology.com

There are six crystal systems that can be further divided into 32 crystal classes. These crystal systems are how geologists have described crystals of similar symmetry. To be a crystal is to fall into one of these systems because without the regular shape, there would be no regular, repeating structure within the object and it fails to meet the definition of crystal.

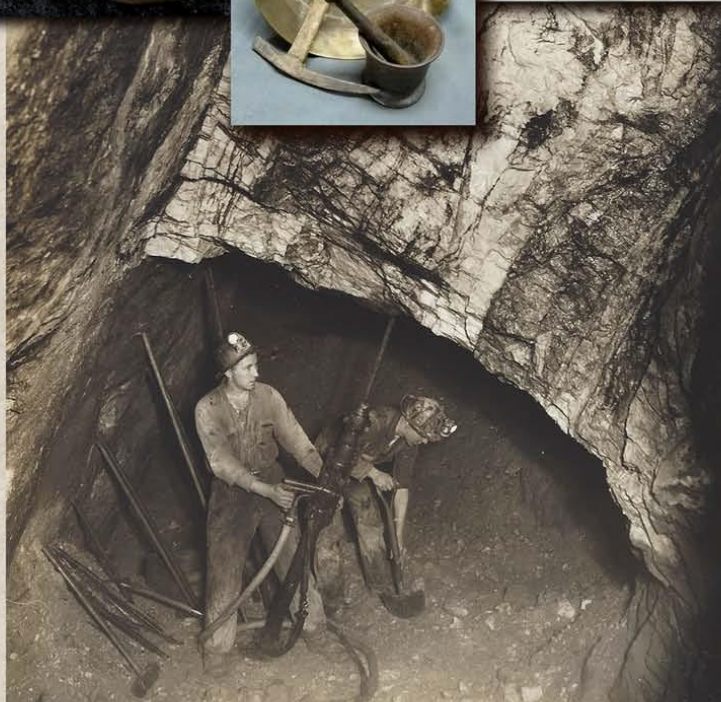


THE BC LAPIDARY SOCIETY PRESENTS

BC GEM SHOW HISTORY OF MINING

APRIL 12-14, 2019

DEALERS • DEMONSTRATORS • CLUB EXHIBITS • DISPLAYS
SPIN AND WIN • GRAB BAGS • CHILDREN'S CREATIVE WORKSHOP
GOLD PANNING • FUN FOR THE WHOLE FAMILY



Items from Alex Homenuke Collection

Photo by Leonard Frank

AND TAILGATE SALE - SATURDAY ONLY

April 13, 2019 10am-5pm

Admission included in the price of the Gem Show



WHEN

Friday: 10am-8pm
Saturday: 10am-6pm
Sunday: 10am-5pm

WHERE

Ag-Rec Building
Central Fraser Valley Fairgrounds
32470 Haida Drive
Abbotsford, BC

ADMISSION

Adults: \$6.00, 3 Day Pass: \$12.00
Students (6-17): \$2.00
Children under 6: Free
(accompanied by an adult)



Visit bclapidary.com



Bloodstone

is the traditional birthstone for March.

An ancient and alternate name for bloodstone is

Heliotrope.



Aquamarine became a modern birthstone for March in the 21st century because jewellers now prefer transparent birthstones. Since the beginning of the 20th century, aquamarine was an alternate choice to bloodstone. Before that, it was Bloodstone for March – and for the zodiacal sign of Aries March 20/21 to April 19/20. No anniversaries, birth hours etc. use Bloodstone. In Roman times Bloodstone as associated with the war god Mars and today it is associated with the month named for that god.

The most sought-after Bloodstone is a dark green with red flecks. Minerals.net and The American Gem Society say the green is often a gradient from light to dark and the red is flecks or streaks with other colours. It is an opaque stone, but those bloodstones that are a bit more transparent are often the ones called Heliotrope. Interestingly, if the rock has some yellow patches some call it Plasma.

All these names come from the rocks's physical properties. In Medieval times a legend was told that the blood of Christ dropped on a green stone at the foot of the cross and created Bloodstone. Heliotrope is from the Ancient Greek helios for sun and tropein for turning. Pliny the Elder of ancient Rome observed that the stone gives a red reflection when turned to the sun while immersed in water.



Albert the Great called bloodstone the Stone of Babylon because of its magical properties which were considered “not of God”. In ancient times bloodstone was associated with courage, strength to defeat one's enemies, and healing of blood disorders. In Pliny the Elder's time magicians used the stone for invisibility. In the 4th Century Damigeron wrote of it making rain or a solar eclipse and its use in divination and preserving health and youth. Even today, some believe it helps with mental clarity, increasing creativity or even boosting overall energy. In some cultures, a powder is made of bloodstone/heliotrope and used as an aphrodisiac.

There is some confusion about Bloodstone because some people will call any rock with red spots or streaks a bloodstone. Some call hematite bloodstone because it will leave a red streak. Others call any stone a bloodstone if it has red streaks or spots.

Bloodstone is Silicon dioxide (SiO_2) with inclusions of hematite (iron oxide (Fe_2O_3)) and as a member of the Chalcedony family it is a micro or crypto crystalline Quartz. This means it has microscopic crystals. It is not called Jasper because Bloodstone is a more specific word: green with red flecks. According to geology.com: If an opaque stone is predominantly another colour or if the marks and streaks are predominantly a colour other than red it is Fancy Jasper.



One of the ninety engraved gems, cameos and bullae from the Roman Empire. The J. Paul Getty Museum

Because it is a form of quartz it has a Mohs hardness of about 6.5 to 7. Which makes it a good candidate for many forms of jewellery. Bloodstone is often cabbed, but it can be found faceted or made into beads. Since Babylonian times and perhaps before then, bloodstone has been used to make jewellery, seals and amulets. There are examples of bloodstone in signet rings,

cups and statues.

Bloodstone is one of the few gems that is untreated from mine to market. But some simulants have been tried. According to the Fall 1984 Gems & Gemology Gem News – GIA, the Japanese glass manufacturer limori has produced a green “maple stone” with red “flowers” that resembles bloodstone. Glass and bloodstones have very different properties so this should be spotted fairly easily. (**Satoyasu limori** (19 October 1885 – 13 October 1982) is the same Japanese scientist who created Victoria Stone which attracted some fierce bidding at our club auction in December).

Bloodstone is found in the United States in California, Nevada, Oregon, and Washington. According to the Gemological Institute of America, Bloodstone can be found filling fractures or cavities in other rocks or as pebbles in riverbeds. I could not find any sources of bloodstone listed for BC but because of how it is made and where it is found, there should be some.

The biggest producer of Bloodstone is India, and other primary sources for the stone are Brazil and Australia. Some sources say we have gem quality bloodstone in Canada, but I could not find out where. I am hoping to hear from club members.



A German snuffbox, ca 1740, made from bloodstone and gold. 3.8 x 8.3 x 6.4 cm. Gift of Mrs. Charles Wrightsman, 2008. Metropolitan Museum of Art, New York. Public Domain.