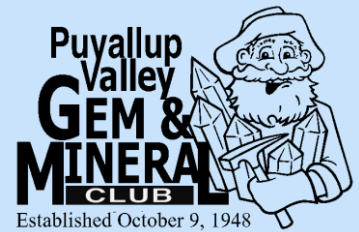


ROCK-A-TEER



Newsletter of the Puyallup Valley Gem & Mineral Club

Jillian Higgins

Issue 69

Volume 122

October

2023

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Jim Christian



It is with a heavy heart that I inform you of the passing of one of the club's most influential members. Jim Christian, club member since 2007, Board of Directors member for multiple years and capacities, and incredibly active volunteer for our rock community passed away on Tuesday, September 19, 2023.

Jim was not a man who liked the spotlight, so I think it is worth acknowledging all the many things he has done for this club over the years he was involved.

- Served on the Club Board of Directors for multiple terms as Vice President
- Was instrumental in getting the Club house up and running
- Served as the clubhouse director for many years
- Started the Show in the Trees during COVID to help vendors maintain their livelihood
- Is the reason we have a booth at the Gem Fairs
- Helped the club secure the Geodes we sell at the shows
- Was the Club Show Director from 2019 - 2021
- Volunteered to man the club booth at the WA State Fair many, many times.
- Volunteers on more committees than can be listed but a couple are: clubhouse committee, website committee, SOP and By-Law editing committees, etc.
- He would help setup and teardown at any and all events that needed his help.
- He was always available to help in any way he was able

The family would like it to be known that he passed making his own choice to forgo medical intervention as upon reflection, he acknowledged a life very well lived. He was 85 and wanted to go on his own terms. For all of us who were lucky enough to get to know him closely, this is exactly in character with what he would want to do.

We will hold a Celebration of Life at the Tacoma Sportsman's Club on Thursday, October 26th, 2023 starting at 5:00pm. The event will be a potluck so please bring your best dish to help honor this wonderful man.

His obituary can be found at <https://hillfhpuyallup.com/tribute/details/323790/James-Christian-Jr/obituary.html>

To say he was an active volunteer does not do his contributions to this club justice. He was pivotal in helping guide our club into the success we have today and will continue to have well into the future. He will be missed beyond what words can express.

President's Perspective

Tony Johnson

I just want to thank everyone who volunteered for the fair.

We had so much help and it went so smoothly, it was unbelievable. From set up, to putting the club display together, assembling the Space Needle, the volunteers for the booth, giving kids rocks, and of course tear down. We had enough tumbled material that we were not even close to running out, so great work in the preparation for the fair.

Thank you again to everyone in the club for doing such a great job. We really do shine as a group and as a team.

The auction will be coming up toward the end of the month. There will be an email coming out with all the details so keep your eyes out for that. If you have any questions please feel free to ask any of the board of directors.

Field Trip Report

October 21 – Jordan Creek (Marblemount)

Meeting place - 10:00AM at Marble Mountain Fish Hatchery Hwy 20

Hunting for – Listwanite and Jade

Tools you need - Rock hammer, rubber boots or waders, and a backpack/bucket for your treasures

Access - moderate terrain, ½ mile hike from hatchery

Additional items - lunch/snacks and water, water, water. Dress in layers. Be prepared for ticks/mosquitoes

November 18 – Twin Rivers (Joyce)

Meeting place - 10:00Aam Joyce General Store on Hwy 112

Hunting for – Concreations

Tools you need - Rock hammer, shovel, hammer, backpack/bucket for your treasures

Access - easy terrain, based on the tides

Additional items - lunch/snacks and water, water, water. Dress for wet weather in layers

Please remember that even though we love to meet new people, fieldtrips are a member benefit and part of your membership dues covers you for injury liability.

Though injuries are rare, and we do everything we can to avoid them, we are going out into nature, and uncontrollable environment.

All individuals attending field trips will have to sign a release of liability, and if you are bringing guests, we will try to entice them into join the club by having Membership applications available.

OCTOBER 2023 CLUB HOUSE SCHEDULE

DATE	DAY	TIME	ACTIVITY	LOCATION	INSTRUCTOR
1	Sunday				
2	Monday	10:00AM-2:00PM	Members Open Access	Club House	Tasha Parker
3	Tuesday	4:00PM-8:00PM	Members Open Access - Beginner	Club House	Ed & Renera
4	Wednesday	10:00AM-2:00PM	Members Open Access	Club House	Dennis Batchelor
		4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson
5	Thursday	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson
6	Friday				
7	Saturday	10:00AM-2:00PM	Members Open Access	Club House	Tony Johnson
8	Sunday				
9	Monday	10:00AM-2:00PM	Members Open Access	Club House	Tasha Parker
		7:00PM-8:00PM	Opal Club Business Meet.	Club House	Tony Johnson
10	Tuesday	4:00PM-8:00PM	Members Open Access - Beginner	Club House	Ed & Renera
11	Wednesday	10:00AM-2:00PM	Members Open Access	Club House	Dennis Batchelor
		4:00PM-8:00PM	Wire Wrapping	Club House	Tony Johnson
12	Thursday	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson
13	Friday	6:00PM	Club Board Meeting	Fruitland Grange	Kevin Higgins
		7:30PM	Club Business Meeting	Fruitland Grange	Tony Johnson
14	Saturday	10:00AM-2:00PM	PMC - Intermediate Class	Club House	Sonora Hauser
15	Sunday				
16	Monday	10:00AM-2:00PM	Members Open Access	Club House	Tasha Parker
17	Tuesday	4:00PM-8:00PM	Members Open Access - Beginner	Club House	Ed & Renera
18	Wednesday	10:00AM-2:00PM	Members Open Access	Club House	Dennis Batchelor
		4:00PM-8:00PM	Opal Cutting	Club House	Tony Johnson
19	Thursday	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson
20	Friday				
21	Saturday	10:00AM-2:00PM	Jordan Creek	Field Trip	Nate White
		10:00AM-2:00PM	Members Open Access	Club House	Tony Johnson
22	Sunday				
23	Monday	10:00AM-2:00PM	Members Open Access	Club House	Tasha Parker
24	Tuesday	4:00PM-8:00PM	Members Open Access - Beginner	Club House	Ed & Renera
25	Wednesday	10:00AM-2:00PM	Members Open Access	Club House	Dennis Batchelor
		4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson
26	Thursday	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson
27	Friday	6:00PM	Club Auction & Potluck	Fruitland Grange	Tony Johnson
28	Saturday	10:00AM-2:00PM	Stone Carving	Club House	Robin McDonald
29	Sunday				
30	Monday	10:00AM-2:00PM	Members Open Access	Club House	Tasha Parker
31	Monday		CLOSED HALLOWEEN		

For questions about a specific class or event, contact the instructor

Dennis Batchelor (360) 870-8741	Ed Knoll (253) 651-7453	Tony Johnson (253) 863-9238
Tasha Parker (206) 291-8068	Kevin Higgins (253) 579-3404	Glen Ripper (253) 508-7545
Renera Barnes rsb1224@netscape.com	Jillian Higgins (253) 355-3146	Nate White (206) 349-7054

*** **Members Open Access** is the time when members can use the saws and cabbng machines

This schedule is subject to change. Please check the club website for updated information.

Puyallup Valley Gem & Mineral Club

Membership Renewal

*** PLEASE PRINT LEGIBLY ***

Web Site: <http://puyallupvalleygemandmineralclub.com>

ANNUAL MEMBERSHIP DUES: ▶ Single - \$25.00 ▶ Family (2 or more) - \$30.00

[Dues are due October 1st for the next calendar year and half price beginning July 1st for the current year]

YEAR: **2024**

FOR FAMILY MEMBERSHIPS, ALL INDIVIDUALS MUST LIVE AT THE SAME RESIDENCE

SINGLE RENEWAL

FAMILY RENEWAL

PRINT YOUR FIRST AND LAST NAME:

DATE OF BIRTH:

NOTE ANY CHANGES OF ADDRESS, PHONE, EMAIL, ETC, BELOW. IF SAME AS LAST YEAR, JUST CIRCLE "SAME"
IF YOU CIRCLE "NEW", PLEASE ENTER THE NEW INFORMATION BELOW.

ADDRESS: (CIRCLE ONE) **SAME OR NEW**:

PHONE: (CIRCLE ONE) **SAME OR NEW**:

EMAIL: (CIRCLE ONE) **SAME OR NEW**:

OTHER: (CIRCLE ONE) **SAME OR NEW**:

FOR FAMILY MEMBERSHIP, CONFIRM/NAME OTHER FAMILY MEMBERS BELOW AND CIRCLE 'ADULT' OR 'CHILD' (under 18)

(Circle one) **Adult OR Child**

DATE OF BIRTH:

(Circle one) **Adult OR Child**

DATE OF BIRTH:

(Circle one) **Adult OR Child**

DATE OF BIRTH:

Please let the Membership Chairperson know as soon as any changes occur in the above information!

Names, addresses and phone numbers are provided to the Club Treasurer, Membership Chairperson and Board Members.

>>OTHER THAN THE ABOVE, PVG&MC DOES NOT SHARE YOUR PERSONAL INFORMATION<<

Give this completed form and your payment to the Treasurer or mail to: **PVG&MC, P.O. Box 134, Puyallup, WA 98371**

For Expedited processing mail to: Jillian Higgins c/o PVG&MC, 22509 120th St. Ct. E. Bonney Lake, WA 98391

*** NEVER SEND CASH THROUGH THE MAIL *** **Make checks payable to: PVG&MC** ***

[Upon receipt of this form with payment, a membership card will be created for you and be available by email, or mailed upon request.]

As a member of the Puyallup Valley Gem & Mineral Club, I agree to abide by the rules of the Rock Hounding Code of Ethics, the Standard Operating Procedures, and the BY-LAWS of the Puyallup Valley Gem & Mineral Club.

Member's Signature:

Date:

Official Use Only:

Amount: \$ _____

Membership #: _____

Cash

Check [# _____]

Card Issue Date: ____/____/____

Credit Card

Roster Entry Date: ____/____/____

Receiver's Initials: _____

Email Date: ____/____/____

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Revised September 4, 2021

Special Recognition

Glen & Teresa Rodrick & Rick Beehler & Lisa Young

As a stranger I arrived at the Greenwater fieldtrip on Friday night; unsure of what I was walki9ng into I walked around the parking lots until I noticed the sign on the back of Glen's trailer. As I walked over to say Hi, Glen invited me to sit with them, the four of them made me feel welcome as soon as I arrived. They offered entertainment as well as tips for playing with rocks. The four of them (and a few unnamed folks) helped create a weekend that I will never forget.

By: Lynz Taylor

If you have a member or members you would like to have recognized, you can find the special recognition form on the club website under FORMS (top right side). Fill out the form and email it to PVGAMC@gmail.com for it to be read at the next club meeting and written into a segment piece in a newsletter.

Nomination Committee Report

The nominating committee is publishing the recommendations for the 2023 club board as follows. The committee will be providing this information to all club members by email as well as newsletter. Nominees will be confirmed by the club at the October business meeting.

The nominating committee recommends the following club members for the 2023 Board of Directors.

President: Tony Johnson
Vice President: Kevin Higgins
Secretary: Patti Dailey-Shives
Treasurer: Jillian Higgins
Associations Director: Mark Baumann
1 Year Director: Richard Yang
2 Year Director: Tasha Parker
1 Year Trustee: Dennis Batchelor
2 Year Trustee: Glenn Rodrick

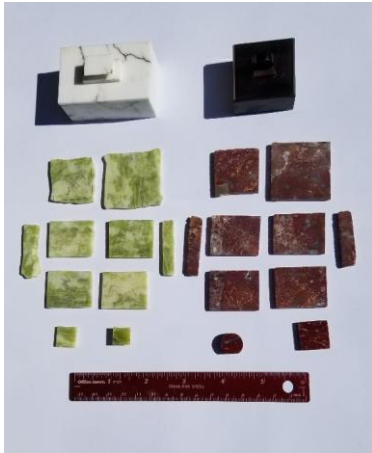
How to Make Gem Boxes

By Brett Lawrence

For some time, I have contemplated writing an article on making gem boxes. Recently, I was approached by a club member who took an interest in some of my work and asked if I would consider writing about how to make them. After consideration this then is the start of that article...the first of a few to tackle this subject.

In the beginning...

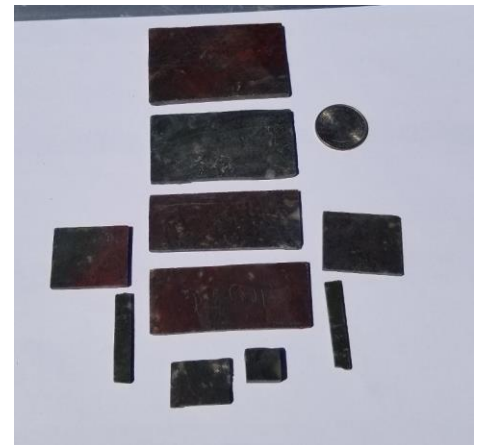
Nearly 15 years ago, my wife Sherry and I were in Redmond, Oregon and visited the old Elkins Rock Shop in Prineville. She managed to find a malachite box made in Pakistan. While it was a gorgeous piece of work it was a rather simple affair with the body of the box and a lid but no adornment(s). At that time, I was growing tired of making only cabochons and desired to spread my wings and do something else. I looked at Sher's find and, brightening, said, "I can do this." It was at that point my lapidary life took a different direction, though I still do the occasional cabochon for something different.



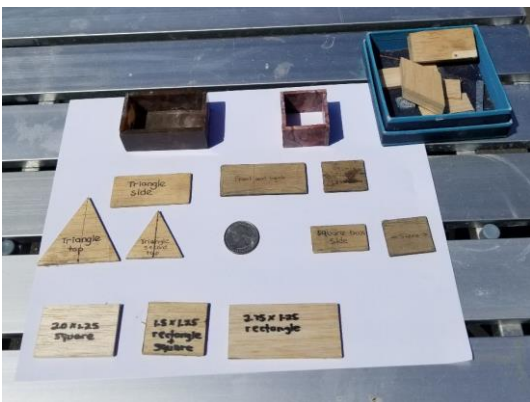
To begin with no books or articles existed to take me where I wanted to go. There was an occasional article here

and there, such as in Rock and Gem magazine, but these were for quite elaborate boxes that included metal work and intricate adornments. My hobby then was a from-scratch endeavor. As I wanted to keep things noncomplicated it would be simplicity without gaudiness, elegance without pretension. My only adornment was to be a top piece with a knob, the latter sitting atop the former on the finished box.

So, making my boxes was a learning work in progress, experimenting and figuring things out, visualizing, nothing written down. So should anyone desire to try their hand at this fun activity the following installments are meant to be guidelines from my own experiences and not hard and fast rules on what to do and not to do. If something works better use it.



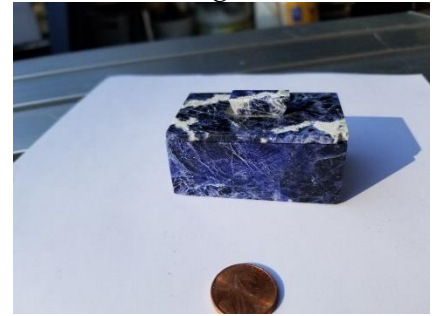
As a start and before beginning any box project consider creating a set of templates. These will be indispensable in forming uniform pieces into sets. Since boxes are handmade no two boxes will be exactly alike. In that light even the lids on each box will only fit one way despite a square one having four sides. In all cases, for me the lid is perhaps the most difficult part to make as the cut slab piece it needs to fit the box body and the worked precisely when it is being ground, formed, and assembled.



As for the templates, I had to be mindful of the Genie wheels and their diameter of $1\frac{1}{2}$ ". This limits the size of my boxes, though I have since made templates for taller and shorter square boxes. In made them using a piece of $\frac{1}{8}$ inch-thick stock balsa to cut pieces with a metal ruler and Xacto knife, each angled precisely at 90 degrees on each corner. The template for the square is ($1\frac{1}{4}$ "x1"), the two rectangle pieces ($1\frac{1}{4}$ "x1" and $2\frac{1}{2}$ "x1" respectively), and for the triangle ($2\frac{1}{4}$ "x1"). The square only needs one template piece for the four sides. A rectangle will have two, one each for the long

sides and the short sides. For the triangle one template will do for the three sides, though I do have templates for the top and two more for top pieces that will be affixed atop each other followed by the knob.

I do not have lid templates for the square and rectangle (though someone could make them) as I have a couple unfinished square and rectangle box bodies I use for drawing out the lid and bottom pieces. These had lids that either broke during working or were dropped and shattered with no backup material remaining to create an extra. These have since come in handy rather than being wasted effort and material.



Included with this article are some pics of my templates and boxes, both assembled and exploded prior to assembly and finishing. The complete box is sodalite and is the prototype, the first one I made. It has the simple knob affixed to the lid minus the top piece all future boxes will employ.

Associations Director Report

Hello to all. I hope everyone has been having a rocking good hounding season. Here is my report for the month.

The Mohave Trails National Monument (MTNM) Subgroup of the Desert Advisory Committee (DAC) has finalized their recommendations to the DAC. The MTNM Subgroup gave a recommendation of "Strongly Agree" that recreational rockhounding be allowed in the MTNM and under current regulations. The DAC will then consider the recommendation and pass on their recommendation to the Bureau of Land Management (BLM).

The Oregon Council of Rock and Mineral Clubs has partnered with the Prineville, Oregon BLM on National Public Lands Day (NPLD) since 2019 to sponsor a reclamation project at Hampton Buttes. They spend the day working to fill in and level excavated areas. They had a work party on Saturday 9/23. The Council is continuing to work with BLM staff to explore the option of utilizing a small tractor or Bobcat at Hampton Buttes. They hope to have the necessary permits in time for 2024s work party. They also looking at other collection sites for possible reclamation projects. One of the Councils projects is installing informational kiosks at Hampton Buttes and Glass Buttes. Signage could describe the history of the site and recommend best rockhound stewardship practices (American Federation of Mineralogical Societies Code of Ethics). The BLM has also invited the Council to help prepare a display of Oregon rocks for their Prineville office.

Respectfully submitted by Mark Bauman

PVG&MC Associations Director

Clubhouse report

Tony Johnson

Everything is going well. We are starting to see and increase in attendance of classes as we are heading into fall/winter.

The ramp has been replaced and is looking really good. We will be painting it when the weather starts to calm down so it will dry correctly. I really need to thank Craig Oda for helping with the ramp build.

A shout out to our wonderful saw cleaning team, Richard & Maria Yang, Nate White, and Tasha Parker, and Dennis Batchelor. They are becoming quite the team getting faster and faster at getting the saws clean for all of the club to enjoy.

Chrysoberyl

Varieties: 1) Chrysoberyl, 2) Cat's-eye, and 3) Alexandrite
Author: [Hobart M. King](#), PhD, GIA Graduate Gemologist



Varieties of Gem Chrysoberyl: Top left: a faceted oval of transparent green, nonphenomenal chrysoberyl, by Greg C. Grace / Alamy. Top right: the yellow oval cabochon known as the Maharani cat's-eye chrysoberyl, by SBS Eclectic Images / Alamy. Bottom: a single stone of faceted color-change chrysoberyl in natural light (left) and in incandescent light (right). [What Is Chrysoberyl?](#)

Chrysoberyl is a rare beryllium aluminum oxide [mineral](#) with a chemical composition of BeAl_2O_4 . It is sometimes confused with the silicate mineral known as [beryl](#), which has a composition of $\text{Be}_3\text{Al}_2\text{Si}_6\text{O}_{18}$.

The main commercial use of chrysoberyl is as a [gemstone](#). It excels in that use because of its high [hardness](#) - 8 1/2 on the Mohs hardness scale. The only gem minerals with a higher hardness are [diamond](#) and [corundum](#) (the mineral of [ruby and sapphire](#)).

A minor use of chrysoberyl is as a collector's mineral. Well-formed crystals are valuable and highly desirable - especially those that exhibit twinning.

Although chrysoberyl contains [beryllium](#), it is not mined as a source of beryllium. It is only found in small occurrences that cannot be mined at a profit.

Most gem-grade chrysoberyl is translucent to transparent and is cut into faceted gems or en [cabochon](#). However, some rare specimens of chrysoberyl exhibit the phenomena of [chatoyance](#) and/or color-change.

Natural gem-quality chrysoberyls that exhibit the highest levels of these phenomena can sell for higher prices per carat than all but the highest quality diamonds.

The three varieties of gem-grade chrysoberyl and their cutting styles:

1. *chrysoberyl*: translucent to transparent, without phenomena, faceted;
2. *cat's-eye*: a chatoyant gem cut en cabochon; and
3. *alexandrite*: a color-change gem, cut en cabochon or faceted.

Translucent to transparent crystals of chrysoberyl are usually found in [pegmatites](#), dolomitic [marbles](#), and stream sediments. They are often yellow, yellowish green, green, brown or yellowish brown, and weigh less than five carats. Rare blue chrysoberyl crystals have also been found.

Most chrysoberyl crystals are nonphenomenal (that is, they do not exhibit chatoyance or color-change). Gemologists simply call them "chrysoberyl". Natural nonphenomenal chrysoberyl is rare, moderately expensive, seldom seen in jewelry stores, and most jewelry shoppers have never heard of it. If you are interested in chrysoberyl jewelry, you might find it at a store owned by a jewelry designer who specializes in rare and seldom-seen gems.

Be cautious when buying chrysoberyl. Much of the chrysoberyl jewelry being sold online is made with synthetic chrysoberyl or imitation chrysoberyl. These should be priced significantly less than similar jewelry made with natural chrysoberyl. If you are paying major money for a piece or you only want to purchase natural gems, be careful in your transactions. See our section below about synthetic and imitation chrysoberyl.

Cat's-Eye Chrysoberyl: Chrysoberyl that contains large numbers of fibrous inclusions can produce a "cat's-eye," a line of light across the surface of the stone that orients perpendicular to the included fibers. Chrysoberyl is the gem that exhibits the finest cat's-eyes, and when the term "cat's-eye" is used without a mineral name as a modifier, the speaker is most likely referring to chrysoberyl. This specimen exhibits the "milk-and-honey" effect - when properly oriented, the stone has two apparently different colors on each side of the cat's-eye line. This green cat's-eye chrysoberyl was produced in Sri Lanka and is about 5.6 x 4 millimeters in size.



Chrysoberyl is the gemstone that produces the most distinct "[cat's-eye](#)," or chatoyance. If a person uses the name "cat's-eye" without the name of another gemstone (for example, "cat's-eye tourmaline"), then they are most likely referring to chatoyant chrysoberyl. Cat's-eye chrysoberyl has also been called "cymophane."

The phenomenon of cat's-eye occurs in cabochon-cut stones that contain a high density of parallel fibrous inclusions. The "cat's-eye" is a line of light that reflects from the dome of the cabochon at right angles to the parallel inclusions. The line of light is very similar to how a spool of silk thread will produce a line of reflection across the top of the spool as it is moved back and forth under a source of light.

Some specimens of cat's-eye will appear to have a different color on each side of the cat's-eye line when illuminated from the proper direction with respect to the observer's eye. It gives the illusion that the stone is

made of two different materials, a light material on one side of the line and a dark material on the other. This phenomenon is known as the "milk-and-honey" effect. A photo of cat's-eye chrysoberyl showing the milk-and-honey effect is shown on this page.



Alexandrite: A faceted specimen of color-change alexandrite of 26.75 carats from Tanzania, showing a blue-green color in daylight and a purple-red color under incandescent light. Photographed by David Weinberg for Alexandrite.net and published here under a [GNU Free Document License](#).

The best way to learn about minerals is to study with a collection of small specimens that you can handle, examine, and observe their properties. Inexpensive mineral collections are available in the [Geology.com Store](#). Image copyright iStockphoto / Anna Usova.

Alexandrite is the color-change variety of chrysoberyl. The most distinctive specimens appear to have a green to blue-green color in daylight but change to a red to purplish-red color under incandescent light. Specimens with strong and distinct color-change properties are rare, highly desirable, and sell at very high prices. Stones over five carats are especially rare. A photo pair of an alexandrite gem in daylight and incandescent light is shown on this page.

The change in color is thought to occur only in specimens where chromium substitutes for aluminum in the mineral's atomic structure. The chrysoberyl in which this phenomenon was first observed was named "alexandrite" after Tsar Alexander II of Russia. Since then the "alexandrite effect" has been observed in other gems, which include color-change [garnet](#), [spinel](#), [tourmaline](#), [sapphire](#), and [fluorite](#).

Alexandrite is a rare material, only found in very small deposits. It was first discovered in the Ural Mountains of Russia in the late 1800s. Although that deposit has been mined out, small deposits have since been discovered in Brazil, India, Sri Lanka, Myanmar, China, Zimbabwe, Tanzania, Madagascar, Tasmania, and the United States.

Alexandrite can also be strongly pleochroic (a stone that has a different apparent hue when viewed from different directions). It is a trichroic stone (exhibiting three different hues from three different directions) with a green, red, or yellow-orange hue depending upon the direction of observation. The pleochroism of chrysoberyl is not apparent in all specimens and varies under different types of light. It is not as distinctive as the color-change effect.

Alexandrite serves as a [birthstone](#) for the month of June. It joined pearl as a June birthstone in 1952, when the list of modern birthstones was revised. Alexandrite gave people born in June the option of a durable faceted stone. Although natural alexandrite is extremely expensive, lab-grown alexandrite is inexpensive and widely available.

Synthetic chrysoberyl is a man-made material that has the same chemical composition, internal structure, physical properties, and appearance as natural chrysoberyl. It can be called lab-created chrysoberyl, lab-grown chrysoberyl, or man-made chrysoberyl or another name that clearly indicates its man-made origin.

Imitation chrysoberyl can be a natural or man-made material. It does not have the same chemical composition and crystal structure as natural chrysoberyl. Instead, it only "looks like" natural chrysoberyl.

In the United States, sellers of synthetic gemstones or imitation gemstones are required by law to clearly indicate the synthetic or imitation origin of their products. Failure to do so is a violation of United States law. Sellers who do not abide by clear, accurate and conspicuous labeling and identification practices could face civil or criminal liability.

Proper selling practices include:

1. the seller clearly informs the buyer that the material is synthetic or imitation
2. the seller confirms that the buyer understands that the material is synthetic or imitation
3. the seller has clearly labeled the item as synthetic or imitation
4. the seller provides a bill of sale that documents the synthetic or imitation nature of the item

The proper selling practices above are the sole responsibility of the **seller**.

There is nothing wrong with creating, advertising, or selling synthetic and imitation chrysoberyl. They are 100% legitimate products. The only time a problem occurs is when a seller fails in their duty to properly disclose the synthetic/imitation nature of what they are selling.

Physical Properties of Chrysoberyl

Chemical Classification	Oxide
Color	Usually ranges from brown to pale yellow, yellow-green and green
Streak	Colorless
Luster	Vitreous
Diaphaneity	Transparent to translucent
Cleavage	Poor, prismatic
Mohs Hardness	8.5
Specific Gravity	3.7 to 3.8
Diagnostic Properties	Hardness, color
Chemical Composition	Beryllium aluminum oxide, BeAl_2O_4
Crystal System	Orthorhombic
Uses	As a gemstone: chrysoberyl when transparent, "cat's-eye" when chatoyant, and "alexandrite" in specimens that exhibit color change.

One of the most distinctive properties of chrysoberyl is its exceptional hardness. With a [Mohs hardness](#) of 8.5, it is the third-hardest gemstone and the third-hardest mineral that is even occasionally found at Earth's surface. Although chrysoberyl is extremely hard, it does break with distinct cleavage in one direction and indistinctly or poorly in two others. It also has a brittle tenacity.

Most specimens of chrysoberyl are nearly colorless or fall into the brown to yellow to green color range. Red specimens are occasionally found.

Chrysoberyl often occurs in tabular or prismatic crystals with distinct striations (see photo below). It also occurs in twinned crystals with distinct star and rosette shapes. These crystals usually persist well and retain their shape during stream transport because of the mineral's exceptional hardness. This makes them easy to identify in gem gravels, but the twinning often interferes with their usefulness as gems.



Chrysoberyl crystal: A beautiful chrysoberyl twinned crystal from Minas Gerais, Brazil. Photo by Yaiba Sakaguchi, used here under [public domain](#).

As a beryllium mineral, chrysoberyl only forms under those conditions where large amounts of beryllium are present. This limits its abundance and geographic distribution. High concentrations of mobile beryllium most often occur on the margins of magma bodies during the final stages of their crystallization. Thus, chrysoberyl usually forms in pegmatites and in [metamorphic rocks](#) associated with

pegmatites. These include [mica schists](#) and dolomitic marbles.

Chrysoberyl is also found along with other gem minerals in placer deposits. It is a hard, weathering-resistant mineral with a high specific gravity. These properties allow it to survive in sediments after other minerals have been destroyed by abrasion and chemical weathering.

Field Trip Recap

Nate White

We all met up in the morning at little notches and had 25 cars total. First, we went to the Thunder egg spot and everyone seemed to be having a good time looking around and finding stuff. We got done around 12:30 and left to go to next spot to look for lily pad jasper.

Richard and Maria were amazing in helping out by going on ahead to start breaking off good pieces

For everyone if they wanted to grab some. Tasha had got out of the car on the way to help point out the leaf fossil spot. It turned out to be a great day for Rock Hounding.

COMMUNITY SUPPORTERS



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Rice Museum of Rocks & Minerals

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503-647-2418

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www.ricenorthwestmuseum.org

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Yankees_Diesel@comcast.net

SUNSHINE REPORT

With everything going on, we have started meeting again, but our attendance at the meetings is still low as members are staying safe. As a group we need to bring to each other's attention members who need healing thoughts or prayer sent their way.

If you know of anyone else who needs to be recognized in next months Sunshine Report, please email or call

Tony Johnson at ynotopals@outlook.com (253) 863-9238

FROM THE BENCH

Keeping your Bench Clean (and recouping your silver)

Often when you are doing extensive cutting with your jewelers saw, filing debris can get everywhere. Depending on what you are cutting out, either silver or even gold, there is also value in these shavings. How can you keep them from getting all over and collect them to be melted down and reused?

Any easy solution is a small handheld cordless vacuum cleaner. They sell them all over and Amazon has a very large selection at various price ranges. I keep one handy to help suck up any metal that may have landed in my lap or on my arms and it works amazingly well at cleaning out the trays in my silversmithing bench. Many come with attachments that narrow the area of suction, so you can get into the corners and harder to reach areas much easier than with a brush.

Local Area Shows for 2023/24

DATE & TIME	CLUB	SHOW	LOCATION
October 2023 6th 10am-6pm 7th 10am - 6pm 8th 10am—5pm	Portland Regional Rock and Gem Show	42nd Annual \$7, under 12 free with adult	New Location Wingspan Event Center 801 NE 34th Ave Hillsboro, OR
October 2023 7th 9am - 5pm	Idaho Falls Gem & Mineral Society	Annual Members Rock, Gem, and Jewelry sale Adults \$3, 12 and under free	Bonneville Co. Fairgrounds 1542 East 73rd South Idaho Fall, ID
October 2023 7th 10am - 5pm 8th 10am—5pm	Marysville Rock and Gem club	47th Rocktoberfest	Evergreen State Fairgrounds Display Bldg #500 14405 179th Ave SE Monroe, WA
October 2023 7th 10am - 5pm 8th 10am—3pm	Springfield Thunderegg Rock Club	65th Annual show	Willamalane Adult Activity Center 215 W C St Springfield, OR
October 2023 14th 10am - 5pm 15th 10am—5pm	Port Moody Rock & Gem Club	Annual show	Kyle Centre 125 Kyle St, Port Moody, BC
October 2023 14th 10am - 5pm 15th 10am—3pm	Surrey Rockhound Club	Annual show	Sullivan Hall 6306 152 Street Surrey, BC
October 2022 21st 10am—5pm 22nd 10am—4pm	Hell's Canyon Gem Club	Hell's Canyon Annual Show \$5 for weekend	Nez Perce County Fair Building 1229 Burrell Avenue Lewiston ID 83501
October 2023 29th 9am - 4:30pm 30th 9am—4:30pm	Parksville & Courtenay Gem & Mineral Clubs	Annual show	Qualicum Beach Civic Centre 747 Jones St Qualicum Beach, BC
November 2023 4th 10am - 5pm 5th 10am - 5pm	Delta Rockhound Gem & Mineral Club	Annual show	South Delta Rec Centre 1720 - 56 Street (Tsawwassen) Delta, BC
November 2023 11th 9am - 5pm 12th 10am - 4pm	Skagit Rock & Gem Club	Treasures of the Earth	Sedro Woolley Community Center 703 Pacific St Sedro Woolley WA 98284
November 2023 17th 1pm - 6pm 18th 10am - 5pm 19th 10am - 3pm	Abbotsford Rock & Gem Club	Annual show	Matsqui Community Hall, 33676 St. Olaf St. Abbotsford BC
November 2023 18th 9am - 4:30pm 19th 9am - 4:30pm	Parksville & Courtenay Gem & Mineral Clubs	Annual show	Qualicum Beach Civic Centre 747 Jones St. Qualicum Beach, BC
November 2023 18th 10am - 5pm 19th 10am - 5pm	Kitsap Mineral and Gem Society	Fall Festival of Gems	The President's Hall 1200 NW Fairgrounds Road Bremerton, WA
February 2024 10th 9am—5pm 11th 9am—5pm	Whidbey Island Gem Club	Annual Gem Show	Oak Harbor Senior Center 51 SE Jerome St. Oak Harbor WA
April 2024 20th 10am - 5pm 21st 10am - 4pm	Lakeside Gem & Mineral Club	27th Annual Rock & Mineral Show \$5 adults, 12 & under free	Benton Franklin County Fairgrounds Building 2, 1500 S. Oak Kennewick, WA
April 2024 27th 10am - 5pm 28th 10am - 5pm	West Seattle Rock Club	56th Annual Rock Show	Alki Masonic Temple 4736 40th Ave. SW. Seattle, WA

2023 SHOW & TELL THEMES and PROGRAM NIGHT EVENTS

MEETING	DATE	SHOW & TELL THEME	PROGRAM NIGHT EVENT
January - 1st Meeting	January 13, 2023	Rocks & Their Uses or any field trip finds	
January - 2nd Meeting	January 27, 2023	Fortification or any field trip finds	TBD
February - 1st Meeting	February 10, 2023	Copper Related or any field trip finds	
February - 2nd Meeting	February 24, 2023	Hearts Made of Stone or any field trip finds	Carl Carlson
March - 1st Meeting	March 10, 2023	Quartz/Phantom Crystals or any field trip finds	
March - 2nd Meeting	March 24, 2023	Thundereggs, Geodes & Nodules any field trip finds	Jerry's Rock Shop
April - 1st Meeting	April 14, 2023	Wired-Up (Anything with wire) or any field trip finds	
April - 2nd Meeting	April 28, 2023	No Show & Tell	Auction/Potluck
May - 1st Meeting	May 12, 2023	Rocks Only a Mother Could Love or any field trip finds	
May - 2nd Meeting	May 26, 2023	No Show & Tell	Mineral Council
June - 1st Meeting	June 9, 2023	Lace Agates or any field trip finds	
June - 2nd Meeting	June 23, 2023	No Show & Tell	Tailgate Party @ Grange Parking Lot
July - 1st Meeting	July 14, 2023	Red, White, & Blue or any field trip finds	
July - 2nd Meeting	July 28, 2023	No Show & Tell	Jerry's Rock Shop
August - 1st Meeting	August 11, 2023	Carnelians or any field trip finds	
August - 2nd Meeting	August 25, 2023	No Show & Tell	Picnic & Tailgate Party at club house on Saturday
September - 1st Meeting	September 8, 2023	Your Choice or any field trip finds	
September - 2nd Meeting	September 22, 2023	No Show & Tell	Mini Demonstration Day
October - 1st Meeting	October 13, 2023	Jasper or any field trip finds	
October - 2nd Meeting	October 27, 2023	No Show & Tell	Auction/Potluck
November - 1st Meeting	November 10, 2023	Opals or any field trip finds	
November - 2nd Meeting	November 24, 2023	No Show & Tell	BINGO Night
December - 1st Meeting	December 9, 2023	No Show & Tell	Holiday Banquet/Officer Installation on Saturday
December - 2nd Meeting	No Meeting	No Show & Tell	

2023 Elected Officers

Title	Name	Phone	Email
President:	Tony Johnson	(253)863-9238	ynotopals@outlook.net
Vice President:	Kevin Higgins	(253)579-3404	kevlar016@hotmail.com
Secretary:	Patti Dailey-Shives	(253)678-0029	pattidailey28@gmail.com
Treasurer:	Jillian Higgins	(253)355-3146	J.Y.Higgins@gmail.com
Association Director:	Mark Baumann	(253-310-5891	rocksnreptiles4me@gmail.com
1 Year Director:	Glen Ripper	(253)508-7545	glen311944@yahoo.com
2 Year Director:	Richard Yang	(208)596-8340	ryang0711@gmail.com
1 Year Trustee:	Glenn Rodrick	(253)531-4062	gtrodi@comcast.net
2 Year Trustee:	Dennis Batchelor	(360)870-8741	hobbyhorse51@gmail.com

2023 Committee Chairs

Title	Name	Phone	Email
Clubhouse Coordinator	Tony Johnson	(253)863-9238	ynotopals@outlook.net
Club Show Coordinator	Jillian Higgins	(253)355-3146	J.Y.Higgins@gmail.com
Field Trips Coordinator	Nathan White	(206)349-7054	nate.white77@gmail.com
Web Master	Jillian Higgins	(253)355-3146	J.Y.Higgins@gmail.com
Editor/Communications	Jillian Higgins	(253)355-3146	J.Y.Higgins@gmail.com
Membership	Jillian Higgins	(253)355-3146	J.Y.Higgins@gmail.com
Sunshine	Tony Johnson	(253)863-9238	ynotopals@outlook.net
Newsletter	Jillian Higgins	(253)355-3146	J.Y.Higgins@gmail.com
Mineral Council	Mark Baumann	(253-310-5891	rocksnreptiles4me@gmail.com



WASHINGTON STATE MINERAL COUNCIL

The Puyallup Valley Gem & Mineral Club is a member of the American Lands Access Association and the Washington State Mineral Council. You can find more information about the ALAA at: amlands.org or the WA Mineral Council at:

HAPPY BIRTHDAY

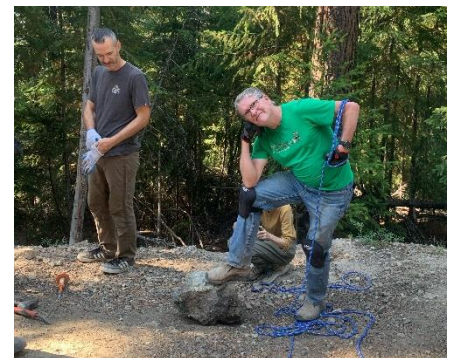
October 2023

Megan Worley – 1st
 Brenda Guay – 1st
 Cary Vance – 2nd
 Katherine Morgason – 3rd
 Greg Collins – 6th
 Autumn del Fierro – 7th
 Maria Yang – 8th
 Kirsten Widener – 10th
 Sylvia Banner – 11th
 Virginia Patterson – 11th
 Sandra Skinner – 13th
 Karen Edwards – 15th
 Isaiah Pena – 16th
 Ruth Foster – 17th
 Crystal Day – 18th
 Virginia Orel-Eliason – 19th
 Sadie Crane – 21st
 Jillian Higgins – 21st
 Teresa Ray – 21st
 Christopher Woodruff – 21st
 Donald Roy – 22nd
 Sylvia Gadberry – 27th
 Lily Williams – 27th
 Aubrey Williams – 27th
 Nicole Blankenship – 28th
 Patti Dailey-Shives – 28th
 Taylor Lynz – 28th
 James Burke – 29th
 Devon Hines – 29th
 Paul James – 29th
 Kevin Higgins – 30th
 Debbie Mays – 31st

COLORFUL COPPER

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| 1. ATACAMITE | 10. CONICALCITE | 19. POLYBASITE |
| 2. AURICALCITE | 11. COVELLITE | 20. ROSASITE |
| 3. AZURITE | 12. CUPRITE | 21. SCHWAZITE |
| 4. BOURNONITE | 13. DESCLOIZITE | 22. STANNITE |
| 5. BORNITE | 14. DIOPTASE | 23. TENNANTITE |
| 6. BROCHANTITE | 15. ENARGITE | 24. TETRAHYDRITE |
| 7. CHALCANTHITE | 16. LINARITE | 25. TORBERNITE |
| 8. CHALCOCITE | 17. MALACHITE | 26. TURQUOISE |
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ROCK-A-TEER

Newsletter of Puyallup Valley

Gem & Mineral Club

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