THE ROCKET

September 2024

deadline for next issue
October 11, 2024

Club email: secretary.hrc@gmail.com
Newsletter email: Edrocket18@gmail.com
Roz MacLean – editor

I am sorry to have missed creating a June newsletter. My neck and shoulders/back got very painful from too much time on a computer etc. so I had to take a break. It took over a month away from the computer and other things like lapidary to heal. In future I'll have to be very careful. This month I will try to include articles that should have appeared in the June newsletter. If you sense something is missing, contact me and we will get it in next month's issue.

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

Next Meeting: Friday – September 27 at 7 pm
at Hastings Community Center Auditorium (on the main floor)

Program for next meeting (September 27)

September is a time of new beginnings for many and in that spirit, Lara has put together a "short and quick" slide show and presentation. We have many recent, and even some longer term members, who may not realize all the club has to offer. Lara will be doing a short presentation on a year in the life of a Hastings Centre Rockhound including the different classes, shows and field trips.

We have been given some very generous donations recently so Linda is holding an auction to raise money for the new big saw. Bring your money so you are prepared. We hear there are some surprising and really wonderful items.

Program from last meeting (June 28)

June was our Wine and Cheese Social. Thanks to everyone who brought out food for the Wine and Cheese event in June! It was quite a spread.

Members were also asked to bring rocks and recent finds to show the club. We had a great response: Tim, Kyle, Wes, Deane, Midori, TJ, Nick, Lara and Joyce. Thanks for sharing! Unfortunately, we haven't any pictures. (If you did take pictures, please send them to the e-mail at the top of this page and we'll get them in the next issue of the Rocket.)

To those who took home rocks from the Rock Auction; thanks for giving them homes, and your participation!

Upcoming Events:

Field Trips October 5 and October 6

Our Club Secretary Crystal recently sent an e-mail September 15 to members about field trips planned by our wagonmaster Kyle Piatocka. Please see that e-mail for links or contact Kyle to join the Field Trip.

The field trip is planned for around the Cache Creek area on **Saturday October 5 & Sunday October 6.**

Meeting location: Cache Creek, BC (exact location given after registration)

- **Day 1 - Piatocka Brothers mineral claim (Agate, green calcite, petrified wood) *Steep Terrain***
- **Day 2 - Scottie Creek (Amethyst, chert, serpentine)**
- Suggestions on places to stay include Juniper Beach campground or a motel in Cache Creek.

Meeting time: Saturday October 5 at 10:30 AM & Sunday October 6 at 10 AM at the given location

All members participating in the field trip must:

1. Be a member in good standing
2. Bring their BCLS membership card and Hastings Rockhounds lapidary membership card
3. Register with the wagonmaster
4. Prior to starting the activity, sign in with wagonmaster/field trip leader and fill out necessary waiver forms as well as show proof of BCLS membership and Hastings Rockhounds membership

Items to bring:

- Hastings Rockhounds & BCLS membership card
- Rock hammer/pick
- Bucket/rice bags
- Hand rake
- Hiking boots
- Gloves
- Food/water
- Look ahead and dress for the weather

For more info/registration: contact our wagonmaster Kyle at kylepiatocka@gmail.com or text 778-302-6822 (spots may be limited). Upon signing up please indicate which day you will be attending or if you are attending both.

Pacific Museum of Earth- Thursday Oct 17th

Join us, and other interested Rockhounds alike, for this scientific journey of rocks and wonder! Scratch the surface, to the depth of this subject and solve your most curious questions about rocks.

Museum Tour of Pacific Museum of Earth
And Minerals of the World!
60 minute Program | All Ages

Enter the world of minerals, with minerals from all around the world! Join us to explore the diversity and uses of minerals from across the globe through a scavenger hunt, an immersive board game experience, and hands-on encounters with real mineral specimens. This program makes use of the PME's gallery and mineral collection to give students a tactile, unique museum experience. It connects geology to a sense of place, and encourages curiosity about and stewardship for our planet's treasures.

PME's mineral and fossil collections are vast. The history of each collection spans nearly 100 years. The mineral collection, housed at the Pacific Museum of Earth is home to some of the rarest and most exquisite mineral specimens found in nature. We will also take part in the self-guided Stone Slab tour.

When: Thursday October 17th at 12:30pm
Where: Meet up at the UBC Aquatic Centre (and we will walk together to the Pacific Museum of Earth to the tour that starts at 1pm)

Cost: $10

Interested in joining us? Please RSVP by (contacting Lara McQuay or Crystal). We will send out details confirming your spot. FYI first come, first serve. Spots will be limited

Rock and Gem Shows

Sept. 21 & 22,2024 **Fraser Valley Rock & Gem Show**, Kinsmen Community Center, Aldergrove
Sept.28,2024 **Creston Valley Prospectors & Lapidary Club,** Creston Valley Mall Lower Level
Oct. 5 & 6,2024 **Port Moody Rock & Gem Club**, Kyle Centre, Port Moody, BC
Oct.19 & 20, 2024 **Surrey Rockhound Club**, Sullivan Hall, 6306 152nd St., Surrey
Oct. 19 & 20,2024 **Victoria Lapidary & Mineral Society**, Leonardo de Vinci Centre, Victoria
Nov. 2&3, 2024 **Delta Rockhound Gem & Mineral Club**, South Delta Rec. Centre, Tsawwassen
Nov. 15, 16 & 17, 2024 **Abbotsford Rock & Gem Club,** Matsqui Community Hall, Abbotsford, BC
Nov. 16&17,2024 **Vernon Lapidary & Mineral Club**, Dogwood Gym-Greater Vernon Rec. Centre,
Nov. 30&Dec 1, 2024 **Parksville & District Rock & Gem Club,** Qualicum Beach Civic Centre,

See the BC Lapidary Society website for more information or link to a website.

Workshop Hours

If you are a member in good standing and have taken the required lapidary workshop training course (usually during a workshop time), 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.

Shown below are the regular workshop hours. Changes are often announced by email. Some short programs are announced at meetings, maybe in an email, or in this newsletter.

Lapidary:	Monday	6:30 pm - 9:30 pm	Richard
	Wednesday	1:00 pm - 4:00 pm	David
	Thursday	6:30 pm - 9:30 pm	Tim
	Saturday	1:00 pm – 4:00 pm	Robert
Silversmithing*	Wednesday	9:00am – 12:00 noon	Robert
	Saturday*	9:00am – 12:00 noon	Crystal and Robert

***Beginners to Silversmithing** are asked to contact Crystal before attending. Instruction is available **only at the Saturday session** and there is a $35 beginners kit with supplies needed for starting silversmithing.

Workshop News

Jo rebuilt grinder #2 in June

Richard's recent Cabochon

Stabilizing Methods from Bob Walker

In March Bob gave a presentation to our club about stabilization of lapidary materials. Club members were very interested and Bob has graciously provided some notes. Parts 1 and 2 appeared in April and May Rockets

Part 3 of 5

Cactus Juice is a brand of resin commonly used for stabilizing porous materials, including lapidary material. Here's a step-by-step guide on how to use Cactus Juice resin:

1. Preparation: Ensure that your lapidary material is clean and free from any dirt, debris, or oils. Clean the material with soap and water and let it dry thoroughly before proceeding.

2. Safety precautions: Wear appropriate personal protective equipment (PPE), such as gloves and safety glasses, to protect yourself during the process. Cactus Juice is a resin and should be handled with care.

3. Mixing: Cactus Juice resin is ready to use and does not require mixing or dilution with other substances. However, you can stir the resin gently before using it to ensure consistency.

4. Impregnation: Place your lapidary material in a suitable container that can hold the material and the Cactus Juice resin. Make sure the container is clean and free of contaminants. Pour Cactus Juice resin into the container, ensuring that it completely covers the material. You can also use a vacuum chamber for better resin penetration (optional).

5. Vacuuming (optional): If you have a vacuum chamber, place the container inside it and apply a vacuum. This step helps remove air bubbles and assists in the resin's penetration into the material's pores. Follow the recommended vacuuming time and pressure specified by the manufacturer.

6. Penetration: Allow the lapidary material to soak in the Cactus Juice resin for a sufficient period, typically between several hours to a few days, depending on the material's porosity and the desired level of stabilization. The resin will gradually penetrate the material, reinforcing its structure.

7. Curing: After the desired penetration time has elapsed, remove the container from the vacuum chamber (if used) and let the excess resin drain off. Transfer the material to a clean surface and let it cure at 200 F for 1 to 2 hours (according to the manufacturer's instructions).

8. Finishing: Once the resin has fully cured, you can proceed with shaping, cutting, and polishing the stabilized lapidary material as desired.

It's important to carefully read and follow the instructions provided by the manufacturer of Cactus Juice resin, as they may include specific guidelines or variations for different materials and application techniques. Additionally, performing small-scale tests or practice runs before applying the resin to valuable or large pieces of lapidary material is recommended.

At what temperature is Cactus Juice cured? Cactus Juice resin is typically cured at temperatures between 200°F (93°C) and 250°F(121°C). The exact curing temperature and duration may vary depending on factors such as the thickness of the material being stabilized and the specific instructions provided by the manufacturer. It's important to refer to the manufacturer's guidelines or instructions that accompany the Cactus Juice resin you are using for the precise curing temperature and time recommendations.

Member News: Paul Pinsker on Gaspéite

The triangular specimen measures 7x7x6 cm, with a max height of ~3cm, and a weight of 152 grams.

This week I polished one side of a very special rock that I had received as a gift from my geologist friend Rob Smith in Perth, Australia in May. While developing a mine in Kambalda, Western Australia, a pocket of exceedingly rare Gaspéite was discovered. The original discovery of this gemstone mineral (nickel carbonate) was in the Gaspé region of Quebec, the “type location”. It is also found in a few other locations within Australia. My original acquaintance with Gaspéite was on a cross-Canada road trip with Joyce in 2013 where, at a small rock shop near Percé. There was a pinky-sized chunk with an exorbitant price…”Non, merci!”

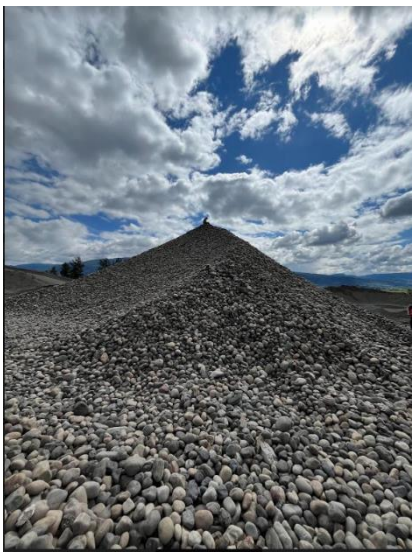
I suspected that my friend had something special for me, on top of the all-day tour of Perth he and wife Cathy gave Joyce and me. So, I came prepared - with a 3+ kg BC jade bookend that I lugged across the Pacific Ocean and Australian continent. Rob said, “I can’t accept this”, but I replied, “You have to as it will exceed my baggage weight limit on the small aircraft of the upcoming Kimberley portion of our exploring Western Australia”. I still have the other twin block of polished jade at home, the perfect doorstop.

Finally, if anyone can get hold of some Gaspéite, with Moh’s hardness 4.5-5 it is a good material for making high end jewelry, though not up to the wear and tear a ring would bear.

Rendezvous May 17-18, 2024
Armstrong, BC

Photos from Amy Y

Searching for Gravel Pit Agates



Photos from Tim Haslam

Libor and Meghan digging for Agates at Inches Creek

Paxton Valley looking for Agates
Digging by the roadside

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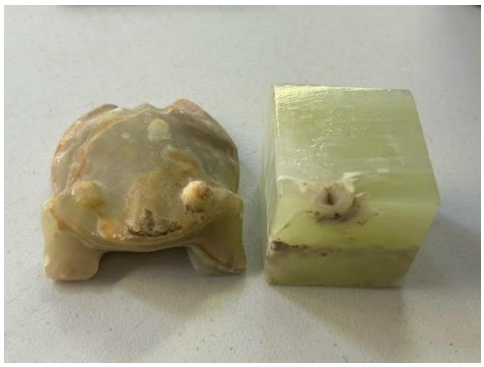
Estimated weight (80lbs) Agate find of the day. Full sized shovel behind the stone parts.

Two fellow diggers holding 2 of the larger parts of the find.

Raffle time in the Heritage Building



Tim won 2 onyx pieces

Catching up on Club Events:

Intro to Stone Carving Class

May 26th and June 9th

Photos: Richard Kotecki

Photos by Lara McQuay

Steve's Carving

June Grab-Bag Wrapping

Photos Lara McQuay

Also in May/June

Kyle showed up at the workshop with a great specimen of Petrified Wood from his claim in Deadman's Valley.

Thanks Lara and MIdori for the 90th Anniversary display case. Thanks to everyone who lent their beautiful specimens, and rock samples, Linda, Richard, and Lara.

Look for it on the main floor on the way to the auditorium, just past the top of the stairs.

July 7, 2024
Hastings Community Association 90th Anniversary

As part of Hastings Community Centre Association our participated and also had a mini Gem and Mineral show.

Photos Richard Kotecki

(Sorry, I don't have everyone's name in these pictures, nor all who participated.)

In August, we also participated in the Vancouver Gem & Mineral Show at Kitsilano Rink. No photos.

August Field Trip

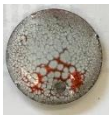
Kyle Piatocka was wagon master for the Field Trip to Princeton on Sunday August 25, 2024. We met in Princeton and had fun digging in an Eocene period road cutting north of Princeton in the morning. We tried to go to Vermillion Bluffs to check for agates but weren't able because the first half of the Kettle Valley Railway bridge had been washed out by the flood a few years back. We then set our sights on a location between Princeton and Coalmont for more plant fossils.

Photos Kyle Piatocka

Missing Bridge

September Enamelling Class

photo Dawn Dutrizac-Larose

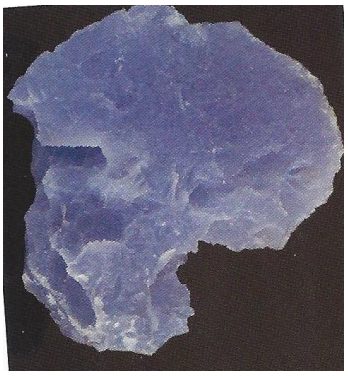


Other photos Lara McQuay samples not included in 1st photo

Reprinted from January 2020 with some updates.

Chalcedony

By Roz MacLean



Renee Newman, Exotic Gems: Vol 3, p 95 Mohave Blue rough from Frank Heiser. Photo by David Rickett of FX Imaging I

Traditionally this article is about birthstones for the month. Lately, I have been looking at material that is more likely to be worked by lapidaries. As I considered Agate and Jasper, I started down a "rabbit hole" familiar to people starting to learn our great hobby…what is similar and different about lapidary stones and traditional gemstones? I came across a basic book that helped answer some of my questions. Rocks & Minerals of Western North America by J. Duane Sept. A gemstone is "a mineral or rock valued for its beauty, rarity and hardness," and usually they are crystals.

photo: Helen Serras-Herman Rock & Gem, February 2019

Looking at the "cardinal gemstones": Amethyst, Sapphire, Ruby, Emerald and Diamond, that is true. Then I had to define mineral: "a homogenous, naturally occurring inorganic solid with a defined chemical composition." I'm not a chemist so I had to think about that a bit – back to the periodic table of chemistry - a combination of elements. Diamond is one element. The others are combinations of elements so that makes them minerals. But what about the stuff I work with?

Quartz is the most common mineral group amongst stones considered gemstones and amongst stones we commonly find and work with, from Agate, to Bloodstone, Carnelian, Jasper, even Tiger's Eye. They are all quartz, but they look very different. At this point a website called http://www.quartzpage.de/ was helpful. Quartz is silicon dioxide, commonly called silica. In a very simplified explanation: If there is lots of time, space and silica at the right temperature and pressure, the silica will grow in an organized pattern and form a large crystal (Macrocrystalline Quartz), like Amethyst, Aventurine, Citrine, Rose Quartz, and Smoky Quartz. If the time, space, temperature and pressure are different, or if the silica amounts are not plentiful, or are interrupted, the crystals may be tiny and form small, even disorganized, clusters too tiny to see even under a microscope (cryptocrystalline quartz). It is a variety of quartz called chalcedony. If the resulting chalcedony is dense, like a solid gel we call it a type of chalcedony called **Chalcedony.** If the chalcedony is in layers, we tend to call that type of chalcedony Agate. Both types, Chalcedony and Agate, refers to cryptocrystalline quartz that is translucent. Jasper is the opaque type of chalcedony. It gets confusing when we use the same word two different ways, but now I'm into something I work with and find easily when rockhounding. I'll focus in this article on the solid gel type of chalcedony called **Chalcedony.**

Geology is a relatively new science and that shows when studying rocks. According to https://www.gemdat.org/gem-960.html recent studies have shown that much Chalcedony is a mixture of cryptocrystalline quartz and mogánite, another silica mineral related to quartz but with a different crystal structure.

In the gem trade Chalcedony refers to the white, through blue to purplish cryptocrystalline quartz. But there is something new again according to https://www.gemdat.org/gem-960.html, there is a Yellow, orange and red-orange variety of chalcedony from Botswana known as Citrus Chalcedony.

Chalcedony is a birthstone for June in the Polish, Russian and Ancient Arabic traditions. It is also used for those born at 8pm or under the zodiac sign of Cancer.

It is thought by some to increase vitality, stamina, and endurance and to promote emotional balance and charity while relieving melancholy, fever, gallstones, and eye problems.

The name chalcedony comes from the Latin chalcedonius (alternatively spelled calchedonius). The name appears in Pliny the Elder's Naturalis Historia as a term for a translucid kind of “Jaspis” (believed to be Jasper). The name chalcedony is probably derived from the town Chalcedon in Asia Minor. Sailors carried stones from there as good luck talisman and they became known through the Mediterranean.

W*ikipedia: Chalcedony*
Cameo of Titus head
2nd Century AD

Chalcedony has a Mohs hardness of 6.5 to 7. It is usually cut en cabochon or as beads. It is well suited for most jewellery, even bracelets, because of its hardness. Chalcedony is also a favourite carving material. Chalcedony has been known since the Bronze Age in the Mediterranean region. Seals have been found that date back to about 1800 BC. Chalcedony has also been used to carve intaglios (carved into the background) and cameos (carved so the image sits up from the background).

Chalcedony is often found as a late hydrothermal deposit or an alteration product in acidic to basic igneous rocks, tuffs and breccias. It is very common as crusts, or as vein of cavity fillings. The names of marketed Blue Chalcedony often reflect where it is from: African Blue, Holley Blue (from near Holley, Oregon), or “Montana Glory Blue”, from Beaverhead County, Montana.

https://www.minerals.net/gemstone/chalcedony_gemstone.aspx

Because the blue colour is most prized it is often dyed so buyers need (to be wary of their source. According to gemdat.org, the dye may be detectable by looking for dye concentration between grain boundaries and in in fractures. Under light the stone may show mosaic-like markings.

One caution for working with Blue Chalcedony is that some people have observed the colour fading over time in some samples. Many jewellery makers and carvers will leave the stone for awhile, even a few years to ensure the colour is stable. It is recommended to store jewellery out of strong lights.

An excellent article on Blue Chalcedony appeared in Rock & Gem February 2019. https://www.rockngem.com/blue-chalcedony-a-lapidary-superstar/. In the article, Helen Serras-Herman refers to many sources of Blue Chalcedony. Renée Newman in her book "Exotic Gems, Vol. 3" (international Jewelry Publications, 2014) gives a chapter to Blue Chalcedony and has pictures of some from a private mine near Kamloops, BC.

Now we have Chalcedony sorted, we’ll look at Agate next month.

photo: Helen Serras-Herman, Rock & Gem, February 2019.