

THE ROCKET

April 2023

Deadline for next issue
is May 12th, 2023

Club email: secretary.hrc@gmail.com
Newsletter email: Edrocket18@gmail.com
Jayne Wellygan – guest editor

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

Next Meeting: Friday – April 28 at 7:00pm 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 (April 28 2023):

Harley Waterson will be the speaker at the next meeting. Topic: Thundereggs (and, time permitting, a short discussion on making doublets & triplets).

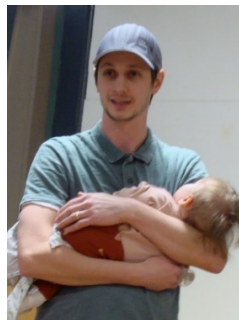
Program from Last Meeting (March 2023):



Linda ran a Special Rock Auction of items mostly donated by Paul Pinsker.

[Left] (top) Paul Pinsker and Linda;
(bottom) Auction Table.

[Below] Kyle (left) and Wes (right) Piatocka bought in some samples of quartz crystals (bottom) from Daisy Lake. Kyle (and his baby) spoke about the details of the upcoming Field Trip to Daisy Lake to take place on Sunday 26th March. See photos of the trip on page 3



Field Trips

On March 26th, Kyle and Wes Piatocka took 27 people on a Field Trip to Daisy Lake Reservoir on the Cheakamus River in the Sea to Sky Corridor, just south of the Whistler and immediately north of the abandoned townsite of Garibaldi. The group spent about 6 hours there hunting for quartz crystals. The group found many small and medium clear quartz crystals, some with chlorite inclusions and chlorite outer layering. Others found a plentiful amount of quartzite. All in all, it was a successful day for these Rockhounds. Thank you, Kyle and Wes.



[Row 1] View of the Daisy Lake Reservoir; [Row 2] (left) young rock hounds; (right) the gang of enthusiastic rock hounds; [Row 3] (left) A huge quartz outcrop; (right) A clear piece of quartz after cleaning. Photos from Patrice Dufour and Kyle Piatocka

NOTE: Many thanks to all of those that sent in 47 amazing photos. Sorry I could not use them all.

Upcoming Events of Interest:

Shows 2023

The following clubs are having shows and sales.

For more information, visit the **BC Lapidary Society** website or the club websites.

- April 14-16 **Courtenay Gem & Mineral Club** Legion Hall (Upstairs)
April 21-23 **Richmond Gem & Mineral Society** Richmond Library & Cultural Centre
April 29-May 3 **Parksville & District Rock & Gem Club** Qualicum Beach Civic Centre
June 3-4 **Selkirk Rock & Mineral Club** Castlegar Recreation Complex
June 3-4 **Ripple Rock Gem & Mineral Club** Campbell River Community Centre
June 9-11 **Quesnel Tumbling Rivers Rock Club** Barlow Creek Hall, Quesnel
July 14-16 **1120 Rock Club** Rutland Centennial Hall, Kelowna
July 15 **Abbotsford Rock & Gem Tailgate (July)** Central Heights Church Parking Lot
August 20 **Fraser Valley Tailgate (August)** Royal Canadian Legion Branch 265 Parking Lot
Sept. 9 **Abbotsford Rock & Gem Tailgate** Central Heights Church Parking Lot
Sept. 16-17 **Fraser Valley Rock & Gem Show** Old Age Pensioners Hall, Aldergrove
Oct. 14-15 **Port Moody Rock & Gem Club** Kyle Centre, Port Moody
Oct. 14-15 **Surrey Rockhound Club** Sullivan Hall, Surrey

BC Lapidary Society News

July 1, 2023 – Anticipated deadline for 2024 calendar submissions

<https://bclapidary.com/rock-minerall-calendar.php>

August 15, 2023 – anticipated deadline for scholarships

<https://bclapidary.com/earth-sciences-scholarships.php>

BC Gem Show

May 12, 13 & 14 at the Chilliwack Heritage Park (New Location)

The BC Gem Show is the largest show in the province, featuring displays, dealers, demonstrations, and activities for the kids. **Tickets** available at the door – Adults \$6; students (6-17) \$2; 3-day Pass \$12.

Free Parking. Times: Friday–10am to 8pm; Saturday–10am to 6pm; and Sunday–10am to 5pm

There will be **Demonstrations of activities like** Stone carving, cabochon making, wire wrapping, bead making, flint knapping and many more! Kid's Crafts, Spin & Win, Lots of displays of finds and work by clubs throughout B.C. Vendors of slabs, beads, specimens etc. *The Rocklovers-Round-Up Tailgate Sale* will be Saturday May 13, from 10am to 5pm in an additional building.

The B.C. Lapidary Society is looking for volunteers for the Show. See [BCLapidary.com](https://bclapidary.com) for more details.

Rendezvous

Quesnel, BC, June 9 – 11, 2023, Barlow Creek Hall, Quesnel, BC.

Rendezvous is the B.C. Lapidary Society's annual gathering and features field trips, displays, auctions, workshops, demonstrations, and their annual general meeting. Organized by the *Quesnel Tumbling Rivers Rock Club* and the *Prince George Club* with the assistance of the *British Columbia Lapidary Society*, it will be held at Barlow Creek Hall and Campground. The *Quesnel Club* will have a mini show and tailgate sale on the Sunday.

Registration is now available on the BCLS website.

<https://www.bclapidary.com/rock-hunting-rendezvous.php>



If you are a member in good standing and have taken the required workshop training courses (silversmithing and/or lapidary), 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.

Workshop Hours

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	Bob
Silversmithing	Wednesday	9:00am – 12:00 noon	Bob
	Saturday	9:00am – 12:00 noon	Bob & Crystal

[Above] Bob's extra silversmithing sessions before the Gem Show. Photos by Richard Kotecki & Bob Walker

Clippings: People see rock-related items all the time. This is our chance to share it. If you see something that might be of interest or give some members a chuckle, please share.

May 16th is Nickel Day and according to rockngem.com, it is a day "...devoted to the mined element, nickel... Nickel has been used by humans for at least 2,000 years. By the middle of the 19th century, it was ubiquitous in American coinage as well as that of other European nations.."

May 15th & June 1st are Dinosaur Days (as per rockngem.com): "Dinosaurs lived millions of years ago... So much is still unknown about these fascinating creatures. Celebrate what we know and anticipate what we don't on this fun day for young and old alike."

Check out rockngem.com January article: **A 2023 Rock Show Bucket List**, for shows in the US if you are planning a trip but consider supporting BC Shows first

April 21-23: 60th Parade of Gems, Central WA State Fair Park in Yakima, Washington.

www.yakimarockclub.com This is the show for volcano lovers, with demos on volcanic explosions, gold panning and flint-knapping, plus Mount St. Helens memorabilia by local artisans to rock your world.

The Hastings Rockhounds Gem and Mineral Show 2023

The Hastings Rockhounds Gem and Mineral Show, held on March 18th - 19th had a great volunteer turnout from club members for setup, take down and participation during the show. Also, there was a fantastic representation of work by our members in the display showcases. Well done! We counted 532 visitors to the show.





[Previous Page] [Top Row] (left) Vendor's table of hand-crafted works; (right) Howard and Rosalie at their sales vendor table [Second Row] (left) Paul Pinsker's beautiful and colourful gemstones from Playa Hermosa, Costa Rica on the Pacific Ocean; (right) Bob Walker demonstrating jump ring making; [Third Row] (left) Jackie and Allison at Beadsmart sales table; (right) Linda at the Club's grab bag table

[This Page] (right) Richard Kotecki's ultraviolet viewing case; (left) Renee and visitors to David Myer's table. Photos by David Myers

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Vancouver Gem and Mineral Show 2023

The Hastings Rockhounds had a table at the Vancouver Gem and Mineral Show 2023 held on March 25th & 26th at the PNE Forum.



(left) Nigel demonstrating his gem faceting machine; (right top) Richard Kotecki and Sante at the club's sales table; (bottom right) Nigel, Richard and Sante at The Hastings Rockhounds' table. Photos by Jayne Wellygan

Turquoise

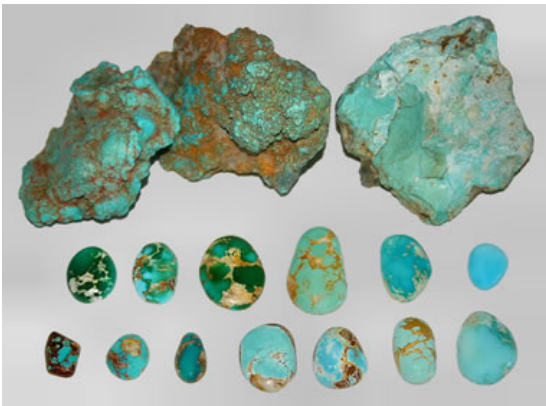
by Jayne Wellygan

A gem material that has been held in the highest regard for thousands of years.

What is Turquoise?

Turquoise is an opaque mineral that occurs in beautiful shades of blue, bluish green, green, and yellowish green. It has been treasured as a gemstone for thousands of years owing to its unique hue. Isolated from one another, the ancient people of Africa, Asia, South America and North America independently made turquoise one of their preferred materials for producing gemstones, inlay, and small sculptures. The word turquoise is said to date back to the 17th century and is derived from the French *turquoise* meaning "Turkish" because the mineral was first brought to Europe through the Ottoman Empire.

Chemically, turquoise is a hydrous phosphate of copper and aluminum $(\text{CuAl}_6(\text{PO}_4)_4(\text{OH})_8 \cdot 4\text{H}_2\text{O})$. Its only important use is in the manufacture of jewelry and ornamental objects. However, in that use it is extremely popular — so popular that the English language uses the word "turquoise" as the name of a slightly greenish blue color that is typical for high-quality turquoise. Very few minerals have a color that is so well known, so characteristic, and so impressive that the name of the mineral becomes so commonly used. Only three other minerals - gold, silver, and copper - have a color that is used more often in common language than turquoise.



[Left] Turquoise Rough and Cabochons: Pieces of uncut turquoise and a small collection of turquoise cabochons. (Photo by owner Reno Chris - Nevada Outback Gems)



[Right] "Big Blue", a large turquoise specimen from the copper mine at Cananea, Sonora, Mexico



[Left] Turquoise rough: A specimen of rough sky-blue turquoise in host rock from Mohave County, Arizona. (Specimen and photo by Arkenstone / www.iRocks.com.)



[Right] Turquoise from Miguel Vacas Mine, Nossa Senhora da Conceição e São Bartolomeu, Vila Viçosa, Évora, Portugal. (Photo from Mindat.org)

Turquoise Colors

Blue minerals are rare, and that is why turquoise captures attention in the gemstone market.

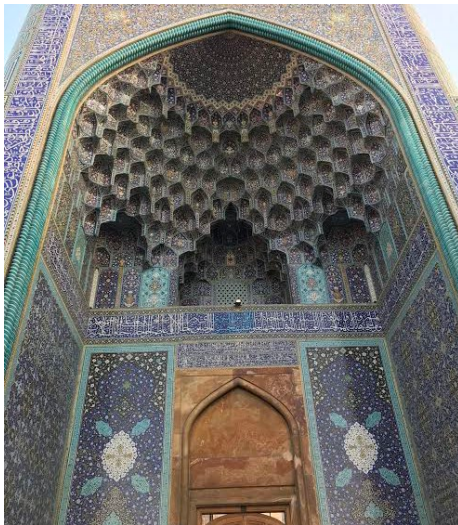
After blue, bluish green stones are preferred, with green and yellowish green material being less desirable. Departure from a nice blue color is caused by small amounts of iron substituting for aluminum in the turquoise structure. The iron imparts a green tint to the turquoise in proportion to its abundance. The color of turquoise might also be altered by small amounts of iron or zinc substituting for copper in the turquoise structure.

Some turquoise contains inclusions of its host rock (known as matrix) that appear as black or brown spiderwebbing or patches within the material.

Some turquoise localities produce material with a characteristic color and appearance. For example, the Sleeping Beauty Mine is known for its light blue turquoise without matrix. Much of the turquoise from the Kingman Mine is bright blue with a spider web of black matrix. The Morenci Mine produces a lot of dark blue turquoise with pyrite in the matrix. Much of the Bisbee turquoise has a bright blue color with a chocolate brown matrix. People who know turquoise can often, but not always, correctly associate a stone with a specific mine.



Turquoise cabochons: Turquoise cabochons from various locations. [From left to right in the upper row]: a greenish blue turquoise cabochon with black matrix from **China**; a teardrop-shaped, slightly greenish blue turquoise cabochon from **Arizona's** Sleeping Beauty Mine; two sky-blue turquoise cabochons with chocolate brown matrix from the Altyn-Tyube Mine in **Kazakhstan**. [In the center row]: a small sky-blue turquoise cabochon from the Kingman Mines in **Arizona**; and two small round sky-blue cabochons from the Sleeping Beauty Mine of **Arizona**. [In the bottom row]: two small cabochons with black matrix from unknown mines in **Nevada**; a teardrop-shaped cabochon with slightly greenish blue turquoise in black matrix from the Newlanders Mine in **Nevada**; and a rectangular cabochon of slightly greenish blue turquoise in reddish brown matrix from the #8 Mine in **Nevada**.



[Left] Shah Mosque (Isfahan) The arch is framed in turquoise ornamentation. By NicolasGaron - Own work, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=83649128>



[Right] The iconic gold burial mask of Tutankhamun, inlaid with turquoise, lapis lazuli, carnelian and coloured glass

Turquoise Occurrence

Turquoise forms best in an arid climate, and that determines the geography of turquoise sources. Most of the world's turquoise rough is currently produced in the southwestern United States, China, Tibet, Chile, Egypt, Iran, and Mexico. In these areas, rainfall infiltrates downward through soil and rock, dissolving small amounts

of copper. When this water is later evaporated, the copper combines with aluminum and phosphorus to deposit tiny amounts of turquoise on the walls of subsurface fractures.



Turquoise can also replace the rock in contact with these waters. If the replacement is complete, a solid mass of turquoise will be formed. When the replacement is less complete, the host rock will appear as a "matrix" within the turquoise. The matrix can form a "spider web," "patchy" design, or other pattern within the stone.

Turquoise Jewelry and Art

The earliest record of turquoise being used in jewelry or in ornaments is from Egypt. There, turquoise has been found in royal burials over 6000 years old.

[Left] Turquoise jewelry: Navajo bracelets made with silver and turquoise. Image by Silverborders, used here under a Creative Commons license.

In North America the earliest known use of turquoise was over 2000 years ago in the Chaco Canyon area of New Mexico. Ancient artists produced beads, pendants, inlay work, and small sculptures.

In the late 1800s, Native American artists began using coin silver to make jewelry. This work evolved into the turquoise and sterling silver style of Native American jewelry that is popular today.

The demand for turquoise and turquoise jewelry rises and falls over time. In 1912, turquoise was named as one of the original modern birthstones for the month of December. In the United States there was a surge in turquoise demand that began in the 1970s and declined in the 1980s.

Turquoise Jewelry Care

Turquoise has a lower-than-ideal hardness and durability (5-6 on the Mohs Hardness Scale, slightly more than window glass) for use in certain types of jewelry. Although the gem is frequently used in rings, bracelets, and belt buckles, these uses place the gem at risk for abrasion and impact.

Natural and Treated Turquoise

Only a small amount of turquoise that is mined today can be used to cut finished stones or make jewelry without some type of treatment. These treatments make the turquoise stable enough for cutting, durable enough for jewelry, or improve its color and marketability. Untreated turquoise is a rare commodity. The different types of turquoise, based upon their treatments, are described below. They are listed from top to bottom in order of their desirability.

Natural Untreated Turquoise is the name for turquoise that is fashioned into cabochons, beads or other items and used to manufacture jewelry without any type of treatment. It is the most highly desirable type of turquoise, especially when it has an attractive color.

Stabilized Turquoise is the name used for turquoise that has been impregnated with a polymer or other binding material to make it durable enough for cutting and use in jewelry. Stabilized turquoise can be cut into beautiful beads and cabochons.

Composite or Reconstituted Turquoise is made from small pieces of turquoise that are mixed with a polymer and cast into block-shaped pieces. The blocks are then sawn into small pieces that are used to cut cabochons, beads and other items.

Dyed Turquoise is exactly that. Turquoise is a porous material and easily accepts dye. The dye is used to modify the turquoise to a more marketable color.

Turquoise: Real or Fake? Look-Alike Materials

Like most other opaque gems, turquoise has been devalued by the introduction of treatments, imitations and synthetics into the market. One of two minerals, howlite or magnesite, have been skillfully dyed to colors so similar to turquoise that it fools almost everyone (at least the first time they see it). The gray to black veining aids in the deception.

Howlite and magnesite are light gray to white minerals that often have markings that resemble the spider webbing seen in some turquoise. These dyed stones fooled many people when they first entered the marketplace and still are mistaken for genuine turquoise by unfamiliar buyers.



[Left] Tumbled Howlite from S. Africa (www.crystalmedicine.ca) [Middle] Howlite nuggets and tumbled stones that have been dyed a turquoise color (www.RockTumbler.com). [Right] Howlite and magnesite dyed a variety of colors. Dyed howlite and magnesite are a common find in tumbled stone mixtures. It kicks up the color of the mix and increases sales (www.RockTumbler.com)

Spiritual Qualities

Turquoise is a healer of spirit and a balancer, inducing a sense of serenity and peace of mind. Good for self-acceptance and forgiveness, and considered to be a very protective stone. It is used for healing on every continent. Ancient absorber of negativity and protector from the evil eye. It opens the throat chakra for communication, creativity, serenity, spiritual bonding. Strengthens and aligns all meridians, chakras and energy fields.