

THE ROCKET

October 2024

deadline for next issue
November 8, 2024

Club email: secretary.hrc@gmail.com
Newsletter email: edrocket18@gmail.com
Roz MacLean – editor

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

Next Meeting: Friday – October 25 at 7 pm
at Hastings Community Center Auditorium (on the main floor)
If you need to attend by Zoom, please contact Crystal for a link

Program for next meeting (October 25)



Andrew Danneffel will come and speak to us about his love of Morrisonite. He has extensive experience with this stone and his tips and tricks will be invaluable. His cabochons are works of art.

Andrew is involved in the BCLS Executive as Past President and Treasurer. He is a member of the Port Moody Rock and Gem Club. He will also be selling some of his Morrisonite stash; can't wait to see it!

https://gemstone.fandom.com/wiki/Morrisonite_Jasper

Kyle and Wes Piatocka will give some tips on how to polish those Eye Agates found on the recent Field Trip. (See article later this issue)

We will have some Very Special Rocks in our ways and means raffle held after the business part of the meeting. You will be interested to see the selections this month and want to get some of those tickets.

Program from last meeting (September 27)

Lara McQuay put together a slide show and presentation about our club and all the amazing opportunities we have within our club. Unfortunately, we don't have any pictures of her presentation, but it was a lively review of life as a Hastings Centre Rockhouser.

A Reminder on Memberships



Memberships are due by January 1, 2025. We do not have a meeting in December so renewals will be at our **October** and November meetings. The perk of renewing early guarantees your contact information will be included in the BCLS directory and you will receive your BCLS card (proof of insurance) in the first batch in January! (\$20 single, \$25 Family)

Preparation for November meeting

Please support your club

According to our constitution: A Nominating Committee shall be selected at the September regular meeting in the following manner: the President shall appoint one, the Executive Committee shall appoint one, and the club shall select one. It shall be the duty of the Nominating Committee to select suitable candidates for each of the four (4) Executive Officer positions (President, Vice-President, Secretary and Treasurer), chairpersons of the Standing Committees of the club, and/or Special Directors for the coming year, and to provide a list of the candidates selected for publication in the notice of the Annual General Meeting and ensure that each member is informed of the duties of each elected position prior to nomination.

The nominating committee will be appointed at the meeting and then they will be phoning you. Elections will be at our November meeting.

1. The Executive Committee of the club shall consist of those members holding the following positions:
 - Four (4) Executive Officers –President, Vice-President, Secretary and Treasurer
 - Senior Delegate to the Lapidary, Rock and Mineral Society of BC
 - One chairperson convener of each of the following Standing Committees:
 - Field Trips
 - Library
 - Membership
 - Program
 - Publications
 - Publicity
 - Show
 - Social
 - Ways & Means
 - Workshop
 - The following special directors:
 - Delegate to Hastings Centre Board of Directors
 - Director-at Large
 - Historian
 - Sunshine

DUTIES OF OFFICERS, COMMITTEES, DIRECTORS AND DELEGATES

30. The **President** shall preside over General meetings of the club and over Executive Committee meetings, and shall be ex-officio member of all club committees with exception to Special Complaints Resolution Committee. The President shall be a signing Officer.
31. The **Vice-President** shall, in the absence of the President, preside as chairperson of General meetings and at meetings of the Executive Committee, and otherwise assist the President and other Officers in the exercise of their respective duties as may be required. The Vice-President will also be the club's Delegate to the Hastings Community Association's Program Committee. The Vice-President may also serve as a signing Officer in the absence of the President.
32. The **Treasurer** shall be the custodian of all club funds and shall sign all cheques for the withdrawal of such funds as are required from time to time, along with any one of following; the President, the Secretary or in the absence of the president, the Vice President. In the event the treasurer is unable to sign cheques, the president shall be one of the signers. The Treasurer shall keep accurate records of the receipts and expenditures of club funds and shall report the financial position at each meeting of the club. The Treasurer shall also submit all records to an auditor at the request of a General meeting. The Treasurer shall be a signing Officer.

33. The **Secretary** or alternate shall attend all meetings of the club and of the Executive Committee and record accurately all minutes and proceedings of every such meeting in a minute book to be provided by the club, shall receive and file all reports, keep or cause to be kept proper books and records in all respects of the business and affairs of the club, and conduct all correspondence of the club, also see clause 10, as directed by the Executive Committee in a prompt and efficient manner. The Secretary shall be signing Officer.
34. The **Field Trips Committee** shall arrange and supervise field trips for the club, and ensure that first aid equipment is available and, if possible, have present a member who is qualified in level 1 first aid. He/she shall also ensure that all participants on the field trip are members in good standing.
35. The **Library Committee** shall purchase and catalogue books and periodicals and care for them; shall acquaint members with titles of such books as are available, supervise the loan and return of books and magazines and collect fines for each overdue month.
36. The **Membership Committee Chair** shall receive all applications for membership, collect club dues, see that membership cards are issued; maintain attendance records at all meetings, ensure that guests sign the guest book and that they are introduced to those assembled at the meeting; issue copies of the Constitution and Bylaws, Workshop Rules and Regulations of the Hastings Centre Rockhounds, Rockhound's Code of Ethics, Vancouver City Code of Conduct, Respect Policy and Complaint Resolution Procedures, Respect in our Club Orientation Pamphlet and the British Columbia Lapidary Society By-Laws to all members; issue annually a list of the names and addresses of all willing members to each member and to the Lapidary Society; keep the Records of Orientation Completion; keep the club advised of the number of members to date, and report to the Hastings Community Centre on attendance at each General or Special meeting held at the centre.
37. The **Program Committee** shall arrange for programs for the General meetings, and keep the Executive Committee advised of future program plans.
38. The **Publications Committee** shall prepare and issue the club's publication, "The Rocket", and such other publications as the Executive Committee may from time-to-time request. "The Rocket" shall be distributed electronically or pick-up to all interested members of the club, and to certain other clubs and individuals upon request. A copy will be posted in the workshop.
39. The **Publicity Committee** shall arrange for publicity for the club and the club's Annual Show; shall send news items to appropriate magazines and to affiliated associations; and attend to other special notices. As part of the Publicity Committee a Webmaster shall maintain the Club's website.
40. The **Show Committee** shall organize and co-ordinate the club's Annual Show, its participation in the Annual BC Gem Show of the Lapidary Society, and any other displays and shows in which the club may decide to participate.
41. The **Social Committee** shall be responsible for purchasing and serving refreshments for General meetings and for the Annual Club Show and other special functions as requested, as well as for arranging for the club's annual dinner.
42. The **Ways & Means Committee** shall be responsible for the raffle held at General meetings, including the purchase or receipt of donations of prizes, conduct of the raffle and recording of receipts and expenses, and shall propose special projects to raise money for the club if required from time to time.
43. The **Workshop Committee** shall be responsible for ensuring that all equipment in the club's workshop is kept in working order; shall purchase new supplies and equipment; shall keep a record of all receipts and expenditures connected with the workshop and report thereon to each General meeting; shall coordinate the arrangement of classes and, together with class instructors, ensure that the rules and regulations governing the use of the workshop are up to date and adhered to.
44. The **Director-at-Large** shall substitute for any officer of the club unable to attend any meeting (except that in the absence of the President, the Vice-President shall substitute). Any officer of the club unable to attend a General meeting or a meeting of the Executive Committee should advise the Director-at-Large in advance of the meeting in question, and submit any report to be made through the Director-at-

Large.

45. The **Historian** shall keep a journal of club activities; collect pictures, hard copy or soft copy, from members for scrapbooks and a slide collection of slides submitted by members as well as any other material pertaining to the history of the club.
46. The **Sunshine Director** shall be notified by members of the club of any special circumstances that might require sending "get well" cards, condolences or congratulations to members.
47. The **Delegate to The Hastings Community Association's Board of Directors** shall attend monthly meetings of that Board to report to it on the activities of the club and to keep the club informed of the activities of the Association.
48. The **Delegates to The Lapidary, Rock and Mineral Society of British Columbia**, as per BCLS rules, shall act as representatives of the club at meetings of the Lapidary Society, reporting to it the views of our club and reporting to the club on the activities of the Society. In particular, participation by one or more delegates or designate at the Annual General Meeting at Rendezvous is required.

*A note about the 3 delegates to the BCLS: We will be electing the junior delegate who will serve for 3 years, Next year the junior delegate become the intermediate delegate and then senior delegate the year after. Our current senior delegate will step down as the current intermediate delegate rotates into the senior position.

BC Lapidary Society - Notes from General Meeting October 6

Nickell Aktarian



There have been a couple incidents of scammers posing as, or contacting club members of other clubs.

-There was an embezzling incident in one club over show payments. The club has suspended the offending parties and taken police action. A club report on this incident should be included in the BCLS meeting minutes. Because of this incident, this year the affected club is not able to support scholarships and other donations that they usually do.

- The BCLS is looking for volunteers for the annual gem show. The BCLS is proposing to give people free camping nearby for those that volunteer for the show weekend.

- The BCLS is still looking for a treasurer (we have an interim treasurer right now) - if interested please let the club-reps know

-All is well with the Gem Federation and insurance rates are unchanged.

- The BCLS is looking for clubs to volunteer to host Rendezvous and Summer Camp. The executive recommends summer camp to be in the Spences Bridge area.

-Nominations for the Lapidary Arts Award (check BCLS website for details) were closed Oct 1st with no applicants. The deadline is extended; get your nominations in!

-Concerns about private lands access, and the rules and rights of rockhounding were discussed. BCLS will look into getting a guest speaker for the next general meeting (or other time of gathering) to give a presentation. Also, some clubs have received complaints from land owners claiming that the sites were not left cleaner than they started. Recommend to remind clubs of rockhounding rules and ethics about respecting the land owners, the environment, and fellow rockhounds. And being a responsible rockhound, only taking what you need and not hoarding it in your garage.

-Nothing of note (or out of the ordinary) regarding: Calendars, directories, financials.

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.

Earplugs & safety goggles: Members are reminded that they are expected to supply their own PPE once they have completed their training sessions.

Metalsmithing: If you have your own Tools and Materials, Michael Ma is hosting a Drop-in workshop time, 10-2pm. Please see him to discuss attending. NO INSTRUCTION.

Photos: Richard Kotecki



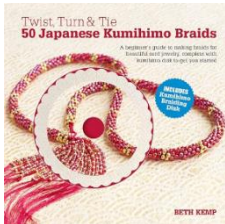


Club Library Refresh: A New Chapter

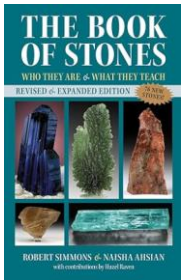
Joyce Wong

This past spring, I completed a project to review and refresh the club library. Over the years, the collection in the Library has served as a valuable resource to our members, reflecting our diverse interests. But the shelves have become overcrowded and some of the titles have grown tired and worn. To streamline the collection, factors such as publication date, poor physical condition and subject relevance were used to assess each title and identify those for sale or recycling. Classic and well-regarded titles were kept in the collection as much as possible.

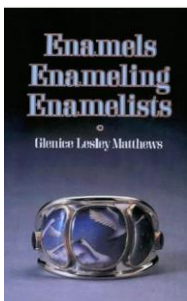
To improve access and help keep track of borrowing, an online catalogue and a new borrowing card system were implemented. Over 130 titles are now listed in the catalogue. In addition, the club has an active subscription to *Rock and Gem* magazine. Here are some sample titles available in the collection:



Twist, Turn & Tie: 50 Japanese Kumihimo Braids / Beth Kemp



Book of Stones: Who They Are and What They Teach / Robert Simmons



Enamels, Enameling, Enamelists / Glenice Lesley Matthews

Looking ahead, it is planned that newer titles be purchased periodically to keep the collection fresh and updated for our members. If you are interested in donating titles, please help us by bringing only titles that are published within the last 10 years.

Note that the collection is currently housed in the Centre's town hall space and very difficult to move in its entirety to the club's new meeting space for our monthly meetings. Until a new storage location is found, only select titles will be available during the monthly meetings.

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 was in the September Rocket

Part 4 of 5

When using a two-part epoxy resin, here's a general procedure to follow:

1. Preparation: Ensure that your work area is well-ventilated and clean. Wear appropriate personal protective equipment (PPE) such as gloves and safety glasses to protect yourself during the process. Gather all the necessary materials and tools.
2. Mixing: Check the instructions provided by the manufacturer for the specific mixing ratio and procedure for the epoxy resin you are using. Typically, two-part epoxy resins consist of a resin and a hardener. Measure the resin and hardener according to the recommended ratio (by volume or weight) and transfer them into a clean mixing container.
3. Mixing thoroughly: Use a stir stick or a mixing tool to thoroughly mix the resin and hardener together. Scrape the sides and bottom of the container as you mix to ensure that the components are well combined. Follow the recommended mixing time specified by the manufacturer to achieve a homogenous mixture.
4. Degassing (optional): If you have a vacuum chamber, you can place the mixed epoxy resin in it and apply a vacuum. This step helps to remove any air bubbles trapped in the mixture, resulting in a smoother final result. Follow the manufacturer's instructions regarding degassing time and pressure if applicable.
5. Application: Once the epoxy resin is mixed and optionally degassed, apply it to your desired project or surface. Use a brush, spatula, or other suitable tools to spread the resin evenly. Take care to work quickly, as epoxy resins typically have a limited working time before they begin to cure.
6. Curing: After application, allow the epoxy resin to cure according to the manufacturer's instructions. Curing time and temperature can vary depending on the specific epoxy resin being used. Place the project in a suitable environment with controlled temperature and humidity, if specified. Avoid disturbing the resin during the curing process to ensure a smooth and even finish.
7. Finishing: Once the epoxy resin has fully cured, you can proceed with any necessary finishing steps such as sanding, polishing, or adding additional layers if desired.

Remember to carefully read and follow the instructions provided by the manufacturer of the specific epoxy resin you are using, as curing times, temperatures, and other details may vary between different products.

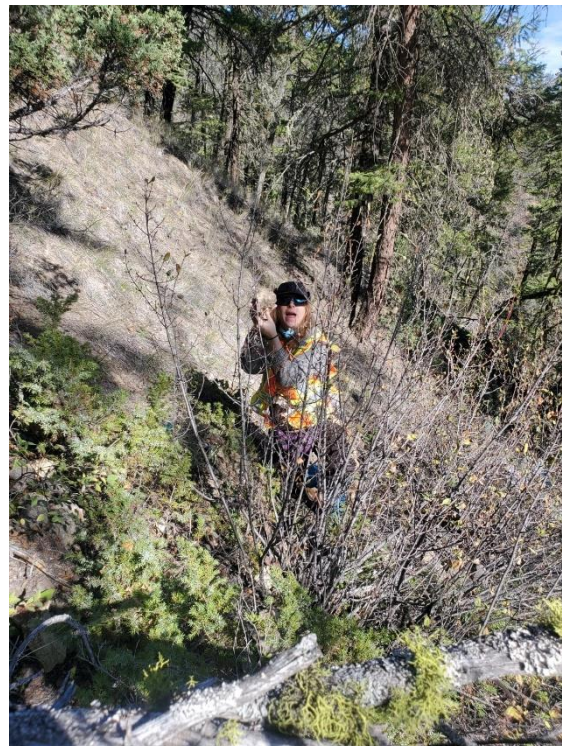
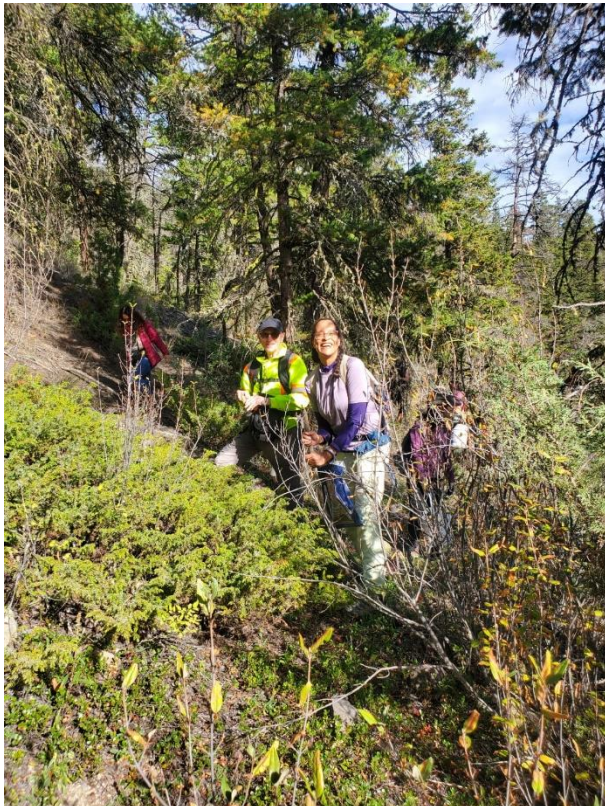
Field Trips October 5 and October 6

Kyle Piatocka

Day 1 - Deadman Valley

The weather was perfect with sun and cloud, and a comfortable 18 degrees

The day started by a quick stop to look at the versicular basalt hoodoos on the cliffside across the Deadman River. Excited, the group took to the steep hills of the bluffs finding agate nodules, agate in host rhyolite or basalt, as well as green calcite. Other fun finds like fresh sage and juniper berries filled the air as we rockhounded.



After lunch we all headed to a large grassy hill up the valley to find agate nodules, botryoidal agate and geodes.



(Amy's photo)

We ended the day by visiting the campsite where half the group was staying to wash our finds.

Day 2 - Part 1 Scottie Creek

It was 4 degrees and pouring rain with heavy winds. The group scrounged the bottom of the rock face while the other half picked their way into fresh amethyst seams. The amethyst was found in a paleozoic period serpentinite host rock found with chert linings.

Day 2 - Part 2 Spences Bridge

What was left of the group met near Spences Bridge and hiked above the railroad to look for redskin agates in the small canyon runoff from the mountain.



More photos of the weekend:

From Renee – The Steps that Wes and Kyle carved out for us



Amy's pictures of her finds – and some given to her by Wes and Kyle.



More of Amy's finds



Rock and Gem Shows

Oct 25,26,27,2024 **Cranbrook Rock & Lapidary Club**, Colombo Lodge, Cranbrook, BC
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.

Reprinted- slightly modified from February 2020
By Roz MacLean



Agate rough, one of a kind stones
on [etsy.com/au](https://www.etsy.com/au)

This month's stone is
AGATE.

In the latest articles we've been looking at material that is more likely to be worked by lapidaries like ourselves, in our workshop.



Polished Montana
agate

Last month we looked at the variety of quartz called chalcedony. Specifically, it was the **cryptocrystalline** (crystals too small to be seen by the naked eye) **quartz** (the chemical compound consisting of one part silicon and two parts oxygen - silicon dioxide (SiO₂)) that

is transparent to translucent, looks like a solidified gel, and is called Chalcedony in the gem trade. Now we need to differentiate Agate as another variety of Chalcedony the cryptocrystalline quartz.

Agate is the name used for a translucent variety of chalcedony that is banded. Sometimes those bands are very hard to spot, but they develop around inclusions and often contribute to the naming of an agate specimen. Agate has always fascinated people. It is a natural wonder, looking like a work of art. No two specimens are identical; each has a different pattern and colour.

Not too surprisingly, agate is associated with the zodiac sign Gemini. The Old Hindu, Hebrew, Italian and Roman calendars assigned agate as a birthstone for May but ancient Polish and Russian calendars gave agate to June. The old Tibetan calendar gave agate to September. Agate is an alternate stone to celebrate a 12th or 14th anniversary. Some people specify Moss Agate for the 14th anniversary.

Theophrastus, (372-287 BC) a Greek philosopher and naturalist, was the first to describe and name a stone found along the river Achates (now known as Dirillo) in Acate, Ragusa Province, Sicily, Italy. The name was originally Greek “Achates” and we now say “Agate.” It has been known for over 3000 years and in Theophrastus’ time was valuable. By 77 AD when Pliny the Elder discussed agate it was more plentiful and had a lower value.

According to Geology.com “Agate generally forms by the deposition of silica from groundwater in the cavities of igneous rocks. The agate deposits in concentric layers around the walls of the cavity, or in horizontal layers building up from the bottom of the cavity. These structures produce the banded patterns that are characteristic of many agates.”

According to a GIA (Gemological Institute of America) article on Moroccan Agates, which spoke of all agates, *“The shape and width of the zones and the general pattern of the agate all depend on the concentration of silica in the fluids, as well as the temperature, pressure, and timing of the fluid influxes. Other elements found in the fluids (Fe, Ti, Mn, and others) affect only the coloration of the agate zones. At the final stage of formation, mainly in the center of the void, idiomorphic quartz of different colors—brown, smoky quartz, amethyst, and rock crystal—can crystallize, sometimes accompanied by calcite, hematite, goethite, barite, and other minerals.”*

Some sources say the bands of chalcedony alternate with microcrystalline quartz giving the cloudy, white colour. Others say the white bands are chalcedony. The difference depends on if you can see crystals. Many agates are hollow because the deposition of silica fluids is not complete. As mentioned above, the surface inside those hollows is often quartz (eye visible crystals). We often call this surface “druzy quartz.”

As mentioned in the article last month, Geology is a relatively new science... *“Chalcedony is a mixture of cryptocrystalline quartz and mogánite, another silica mineral related to quartz but with a different crystal structure.”* Moganite was approved as a new mineral by the International Mineralogical Association in 1999.



© geology.com

Arizona Fire Agate

According to the GIA article on agates, scientists noted moganite intergrowths in agates since 1976. In 2004, other scientists noted that the maturation of the cryptocrystalline silica phases over tens of thousands of years (*the rock is becoming more chalcedony*) lowers the moganite content and may be a tool for estimating the age of the agate. Geologists do not currently have a reliable way of estimating the age of agate because agates are younger than their host matrix. Agate is a complex rock.

Agates can sometimes form in sedimentary rocks with cavities. They can be seen in limestone, dolomite and shale with shells, tree branches or roots within them that decayed and left a space for silica-rich fluids to enter and be deposited forming chalcedony or agate.

Turritella Fossil Agate
[KidzRocks](#) on [Etsy.com.au](#)

Whichever type of rock the agate forms in, as time passes, the matrix holding the agates may disintegrate and free the nodules. Agates are extremely resistant to weathering and may stay as nodules in the soil or are deposited as gravel in streams and shorelines. The skin of these nodules is often a pitted green or brown iron oxide from the first layers laid down in the deposits



Because of the way they form in cavities, agate masses can be several pounds and many inches in diameter. According to Guinness World Records.com, the largest agate measures 61,090.2 kg (134,680.84 lb) and was verified at an event organized by the Development & Reform Commission of Fuxin Municipal Government in Fuxin City, Liaoning Province, China, on 25 October 2009.

The agate measures 22.62 cubic meters (798.82 cubic feet). It is 2.71 m (8 ft 10.69 in) from top to low, 5.09 m (16 ft 8.39 in) from left to right and 4.69 m (15 ft 4.65 in) from front to back.

Agates have a Mohs hardness of 6.5-7 which makes them hard enough for many uses and they take a wonderful polish. Industrial uses of agate focus on its hardness and ability to keep a polished surface resistant to chemical attack. Agate has been used for laboratory balances and pendulums, sometimes as mortars and pestles and as leather burnishing tools.

Agate was well known and used in the ancient world for tools, hardstone carving, seals and jewellery. It has been recovered from a number of ancient sites around the world. Ancient and modern uses are similar. Agates are cut into cabochons, beads, small sculptures, and functional objects such as paperweights and bookends. Agate cabochons are used in rings, earrings, pendants, and other jewelry objects. Agate beads are commonly made into necklaces and earrings. Some have been used as marbles. Carved agate bowls have been collected through various ages, usually by royalty. Mithridates, King of Pontus (135-63 BC) had a famous collection of up to 4000 bowls. Bowl collecting was again popular in the Byzantine era (330-1453 AD) and the Renaissance of the 14th to 17th centuries. Museums in Europe have many bowls in their collections.



*The "Rubens Vase"
(Byzantine Empire).
Carved in high relief from
a single piece of agate
Wikipedia*

When agate deposits in Germany were depleted in the 1800's they started to import material from Brazil. Then deposits were discovered in other location in South America, Europe, Australia and North America.

Even since the early days of Idar-Oberstein imports from Brazil, agates are often dyed. Agate is a porous material and takes colour enhancement treatments well. The intense pink, blue or green agates are often dyed. According to [gemdat.org](#): "The material is sawn and shaped before dyeing. Immersion in a hot sugar solution followed by immersion in concentrated sulphuric acid and heating gives **black**; a **blue** colour, once called Swiss lapis, is produced by immersion in potassium ferrocyanide and subsequent warming in a solution of ferrous sulphate to give a precipitate of Berlin blue. Chromium alum or potassium dichromate may be used to give **green** or bluish green, and nickel compounds give a brighter, **apple green**. Impregnation with iron compounds and heating may give **reddish brown and red** colours. **Yellow** to greenish yellow is obtained by heating dry agate that has been treated with concentrated hydrochloric acid." Dyeing is usually a stable process and should be disclosed to buyers.

Another treatment used especially on carnelians is heating to cause iron impurities within the agate to develop a bright orange to bright red color.

Generally, agates are affordable. The pricing of agates and agate jewellery generally reflects the labour, artistry and distinctiveness of the stone. Custom pieces or stones from collectible locations are generally more expensive.

Agates can be found all over the world. For example:

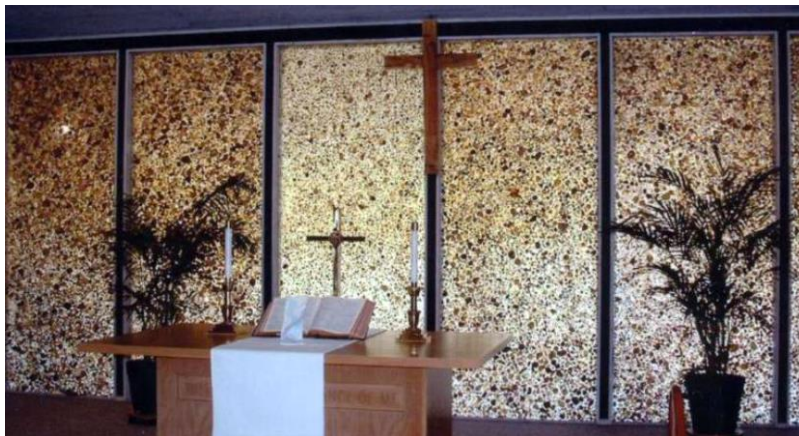
- Moss agates: *India; Scotland; United States Northwest.*
- Scenic agates: *Yellowstone National Park; Wyoming; Montana.*
- Banded agates: *Brazil; Uruguay; Madagascar; Mexico; United States.*
- Lace agate: *Mexico; Arizona; Namibia.*
- Fire agates: *Mexico. Arizona, California and New Mexico*
- Petrified wood: *Arizona; New Mexico; California; Washington; Oregon; various European countries; many other localities*

Mexican Crazy Lace Agate cabochon



According to a Gemmology Canada - Special Issue: Gemstones of British Columbia, By Stephen Bertalan, A.G. (C.I.G.) Fine deposits of agate are found throughout the province. There is a great variety, ranging from fine blue agate, moss agate, banded agate, eye agate, and red agate resembling Mexican agate.

The variety and beauty of agates have inspired people for centuries, sometimes in new ways and uses. In Yachats, Oregon agates collected from local beaches were used to make the church windows.



Fortunately for us, agate is found all over the world and easily found by rockhounds. We can all collect specimens of agate's many varieties...our own pieces of nature's art.

For those interested in collecting agates, I've included some great contacts about agates. They have lists of various types of agates, but none are complete as new finds are still being made and named.

Roger Pabian's "Agate Lexicon" at University of Nebraska School of Natural Resources
<http://snr.unl.edu/data/geologysoils/agaes/agateslexicon.aspx>

<https://www.mindat.org/min-51.html>

Geologyin.com

