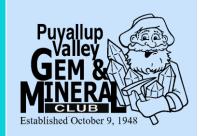
ROCK-A-TEER



Newsletter of the Puyallup Valley Gem & Mineral Club

Jillian Higgins

Issue 59

Volume 112 December

2022

THIS ISSUE

President's Perspective P.2

Field Trip Report P.2

December Club House Schedule P.3

Meet the Member - Brett Lawrence P.4

Membership Renewal P.5

Clubhouse Report, P.6

Article: Red Diamonds. P.6-11

Field Trip Recap P.11

Community Supporters P.12

From the Bench P.12

Sunshine Report, 75th Anniversary Project & Christmas Competition P.13

2022 Show and Tell P.14

2022 Officers and Chairs P.15

Word Search P.16

Happy Birthdays P.16

President's Perspective

Tony Johnson

In reflecting on this past year, I think we can say it was the busiest year we have ever had with the full state fair, two club shows, all the field trips, the campout, meetings, gem fairs and the clubhouse. We had so many members volunteer and it was so appreciated.

I am really grateful to everyone who helped out. No other club can pull off what we have pulled off. The only reason we are able to get these things done is because of all the members who step up and make things happen. I cannot say enough how much I appreciate each and every one of you.

I am thinking that next year will bring the same amount of enthusiasm and activity for our club. The reason we are the biggest club around is because we have so many things we do, and that is thanks to you. I can't wait to see what next year brings.

Field Trip Report

December 10 - Rice Museum

Meeting place - 26385 Northwest Groveland Dr., Hillsboro, OR 97124

<u>Hunting for</u> - Rock pile for children to prospect a specimen, Looking at museum displays

Tools you need - Camera if you would like to take pictures

Access - Wheel chair accessible

<u>Additional items</u> - lunch/snacks and water, water, water. Dress in layers. Well worth the trip with displays of all kinds of minerals from the northwest

January 21 - No Sights due to Weather

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.

DECEMBER 2022 CLUB HOUSE SCHEDULE

DATE	DAY	TIME	ACTIVITY	LOCATION	INSTRUCTOR			
1	Thursday	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson			
2	Friday							
3	Saturday	10:00AM-2:00PM	Members Open Access	Club House	Glen Ripper			
4	Sunday							
5	Monday							
6	Tuesday	4:00PM-8:00PM	Members Open Access	Club House	Renera & Ed			
7	Wednesday	10:00AM-2:00PM	Members Open Access	Club House	Dennis Batchelor			
/	vveuriesuay	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson			
8	Thursday	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson			
9	Friday							
10	Caturday	10:00AM-2:00PM	Wire Weaving	Club House	Jillian Higgins			
10	Saturday	6:00PM	Christmas Party	Fruitland Grange	Tony Johnson			
11	Sunday		•		•			
12	Monday	7:00PM-8:00PM	Opal Club Business Meeting	Club House	Tony Johnson			
13	Tuesday	4:00PM-8:00PM	Members Open Access	Club House	Renera & Ed			
14	Wednesday	10:00AM-2:00PM	Members Open Access	Club House	Dennis Batchelor			
14	vvednesday	4:00PM-8:00PM	Wire Wrapping	Club House	Tony Johnson			
15	Thursday	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson			
16	Friday							
17	Saturday	10:00AM-2:00PM	Rice Museum	Field Trip	Dennis Batchelor			
17		10:00AM-2:00PM	Members Open Access	Club House	Glen Ripper			
18	Sunday							
19	Monday		Holiday - Christmas					
20	Tuesday		Holiday - Christmas					
21	Wednesday		Holiday - Christmas					
22	Thursday		Holiday - Christmas					
23	Friday		Holiday - Christmas					
24	Saturday		Holiday - Christmas					
25	Sunday							
26	Monday		Holiday - New Years					
27	Tuesday		Holiday - New Years					
28	Wednesday		Holiday - New Years					
29	Thursday		Holiday - New Years					
30	Friday		Holiday - New Years					
31	Saturday							
For questions about a specific class or event, contact the instructor								
Dennis		•	Ed Knoll (253) 651-7453					
Renera	Barnes rsb1224	@netscape.com	Jillian Higgins (253)355-3146	Glen Rippe	er (253) 508-7545			
Dennis Batchelor (360) 870-8741 Ed Knoll (253) 651-7453 Tony Johnson (253) 863-9238								

*** Membership Workshop is the time when members can use the saws and cabbing machines

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

MEET THE MEMBERS

Name: Brett Lawrence

Favorite Quote: "Success is the result of constancy of purpose"—Lord Byron (from my writing days)

What are your skills/past experience with the rock Club or rock hounding?

I joined the club in Oct. 2005. I have been president for two terms, vice president and secretary. Both I and my wife have helped with the club show nearly all our years of membership, did the footwork (printing and copying, mailing list upkeep, folding, labels and stamps, and mailing) for the Rocketeer for 10-12 years, and helping with the biannual club auctions.

What is your favorite rock, mineral or gem?

I like any gemstone for my collection.

What is your favorite thing to do with rocks, minerals or gems?

Besides collecting gemstones and fashioning cabochons I fashion gem boxes from rough to finish. I have been engaged in this activity for about 14 years and have worked with a variety of materials to softer howlite the agates and jaspers.

What are your three favorite books/podcasts?

- Gemstones of the World
- Smithsonian Nature Guide—Gems
- Collecting Agates and Jaspers of North America

What is your favorite memory surrounding rockhounding/rocks in general?

Being able to go to Ceres Hill for rockhounding as it was an easy drive and walk into the area. There was always great material to be found.

In your opinion, what is the best thing about the Puyallup Valley Gem & Mineral Club?

The club membership, the friendliness, and the knowledge they have and the eagerness of new members to learn about the hobby.

In your opinion, where/how does the club need to improve?

Since we have many members, it would be nice to see all the club membership being involved with the club activities.

What are three (3) things people might not know about you?

- How Sherry and I met in a college geology class
- That we were/are both Air Force brats
- That the Air Force brought my family to Lakewood, WA from Tehran, Iran

What is your greatest accomplishment?

Marrying my best friend for almost 46 years and donating my 51st gallon of blood and platelets with Cascade Regional Blood Services, an activity we do together.

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 1 st for the next calendar year and half price beginning July 1 st for the current year] YEAR:							
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 <u>DOES NOT</u> 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 Expeditied 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 and the BY-LAWS of the Puyallup Valley Gem & Mineral Club.							
Member's Signature: Date:							
Official Use Only: Membership #: Card Issue Date:// Roster Entry Date:// Amount: \$ Cash							

5 | Page

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Clubhouse report

Tony Johnson

There will be a little bit of maintenance at the clubhouse during the winter break, but not much.

We are going to be making some changes for next year, so keep your eyes on the schedule and information posted in the newsletter. We hope all have a safe and happy break for the holidays.

Red Diamonds

Extremely rare and can fetch prices of over \$1 million per carat.

Author: Hobart M. King, PhD, GIA Graduate Gemologist



Argyle Isla: The Argyle Isla is a 1.14-carat Fancy red radiant-cut diamond mined from the Argyle Mine in Western Australia. It is one of the most valuable diamonds in the world on the basis of dollars per carat. It was part of the Argyle Tender Heroes sale in 2017. Image Copyright 2017 by **Rio Tinto**.

What Are Red Diamonds?

Red diamonds are the rarest variety of **colored diamonds**. In the entire world, only a few **diamonds** with a pure red hue are found in an entire year. The primary source of those red diamonds has been the Argyle mine in the East Kimberley region of **Western Australia**, which is

scheduled to close in 2020. The color of most red diamonds is caused by glide planes in the <u>diamond</u> crystal, along which carbon atoms have undergone slight displacement.

Table of Contents

- What Are Red Diamonds?
- How Rare Are Red Diamonds?
- What Causes the Red Color?
- Pink Diamonds Are Light Red
- Cutting to Optimize Red Color
- Famous Red Diamonds
 - The Hancock Red
 - The Moussaieff Red
 - The DeYoung Red

- Sources of Red Diamonds
- Red Diamond Produced by Treatment
- Red Synthetic Diamonds

Argyle Phoenix: The Argyle Phoenix is a round, 1.56-carat red diamond discovered at the Argyle mine in Western Australia. It is one of the world's rarest and most valuable gems. It is shown here while being examined through a loupe by Josephine Johnson, manager of Rio Tinto's Argyle Pink Diamonds. The Argyle Phoenix was sold in 2013 for \$2,000,000. Photo by David Gray of Reuters / Alamy Stock Photo.



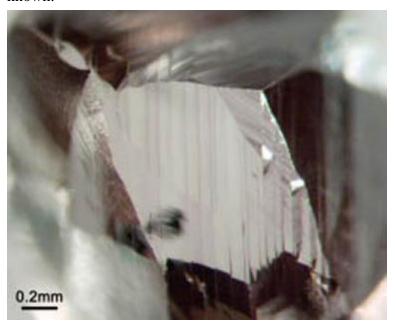
How Rare Are Red Diamonds?

Red diamonds are so rare that between 1957 and 1987, no diamonds with a pure red color were graded by the Gemological Institute of America. [1] The GIA lab grades more diamonds than any other lab in the world, and the fact that no pure reds were submitted for grading over a 30-year period is a strong testament to their rarity.

The Argyle Mine, the leading producer of red diamonds, came online in December of 1985, and that is when a few red diamonds per year started appearing at the GIA laboratory. In the 30-year period between 1987 and 2017, Argyle produced fewer than 20 carats of Fancy red diamonds - and that was from the world's leading source of red diamonds. [2]

Slightly less rare are diamonds with a modified red color. Modifying colors include brown, purple, and orange. These produce diamonds that are brownish red, purplish red, and orangy red.

The diamond market may have an even more limited number of new red stones entering the market, because the Argyle Mine is expected to close in 2020. At present, no new sources of even occasional red diamonds are known.



Cause of Color in Red Diamond: In this

photomicrograph, you are looking into the interior of a rough diamond through a small polished window on its surface. The pink vertical lines are "graining" caused by plastic deformation of the diamond crystal lattice. Each pink line traces a glide plane within the diamond where carbon atoms have been displaced. In this view, the glide planes intersect the polished window at a right angle. Each glide plane is a defect in the diamond that causes the diamond to selectively absorb green light and selectively transmit red. Note the tiny offsets where the slip planes intersect the edges of the polished window. Photograph by the United States Naval Research Laboratory.

What Causes the Red Color?

The Argyle mine is located in an area of Australia that was subjected to the compressive forces of the Proterozoic Halls Creek Orogen. About 1.8 billion years ago, an ancient continental collision compressed the rocks. These forces are thought to be responsible for dislocating carbon atoms in many of Argyle's diamonds. [3]

This <u>plate tectonics</u> collision was not a sudden deformation like the impact of two automobiles. Instead, the rock masses collided at a velocity of a few centimeters per year. The collision and crustal compression would require millions of years to complete.

The high temperatures and shear stress of the collision are thought to have resulted in plastic deformation in the diamond crystals. The deformation is a slight displacement of carbon atoms along glide planes parallel to the octahedral direction of the crystals.

These planes of displacement influence how light passes through the diamonds and cause the selective absorption or selective transmission of certain wavelengths of light. Most often, these glide planes cause a selective transmission that produces **brown diamonds**.

Less often, the glide planes cause the selective transmission of red light. When there are few glide planes, a small amount of red light transmission produces an apparent pink color of the diamond.

Light red diamonds are called "pink" diamonds during grading. Fancy Vivid pinks might appear to be "red" to many observers; however, the strict rules of color grading designate them as "pink". Only in very rare situations are enough glide planes present to produce a more intense saturation of color, resulting in a rare and wonderful Fancy red diamond.

Pink Diamonds Are Light Red

Many people do not realize that pink diamonds and red diamonds both have a red color. The difference between "red diamonds" and "pink diamonds" is one of color intensity. During the color grading process, a diamond with a weak to moderate saturation, accompanied by a light to medium tone, will be called a "pink" diamond. The name "red" is reserved for diamonds with a strong color saturation and a medium to dark tone. The name "Fancy red" is given only to those diamonds that exceed the saturation levels of Fancy Vivid pink and Fancy Deep pink.

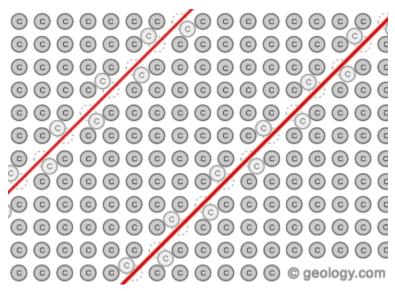
Many people who are unfamiliar with the procedures used to grade colored diamonds would, at a glance, correctly call a diamond with a very light red color a "pink diamond". Most humans have been conditioned since childhood to use the name pink for objects that have a very light red color.

Many of those same people would, at a glance, think that a Fancy Vivid pink or a Fancy Deep pink was a "red diamond". The grading is stricter than many people expect. The best way to comprehend this is to study the color reference charts for colored diamonds published by the Gemological Institute of America. [4]

In the colored diamond grading system, the name "red" is used so sparingly that only a very few diamonds have an intensity of red color that is able to earn it. A person could hold the opinion that the rarity of red diamonds is more a matter of "grading" than a matter of "color".

A similar use of "red" and "pink" in gemology is in the grading of gem <u>corundum</u>. Corundum with a vivid red color is called "<u>ruby</u>", while corundum with a light red color is called "<u>pink sapphire</u>" or "<u>fancy sapphire</u>".

The difference in price between a "ruby" and a "pink sapphire" can be significant. As a result, submitting a gem for grading can be accompanied by anticipation and apprehension.



Glide Planes in Red Diamond: This illustration shows how plastic deformation causes red color in diamond. In the illustration, each gray circle corresponds to a carbon atom in the regular repeating network of atoms in a diamond crystal. During its time in the Earth, the diamond is subjected to forces that cause planes of carbon atom displacement within the diamond crystal. This displacement changes how light passes through the crystal, and the planes selectively cause red light to be transmitted.

Cutting to Optimize Red Color

Because red diamonds are exceptionally rare, they are studied very carefully before being faceted.

The red color is produced by glide planes, called lamellae, within the stone. The goal is to orient the lamellae in a way that will maximize the amount of red light transmission.

The work of the person who plans and executes the cutting of these diamonds is very important. Proper planning and cutting is important for all colored diamonds, but it is especially important when cutting red. Proper cutting can produce a more saturated and even color when the diamond is viewed in the face-up position, resulting in a finished product that is exponentially more valuable.

Famous Red Diamonds

The Hancock Red

One of the first colored diamonds to grab newspaper headlines was the Hancock Red. Its sale in 1987 for \$880,000 (\$926,315 per carat) was an amazing price for a 0.95-carat diamond.

The Hancock Red had been around for a while. It was cut from rough mined in **Brazil**, and one of its first owners was Mr. Warren Hancock, a **Montana** rancher who was also a collector of colored diamonds. Mr. Hancock paid \$13,500 for the gem in 1956. At that time very few people were interested in colored diamonds, and most people had never thought about them.

The 1987 sale occurred at a Christie's auction in New York City, a few years after Mr. Hancock's death. The red diamond sold for \$880,000, a price of \$926,000 per carat - eight times its pre-sale estimate. That was the highest price per carat ever paid for a gemstone of any kind, producing a 6500% profit for Mr. Hancock's estate. The spectacular price brought enormous media and celebrity attention to colored diamonds. [1] [5]

The Moussaieff Red

At 5.11 carats, the Moussaieff Red is the largest red diamond known. The rough used to cut the Moussaieff Red was found by a farmer in an alluvial deposit in western Minas Gerais, Brazil. The rough weighed 13.9 carats and was acquired by the William Goldberg Diamond Company in the mid-1990s.

They cut the rough into a triangular brilliant known as The Red Shield. The diamond was purchased by Shlomo Moussaieff in the early 2000s and is now owned by Moussaieff Jewellers Ltd. Sale prices for the diamond have not been revealed. [6]

The DeYoung Red

Sydney DeYoung, a Boston jeweler, purchased an estate jewelry collection at a flea market. Included in the collection was a hat pin with a large brownish red stone that was thought to be a **garnet**. Sometime after the sale, DeYoung became suspicious about the identity of the stone. It was almost inclusion free, it had no signs of wear, and it had a complex cut. All of these suggested that the stone was not a garnet.

DeYoung took the stone for gemological testing, and the results were shocking. The stone was a 5.03-carat VS2 Fancy brownish red diamond. DeYoung knew that the stone was valuable but passed away in 1986, a year before the 0.95-carat Hancock Red was sold at auction for nearly \$1,000,000 per carat. His will directed that the diamond be given to the Smithsonian Institution upon his death.

Today The DeYoung Red is on display at the Smithsonian, in a case that is occupied by some of the world's largest, rarest, and most valuable diamonds. It is the third-largest red diamond known to exist and the only red diamond on public display anywhere in the world. The country of origin of the diamond is unknown. [7]



Argyle Pink Diamonds Tender: Every year, from 1984 through 2021, Rio Tinto, the owner of the Argyle Mine in Western Australia, would offer its most beautiful, rarest and most valuable colored diamonds in a silent auction known as a tender sale. Known as "The Argyle Pink Diamonds Tender", the sale was open to selected diamantaires and collectors by invitation only. These selected people and entities would be allowed to examine the few dozen diamonds in the sale and place bids for single stones, groups of stones, or the entire collection. In this photo from 2013, Rio Tinto employees are placing 64 red, pink, dark gray-blue, orangy-pink and purple diamonds, weighing a total of 54.99 carats, into specimen boxes with the expectation that those

diamonds will sell for tens of millions of dollars. Photo by David Gray of Reuters / Alamy Stock Photo.

Sources of Red Diamonds

Since 1985, the Argyle Mine in Western Australia has been the source of almost all of the few red diamonds that have entered the market. But, three of the world's most famous red diamonds came from other sources.

The Hancock Red (which sold for \$926,315 per carat in 1987) was found in Brazil sometime before its purchase by Warren Hancock in 1956. The Moussaieff Red, the largest red diamond known, was also found in Brazil sometime prior to its acquisition by William Goldberg Diamond Company in the mid-1990s. Finally, the DeYoung Red was purchased at a flea market by Sydney DeYoung before the Argyle Mine opened. The source of the DeYoung is unknown.

The conclusion is that Argyle has not been the only source of red diamonds. Perhaps more will be discovered in the future?

Red Diamond Produced by Treatment

Red diamonds have been produced by treating diamonds of other colors in a laboratory. Irradiation followed by heat treatment or annealing has successfully altered the color of some diamonds to red. Thin films applied to the surface of diamonds have successfully been used to produce diamonds of all colors, including red. [8] [9]

Lab-Created Colored Diamonds: These diamonds are from the Swarovski Created Diamond collection. This collection of colors stands as the most impressive ever seen in the lab-created diamond industry. Photograph by Swarovski Group.

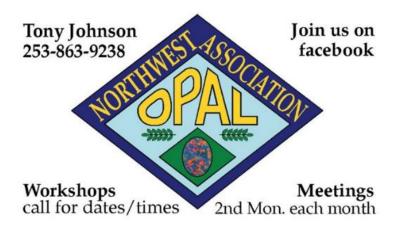
Red Synthetic Diamonds

Synthetic diamonds have also been treated to a red color. In 1993, two red diamonds were submitted to the Gemological Institute of America's Gem Trade Laboratory in New York



City for a standard "origin-of-color" report. GIA gemologists identified the stones as synthetic diamonds, and the red color was determined to be consistent with post-growth irradiation and heating. An article about these treated synthetic diamonds was published in Gems and Gemology. It was one of the first published reports of synthetic diamonds that were identified to have post-growth color enhancement. [10]

In January 2020, Swarovski Group announced the Swarovski Created Diamond Collection. All of the diamonds in the collection had named colors, and the "intense red" color was named "Heavy Metal Cherry".



Field Trip Recap

Dennis Batchelor

We had 9 hardy souls show up at Joyce for a cold stroll on the beach at high tide. Some stuff was found, but conditions were not favorable.

COMMUNITY SUPPORTERS



South Hill RV Sales

Offering the highest rated starter, midline, and high end towables and RV's at the lowest prices which has made us a top volume dealer in Washington state.

12414 Meridian East, Puyallup 98373 253-435-7751 or 866-435-7751 www.southhillry.com



Rice Museum of Rocks & Minerals

To engage, inspire, and educate generations on the splendor and complexity of our Earth.

26385 NW Groveland Dr., Hillsboro, OR 97124 503-647-2418 Info@ricenorthwestmuseum.org www.ricenorthwestmuseum.org

H & I Lapidary

Amber, Jewelry, Beads, Findings, Gemstones, Slabs, Rough Material, Fossils, and Aussie items.

Mike and LaVon Siperek (253) 531-7294 4203 E 99th Street, Tacoma, WA 98446 Yankees_Diesel@comcast.net

FROM THE BENCH

Do you have a hard time hardening your earring posts?

Here are some ideas;

- If you grab the post close to the base of your earring and give it a twist away from you, then move the plyer up the post about 2 millimeters and twist it towards yourself, moving the plyers up the post twisting back and forth it will work harden the metal while keeping the shape straight. Just be mindful that you do not exert too much pressure and bend the post while twisting.
- You can tumble your earring sets with metal shot in a vibrating tumbler for about 30 minutes. I recommend doing this while you are polishing so you get 2 birds with one process. Just mix your polishing medium and burnishing compounds with the metal shot. I also suggest getting shot of various shapes to get into those hard to reach places.

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 eachother'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 either

Tony Johnson at <u>ynotopals@outlook.com</u> (253) 863-9238 or

75th Anniversary Project

For everyone who is interested, we are still working on the clubs 75th Anniversary Project. Below you will see a couple examples of what we are working on. If you are interested in participating in this project, please contact me about joining a class to work on one or check the schedule and get added to a class.



Our holiday potluck and gift exchange / party is approaching! The date is Saturday, December 10th 2022. We would like to take the opportunity to show off all things Lapidary made in the last year, by you, with some healthy competition!

There are three categories that you can enter.

- Jewelry: Silversmithing, Wire Wrap, Beading (around cabs), etc.
- Lapidary: Intarsia, Polished Cabs, Polished Slabs, etc.
- Misc. Ornaments, Gem Tree's, Carved Stone, etc.

There will be a sign in sheet and designated area for you to place your anonymous work for judging by the Club Members present that night.

Please remember: Only one entry per category and please do not put your name on the entry.

Prizes are Certificates that can be used dollar for dollar at the April 2023 Auction or to purchase Raffle tickets at the 2023 Club Show. Prize amounts are as follows for each category;

- First place prizes @ \$10.00 each
- Second place prizes @ \$5.00 each
- Third place prizes @ \$1.00 each

2022 SHOW & TELL THEMES and PROGRAM NIGHT EVENTS

MEETING	DATE	SHOW & TELL THEME	PROGRAM NIGHT EVENT
January - 1st Meeting	January 14, 2022	Tiger's Eye or any field trip finds	
January - 2nd Meeting		Lace or any field trip finds	Mini Lapidary Demonstrations
February - 1st Meeting	February 11, 2022	Heart shaped or any field trip finds Red, Pink, & Purple or any field	
February - 2nd Meeting	February 25, 2022	•	Carl Carlson
March - 1st Meeting	March 11, 2022		
March - 2nd Meeting	March 25, 2022	Green or any field trip finds	Jerry's Rock Shop
April - 1st Meeting	April 8, 2022		
April - 2nd Meeting	April 22, 2022	No Show & Tell	Auction/Potluck
May - 1st Meeting		Flower rocks or any field trip finds	
May - 2nd Meeting	May 27, 2022	No Show & Tell	Mineral Council
June - 1st Meeting	June 10, 2022	Fancy Slabs & Fossils + any field trip finds	
June - 2nd Meeting	June 24, 2022	No Show & Tell	Tailgate Party @ Grange Parking Lot
July - 1st Meeting	July 8, 2022		
July - 2nd Meeting	July 22, 2022		Jerry's Rock Shop
August - 1st Meeting August - 2nd Meeting	August 12, 2022 August 27, 2022	Carnelians + any field trip finds No Show & Tell	Picnic & Tailgate Party at club house on Saturday
September - 1st Meeting	September 9, 2022	Crystals + any field trip finds	
September - 2nd Meeting	September 23, 2022	No Show & Tell	Glenn Rodrick
October - 1st Meeting	October 14, 2022	Wood + any field trip finds	
October - 2nd Meeting	October 28, 2022	No Show & Tell	Auction/Potluck
November - 1st Meeting	November 11, 2022		
November - 2nd Meeting	November 25, 2022	No Show & Tell	BINGO Night
December - 1st Meeting	December 10, 2022	No Show & Tell No Show & Tell	Holiday Banquet/Officer Installation on Saturday
December - 2nd Meeting	No Meeting	NO SHOW & Tell	

2022 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:	Teresa Rodrick	(253)531-4062	gtrodi@comcast.net				
Treasurer:	Jillian Higgins	(253)355-3146	J.Y.Higgins@gmail.com				
Association Director:	Patti Dailey-Shives	(253)678-0029	pattidailey28@gmail.com				
1 Year Director:	Jack Ragusa	(253)389-3119	jackragusa@gmail.com				
2 Year Director:	Glen Ripper	(253)508-7545	glen311944@yahoo.com				
1 Year Trustee:	Dennis Batchelor	(360)870-8741	hobbyhorse51@gmail.com				
2 Year Trustee:	Glenn Rodrick	(253)531-4062	gtrodi@comcast.net				

2022 Committee Chairs							
Title	Name	Phone	Email				
Clubhouse Coordinator	Tony Johnson	(253)863-9238	ynotopals@outlook.net				
Club Show Coordinator	Glenn Rodrick	(253)531-4062	gtrodi@comcast.net				
Field Trips Coordinator	Dennis Batchelor	(360)870-8741	hobbyhorse51@gmail.com				
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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

December 2022

Randy Bjorklund – 1st
Jeff Holman – 2nd
Cody Kappel – 2nd
Rick Beehler – 3rd
Lisa Young – 3rd
Paulette Garibaldi – 4th
Kayla Morris – 4th
Lori Kappel – 6th
Hazel Griffith – 9th
Lori Fahlsing – 10th
Roger Goff – 11th
Amelia Welander –

David Foley – 13th
Kasaundra Sanchez –
15th

Don Coats – 17th
Dick Diedrich – 20th
Xander Griffith – 20th
Michael Otis – 20th
James Sawaya – 23rd
Renera Barnes – 24th
Oscar Torres – 24th
Elijah Clark – 25th
Griffin Eshpeter – 25th
Leisa Strickland – 26th
Austin Pleas – 28th
Bruce Meyer – 31st

THE UNIVERSE OF GEOLOGY

M	I	N	Ε	R	A	L	S	Н	Т	I	L	0	Н	Т	A	В
E	0	S	М	P	Т	I	Н	S	В	Y	0	L	N	Н	E	N
Т	N	С	P	L	А	Т	E	S	Т	E	G	Т	0	S	Т	0
A	S	0	R	Y	С	I	С	I	S	L	R	С	Т	P	I	I
М	I	N	E	R	А	L	I	Z	А	Т	I	0	N	0	Т	Т
0	N	Т	S	А	E	U	I	С	Т	E	I	D	С	R	А	I
R	Т	I	S	Т	S	E	I	S	М	I	С	P	0	E	М	S
Р	R	N	U	N	Χ	E	E	F	L	А	А	Т	N	L	G	0
Н	U	E	R	E	R	D	Т	K	Y	P	N	0	А	I	E	P
I	S	N	E	М	G	С	S	R	А	Y	0	Т	U	E	P	М
С	I	Т	0	I	U	S	I	R	G	R	S	E	L	I	Н	0
Т	0	Т	I	D	E	U	Χ	0	Т	Y	S	С	Т	E	G	С
F	N	I	В	E	Т	U	L	L	R	V	E	Т	P	U	R	E
I	E	U	E	S	L	0	U	С	0	Χ	E	0	С	E	Н	D
L	S	G	U	M	E	А	Т	Н	E	R	I	N	G	F	J	0
Р	С	R	P	G	F	R	E	А	С	Y	D	I	U	L	F	R
U	С	В	A	S	A	L	Т	А	N	Т	I	С	L	I	N	Ε

1.	ANTICLOINE	11.	FAULT	21.	MINERALS
2.	BASALT	12.	FLUID	22.	PEGMATITE
3.	BATHOLITH	13.	GEOLOGY	23.	PLATES
4.	COMPOSITION	14.	GLACIER	24.	PRESSURE
5.	CONTINENT	15.	HEAT	25.	SEDIMENTARY
6.	CORE	16.	INTRUSION	26.	SEISMIC
7.	CRUST	17.	KARST	27.	SUBDUCT
8.	CRYSTAL	18.	MANTLE	28.	TECTONIC
9.	ERODE	19.	METAMORPHIC	29.	UPLIFT
10.	ERUPT	20.	MINERALIZATION	30.	WEATHERING

ROCK-A-TEER

Newsletter of Puyallup Valley Gem & Mineral Club P.O. Box 134 Puyallup, WA 98371