

THE ROCKET

June 2022

deadline for next issue
September 9, 2022

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Roz MacLean - editor

Future Meetings: Our monthly meetings are on the fourth Friday of the month.

Next Meeting: Friday – June 24 at 7PM
at Hastings Community Center Hall

This meeting will be a “hybrid meeting.” For those unable to attend in person, please contact our secretary, Crystal, for a zoom link for the meeting.

Next Meeting Program:

This is our last meeting before the summer break

It is our annual **Wine and snacks** evening with a **Bottle draw** and a presentation about the recent provincial **Rendezvous**. Wine is supplied by the club. Please only **bring a finger-food snack** to share, and a donation to the **bottle** draw. (Anything that can fit in a bottle or jar will be placed on a numbered square for a draw). Rock related items are popular, but last year I brought jam. Someone was “confused” wondering which machine it could be used on. (I still might bring jam)

Stories from Rendezvous

Nickell: Hello Rockhounds! In addition to the bottle draw and wine and cheese party at our next meeting, there will be a presentation from some of this year's Rendezvous attendees. It's been 2 years without a Rendezvous - so anticipation for this event on Vancouver Island was high. It did not disappoint! Fossils, and jasper and flowstone field trips just to name a few. Workshops and rock auction and more. It was 3 packed days of rock appreciation, exploration, education and socialization with likeminded people from across the province (and farther too!). Come to the next meeting to hear stories from the attendees. We'll show off some of the samples we found, and share photos. Maybe we'll see you at the next one in Quesnel (2023!)

Some Hastings Rockhounds at Rendezvous





Thank you to Esther:

Our President, Esther Searle has moved to Nelson. We want to thank her for all her efforts on the club's behalf and send our best wishes to her in her new home. Should be some great rockhounding there.

Program from last Meeting:

We had an **Auction** of donated items from a couple from North Vancouver. Thank you Linda for organizing this and providing a chance for some fun biddings. The geodes with figurines of mining related scenes were very popular and brought out some hot bidding. All the items were interesting and most people took home a treasure. Thanks to those who supported the club with some fun fund raising. Photos by Roz



Workshop Hours

Our workshop will be opened most days in the summer except for the times that the community centre is closed, like during the PNE.

Hastings Community Centre has removed all restrictions on the number of people that can attend a workshop. Our workshop instructors decided that people no longer needed to make a reservation.

If you a member in good standing, have taken the required lapidary workshop training course, you can drop in at the workshops and use the equipment on a first come, first served (shared) basis. Be prepared to work on another project if you need to wait to use a particular piece of equipment,

Lapidary:	Monday	6:30 pm - 9:30 pm	Richard
	Wednesday	1:00 pm - 4:00 pm	David
	Thursday	6:30 pm - 9:30 pm	Sante
	Saturday	1:00 pm – 4:00 pm	Bob
Silversmithing	Wednesday	9:00am – 12:00 noon	Bob
	Saturday	9:00am – 12:00 noon	Robert

Mohs Bicentennial

By Paul Pinsker
12 June 2022

Friedrich Mohs (1773-1839) was a German geologist and mineralogist who developed the well-known Mohs Scale for determining the hardness of minerals. This year marks the 200th anniversary of the publishing of his definitive book *Treatise of Mineralogy*, which set out comparative values associated with certain index (or standard) minerals. See illustration below.



The scale is commonly used to relate other minerals' hardness based on which one can scratch another. All minerals have been evaluated and given a Mohs hardness number that shows where they rank relative to the ten standard minerals, from talc to diamond. Common objects can be used in some cases to estimate hardness. For example, a fingernail (2.5 hardness) can scratch gypsum, soapstone, or mica, but not calcite. Most professional geologists have special pencil-like tools to do scratch testing, but less rigorous methods can be used. For tips on scratch testing see the Geology In webzine article...

<https://www.geologyin.com/2014/05/the-mohs-scale-of-mineral-hardness.html>

For the ten index minerals, the hardness differences from one to the next are fairly consistent, except between corundum (ruby, sapphire) and diamond the difference is greater. Some minerals are less predictable, their hardness less easily defined. For example, garnets exhibit stronger or weaker atomic bonds (and, thus, will be harder or less

hard) depending on whether the atomic matrix includes Calcium, Magnesium, or Iron paired with Aluminum, Iron, or Chromium. The Mohs rating can vary from 6.5 to 8. And for kyanite, with its blade-like crystals, the hardness along the length of the blade could be about 5, while across the blade about 7.

Hardness normally determines the purpose a mineral is put to. Softer stone such as soapstone (talc) and fluorite are often used for carving, while stone of hardness above 6 is useful for lapidary work and jewelry. The harder the mineral, generally the more the value for use as a gemstone due to durability; thus, emeralds (7.5-8) on up to diamonds is where the most desirable jewels are found.

Finally, while the Mohs Scale enjoys widespread popularity, there are other hardness scales to be aware of. These include the Rockwell, Meyer, Brinell, Vickers, and Knoop. Perhaps one or more of these will be explained another time; or, the reader may enjoy doing some homework!

Planning a rockhounding fieldtrip

BC Lapidary Society recommends the following:

Food: "We recommend bringing granola bars, sandwiches, water, and hot beverages on cold days."

Clothing: "We recommend bringing layered clothing, rain wear in case it starts to rain, and a hat to avoid sun stroke. Hiking boots with ankle support are recommended; do not wear street shoes, runners, and other soft shoes without ankle support or tread for walking on slippery rocks. Don't forget insect repellent, and sunscreen."

Smithsonian Handbook on Rocks and Minerals (p. 8-9) recommends: Check reference material such as guide books and detailed maps. A compass (and knowing how to use it) is helpful with a map of the area. Protective clothing is essential. If working below a high cliff or quarry face, a hard hat is a must. Goggles will shield your eyes from chips of rock flying off during hammering to break up fallen blocks of material and strong gloves will protect your hands. Several hardened steel chisels are handy for extracting minerals and for splitting rocks. Written notes, photographs or videos showing the location of specimens should be taken. Without field notes, especially a location, specimens are of little scientific value.

Rockhounds may also want to take a 10x hand lens for better detail viewing of mineral and rock specimens for identification.

Pencil, ballpoint pen, and notepad for notes about the trip and specimens collected.

A geological hammer (square front with chisel shaped back) can be used to break up rocks that are already on the ground.

Newspaper, cloth or bubble wrap for wrapping specimens. Label the specimens with the date and location. The more information the better. Some specimens are fragile and wrapping will be essential.

Once home you will want some tools like brushes and scrapers and various cleaning liquids, as well as items to test the Mohs hardness of your specimens.

What is your favorite take-a-long on a rockhounding expedition? Share and help new club members to grow in this hobby. (The first person I asked suggested bandaids or a first aid kit.)

Found on Facebook: A Valentine for Rockhounds.....



Jess Phoenix 
@jessphoenix2018

Magma is red,
Sapphires are blue,
Don't take science for granite
That's a schist thing to do.

Rockhounder's Code of Ethics

We ask all BCLS members and guests to follow our Code of Ethics when joining us on rockhounding trips.

- I will respect private property and do no Rockhounding without the owner's permission.
- I will use no firearms or blasting material in Rockhounding areas.
- I will take garbage home or deposit in proper receptacles.
- I will leave gates as found.
- I will do no willful damage to materials or take more than I can reasonably use.
- I will fill excavations, which may be dangerous to livestock.
- I will build fires in designated places or safe places only, and make sure they are completely extinguished before leaving.
- I will not contaminate wells, creeks or other water supplies.
- I will not tamper with signs, structural facilities or equipment.
- I will obey all laws and regulations of forestry and game departments in the area in which I am hunting.
- I will appreciate and protect our heritage of natural resources.
- I will always use good outdoor manners.
- I will show respect to other members.

Something new? At the BC Gem Show

Anytime I can get to a Gem and Mineral show I like to look for something that is new to me, something that I did not know about before. In the past I have discovered charoite and seraphinite, spessarite, sugilite and bloodstone. For me it is a chance to discover and learn. Finding new material for lapidary work is a bonus.

This year I came across some brightly coloured vases made of “7 Colored Jade”.



When I asked about the material I was told it was jade from Taiwan and that a geologist had stopped by and told the seller that “the hillsides in that area look just like that.” I was curious.

With so many different colours in one stone I knew it would be challenging to work because that usually means different hardnesses and grains, yet the surface was shiny and even.

I also knew yellow jade exists in Guatemala, but it isn't nearly as bright as in this “7colored jade.”

I went home to do some research. Surprisingly my usual sources weren't much help, but other websites had some information.

From <https://www.taiwantrade.com/products/detail.html?productid=775570> I learned it is “Commonly known as serpentine, Taiwan Seven-Color Jade is from the part of the Central Mountain Range that is located in Hualien County. The stone was found by the Bureau of Standards, Metrology & Inspection (BSMI), Ministry of Economic Affairs (MOEA), to be composed of such main compounds as aluminum oxide, iron oxide,

magnesium oxide and calcium oxide. Variants of the stone include **jadeite, opal, lizardite and rhodonite**. A symbiotic multi-element mineral, the stone gained its name thanks to the fact that its various hues are natural and unmatched by other minerals or stones.”

I thought I'd look further and came across something about jade that I had learned quite awhile ago... from <https://www.epigem.de/en-us/informations/lookalikes/jadeite-nephrite-serpentine.html#:~:text=Jadeite%2C%20as%20other%20minerals%20of, but%20much%20higher%20than%20antigorite>. “When scientists analyzed the chemical composition of chinese "Jade" in the 19th century, they discovered that at least two, completely different minerals were in circulation. First, the mineral jadeite from the pyroxene group. On the other hand finely matted minerals of the (ferro-) actinolite - tremolite solid solution series (Fig. 3), called "nephrite". Therefore it is important to keep in mind that the term jade is not a mineral name, but a cultural name.”....

Further on I read “Among the multitude of minerals and rocks that are deceptively traded as "jade", the mineral antigorite from the serpentine group is most frequently offered as "jade", "new jade" or "China jade"....and further on in the article, “In addition, the serpentinite rocks offered in the trade as "Jade" may contain admixtures (e.g. magnetite), which additionally modify the physical data. As a rule, serpentinites have a hardness of 3 - 5½. Thus, they are always scribable with a feldspar (H: 6). The density is between 2.4 and 2.8.” So the material is much softer than jadeite (6.5-7).

I still thought the colours were beautiful and strong, but were they real? And what about that finish? Worthpoint. Com claims to be ... “the largest resource * for researching, valuing, and buying/selling antiques, art and vintage collectibles. Our suite of offerings on WorthPoint.com includes a price guide for researching and valuing antiques, art, and collectibles; a resource gallery for identifying makers' marks; and, a digital library of books from leading publishers on a wide range of collecting topics.” In a write up on a 7 colored Jade vase it stated: “The Jade originates in Taiwan as a rough block of stone that has combination of veins running through it that include **Actinolites and Serpentine Jade**. (my bold type) It is hand carved on a lathe. Once carved, the piece, polished and glazed with an acrylic to enhance the shine and heated to set the acrylic and enhance the natural colors.”

So, 7 color Jade really is serpentine, and many other minerals. The content of those minerals varies by the piece of stone being worked. The vase is finished with acrylic and heated to give that great shine and contribute to those strong colours. As for the geologist referred to by the seller... I doubt the person meant the rock was as colorful as demonstrated, perhaps it was more that many different colours are found in the rock of the area.

So, in trying to understand about 7 color Jade I learned more about rocks and how some people work them. I won't be trying a lathe anytime soon and I appreciate rocks polished by without use of coatings and colours that are not enhanced by recent heat or even dyes. 7 Colored Jade isn't something I'm likely to find and work as a lapidary material. But I enjoyed exploring the world of rocks.

**I hope you enjoy some searches soon
...perhaps get out and do some rockhounding.**

**Enjoy your summer and see you in
September.**

