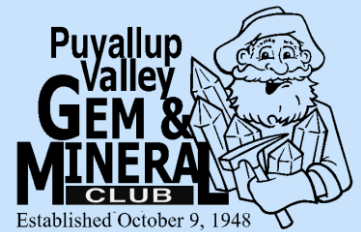


ROCK-A-TEER



Newsletter of the Puyallup Valley Gem & Mineral Club

Jillian Higgins

Issue 44

Volume 97

September

2021

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President's Perspective

Tony Johnson

The picnic was a blast. It was really nice to see so many of the members, both seasoned and new. It was fun to have a meal with everyone, and next time I will try to chit-chat a little more.

I am super excited about the large agate Loren Gates found at the Greenwater overnight field trip. It was something truly unique that I have never seen up there before, and that's saying something since I have been rockhounding up there for 20+ years.

The September program night will be Joan Simpson from Jerry's Rock show, and if you can attend, I would recommend you come because Joan is very entertaining and educational.

New fair procedure this year has things a little bit up in the air, but I have confidence we will be able to adjust and get things figured out. If you have not already signed up for a demonstrator spot yet, contact me and we will get you on the schedule.

Field Trip Report

September 18 - Little Naches

Meeting place - 9:00AM on Hwy 410 at Forest Rd 19, mile marker 92

Hunting for - Jasper, Agate, Petrified wood, Thundereggs

Tools you need - **Rock hammer**, shovel, **pry bar**, hammer, **chisel**, treasure scoop, waders, and a backpack/bucket for your treasures

Access - moderate terrain, 1/2-mile hike to thunderegg site

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

October 16 – 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

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.

SEPTEMBER 2021 CLUB HOUSE SCHEDULE

DATE	DAY	TIME	ACTIVITY	LOCATION	INSTRUCTOR
1	Wednesday	10:00AM-2:00PM	Members Workshop	Club House	Glen Ripper
		4:00PM-8:00PM	Wire Wrapping	Club House	Tony Johnson
2	Thursday	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson
3	Friday				
4	Saturday	10:00AM-2:00PM	Members Workshop	Club House	Glen Ripper
5	Sunday				
6	Monday	10:00AM-2:00PM	Members Open Access	Club House	Glen Ripper
7	Tuesday	4:00PM-8:00PM	Members Open Access	Club House	Re nera & Ed
		7:00PM	Club Board Meeting	Fruitland Grange	Jim Christian
8	Wednesday	10:00AM-2:00PM	Members Open Access	Club House	Dennis Batchelor
		4:00PM-8:00PM	Opal Cutting	Club House	Tony Johnson
9	Thursday	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson
10	Friday	7:30PM	Club Business Meeting	Fruitland Grange	Tony Johnson
11	Saturday	10:00AM-2:00PM	Welo Opal Carving	Club House	Craig Oda
12	Sunday				
13	Monday	10:00AM-2:00PM	Members Open Access	Club House	Glen Ripper
		7:00PM-8:00PM	Opal Club Business Meeting	Club House	Tony Johnson
14	Tuesday	4:00PM-8:00PM	Members Open Access	Club House	Re nera & Ed
15	Wednesday	10:00AM-2:00PM	Members Open Access	Club House	Dennis Batchelor
		4:00PM-8:00PM	Wire Wrapping	Club House	Tony Johnson
16	Thursday	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson
17	Friday				
18	Saturday	10:00AM-2:00PM	Little naches	Field Trip	Dennis Batchelor
		10:00AM-2:00PM	Members Workshop	Club House	Glen Ripper
19	Sunday				
20	Monday	10:00AM-2:00PM	Members Open Access	Club House	Glen Ripper
21	Tuesday	4:00PM-8:00PM	Members Open Access	Club House	Re nera & Ed
22	Wednesday	10:00AM-2:00PM	Members Open Access	Club House	Dennis Batchelor
		4:00PM-8:00PM	Opal Cutting	Club House	Tony Johnson
23	Thursday	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson
24	Friday	7:30PM	Club Program Night	Fruitland Grange	Tony Johnson
25	Saturday	10:00AM-2:00PM	Viking Wire Knitting	Club House	Re nera & Joan
26	Sunday				
27	Monday	10:00AM-2:00PM	Members Open Access	Club House	Glen Ripper
28	Tuesday	4:00PM-8:00PM	Members Open Access	Club House	Re nera & Ed
29	Wednesday	10:00AM-2:00PM	Members Open Access	Club House	Dennis Batchelor
		4:00PM-8:00PM	Wire Weaving	Club House	Jillian Higgins
30	Thursday	4:00PM-8:00PM	Members Open Access	Club House	Tony Johnson

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
Re nera Barnes rsb1224@netscape.com	Jillian Higgins (253)355-3146	Glen Ripper (253) 508-7545

This schedule is subject to change. Please check the website for updates.

MEET THE MEMBERS

Name: **Tony Johnson**

Favorite Quote: It's my temper that gets me into trouble, and it's my pride that keeps me there

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

19 Years as the field trip director, Class instructor in intarsia, wire wrapping, opal cutting, and cabbing. Champion winner in lapidary at the Puyallup Fair. Washington State Mineral Council member for 10 years.

What is your favorite rock, mineral or gem? Opals

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

Teaching others how to work rocks into display/jewelry pieces. I credit **Paul Philman** and **Red Bock** with being my teachers and instilling a love for lapidary and teaching. Going out rock hounding and taking others, teaching them about how and where to find minerals. Doing whatever it takes to help others be successful in lapidary arts.

What are your three favorite books/podcasts?

- Ape – Alain Morgan
- Martial Cornicles
- Anything cook book related

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

Too many to pick. Fun activities at the campouts. Pointing out “purple agates” that were not actually agates, but they were rocks covered in bird droppings.

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

The friends you make, you meet really good people.

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

Keep working on fulfilling the needs of all members, not getting stuck in one way, but staying flexible. “Sometimes you need to write the book instead of just reading it.”

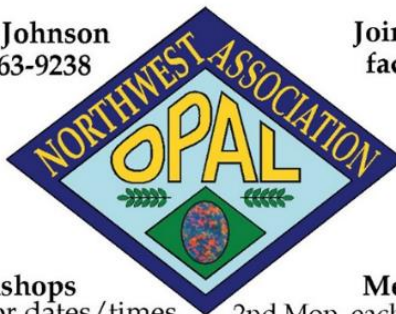
What are three (2) things people might not know about you?

- I am a twin, the good twin
- I lived in Fargo, North Dakota

What is your greatest accomplishment? Making sure all the men I worked with made it home to their family every night and that they were treated fair by me and everyone else above me.

Tony Johnson
253-863-9238

Join us on
facebook



Workshops
call for dates/times

Meetings
2nd Mon. each month

2021 CLUB SHOW RECAP

JIM CHRISTIAN

For the first year ever, our club sponsored 2 annual shows. Our June show at Swiss Park was a bit different in that all of our 37 vendors set up "outside" because, due to Covid issues, the building was not available for our usual "inside" activities. However, even with the couple of rain showers that visited us most of the vendors reported that they did "very well" and liked the new outside arrangements.

In August at our "show in the trees" at the Tacoma Sportsmen's Club, we had 34 vendors and again most of the vendors reported that they did "very well" even though Mother Nature again visited us and brought along a couple of "very warm" days.

However, the important thing in this "show recap" is that none of these vendors would have been able to report that they did "very well" or even that The Club could have sponsored either of the shows without the involvement of some very dedicated PVG&MC members. If I tried to list all of those members who made the shows happen, I would probably miss some so to all of you who were involved, A HUGE HEARTFELT THANK YOU. Your contribution has helped make the PVG&MC the successful club that it is.

Clubhouse report

Tony Johnson

No really anything new to report. We are going stead-ish.

We will be looking to do maintenance as the weather moves us into more of a down time, around when school starts up. We will be doing some floor repairs and the electrical work. Keep your eyes on the schedule to make sure you plan accordingly.

Field Trip Recap

Dennis Batchelor

The Greenwater overnight trip was a huge success. Saturday morning we had more than 28 vehicles meet up at the ranger station to head up to the camp site. Tony took half and headed up to the red and black agate site, Ed Lehman took the other half up to Government Meadows even though the gate was closed and they had to hike in about 3/4 of a mile. Everyone found material and came back for Tony's spaghetti dinner. About 12 hardy souls spent the night, and it rained.

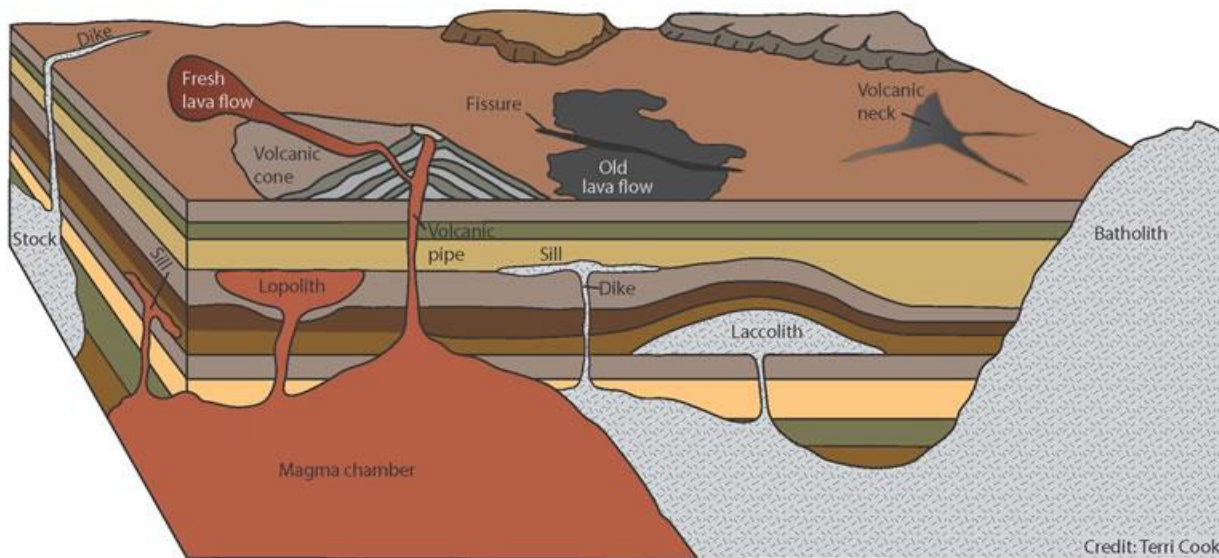
Sunday morning Tony made scrambled eggs and bacon for breakfast. 6 more cars were at the ranger station for more digging. Everyone seemed to have a good time, excitement was had by a number of first timers. Best estimate on the total number of people attending is 58.

The Mineral council was present as well as members from the Lewis County club.

Igneous and Volcanic Rock Features

When molten rock material cools, a wide variety of geologic features can form.

Article by: [Terri Cook](#), M.S.



Although all igneous rocks form from the solidification of molten material, they can have very different

appearances and characteristics depending upon the composition of the original material and where exactly it cooled. Additional information about the many igneous and volcanic features shown in this diagram can be found below.

Introduction

Igneous rocks form from the solidification of once-molten rock material. When this mushy melt is found underground penetrating other rocks, it's called magma, and the solidified rock is termed intrusive. By contrast, molten material that has erupted onto the Earth's surface is named lava, which cools into what geologists call extrusive (or volcanic) rocks.

Because erosion can gradually remove tens of thousands of feet of **rocks** overlying intrusive formations, both extrusive and intrusive rocks can be observed on the Earth's surface, sometimes in close proximity. In the diagram above, the dike and the volcanic neck—despite the latter's name—are both intrusive features, whereas the fissure, lava flows, and volcanic cone are all extrusive.

Because different types of igneous features form under varying conditions, each offers tantalizing clues to the conditions under which it solidified.

Some of the most common igneous features include:

Lava Flow



An aerial view of a low-silica lava flow seen erupting from Hawaii's Mauna Loa in 1984. Public domain photo by RBM, U.S. Geological Survey Hawaiian Volcano Observatory.

Lava Flow

Lava flows are streams of lava that pour out of a volcanic vent or fissure. How quickly lava flows move, and how far they go, depends upon the type of magma that's erupting. Dark-colored magmas that contain relatively little silica (SiO_2), like those observed in Hawaii, can travel further and faster than light-colored magmas, which tend to be much

stickier. Lava flows can be very destructive, burying and burning everything in their paths.

Geologists also use the term lava flow to describe the rock that eventually solidifies from the flowing, molten lava. [Basalt](#) is an example of an extrusive igneous rock formed from dark-colored lava. [Rhyolite](#) is an example of an extrusive igneous rock formed from light-colored lava.

Fissure

Lava erupts from a fissure in northern Iceland's Holuhraun lava field. Image copyright iStockphoto / GISBA.

Fissure

A long crack on the Earth's surface from which lava pours out is called a fissure. This type of volcanic activity is called a 'fissure eruption'. It most commonly occurs in places where dark magmas with low silica contents erupt, such as the Holuhraun lava fields of Iceland and Kilauea Volcano of Hawaii.



Volcanic Neck



Named for its resemblance to the silhouette of a sailing ship, Ship Rock is a volcanic neck located where the main feeder pipe for a larger volcano was once located. The wall-like rock feature radiating outward from the volcanic neck is a dike (see below). Image copyright iStockphoto / Emre Corbaci.

Volcanic Neck

This landform, which is also called a volcanic plug, is created when magma solidifies inside a conduit leading to a [volcano](#) or a volcanic vent. Because the resulting rock is typically harder than

the material it intrudes into, it's left standing after the surrounding, softer rock has eroded away. This feature is therefore often called the "throat" of a volcano. A classic example is Ship Rock, a volcanic neck on the Navajo Reservation that rises nearly 1,600 feet above the desert near Farmington, New Mexico.

Although the use of "volcanic" in the name suggests that volcanic necks are extrusive features, they are comprised of intrusive igneous rocks.

Volcanic Cone

Sunset Crater, a 1,000-foot-high volcanic cone in northern Arizona, is the centerpiece of Sunset Crater National Monument. Public domain photo by the National Park Service.

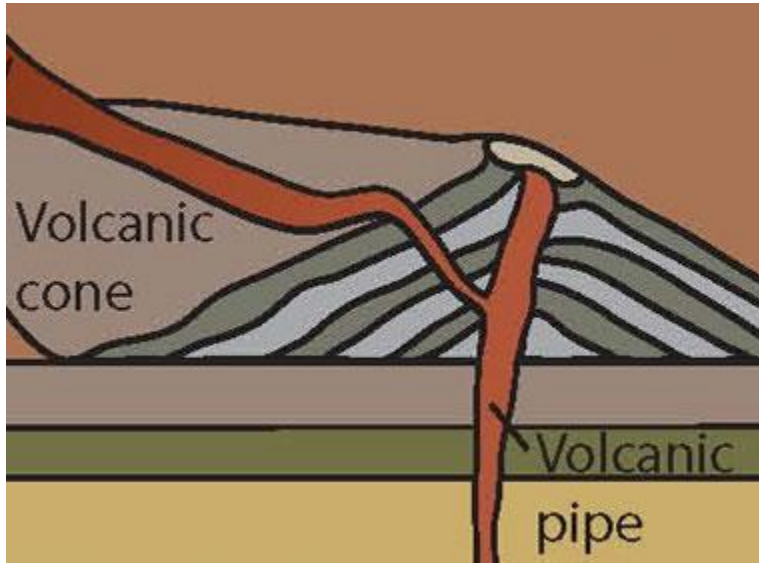
Volcanic Cone

Volcanic cones are steep-sided hills or mountains built of layers of erupted lava flows and fragments of volcanic rocks that have piled up around a central vent. As the name suggests, these features tend to be conical in shape and can be light- or dark-colored.



Sunset Crater in northern Arizona is an example of a volcanic cone so fresh that local farmers almost surely watched it erupt about 900 years ago.

Volcanic Pipe



The main conduit through which magma rises in a volcano is called a volcanic pipe.

Volcanic Pipe

A volcanic pipe is a vertical conduit beneath a volcano through which magma once passed on its journey from the magma chamber to the eruption site. Over time, volcanic pipes usually become clogged by solidified magma and other volcanic rocks, leaving a hard, cylindrical-shaped formation behind. These features can range in width from several yards to approximately half a mile.

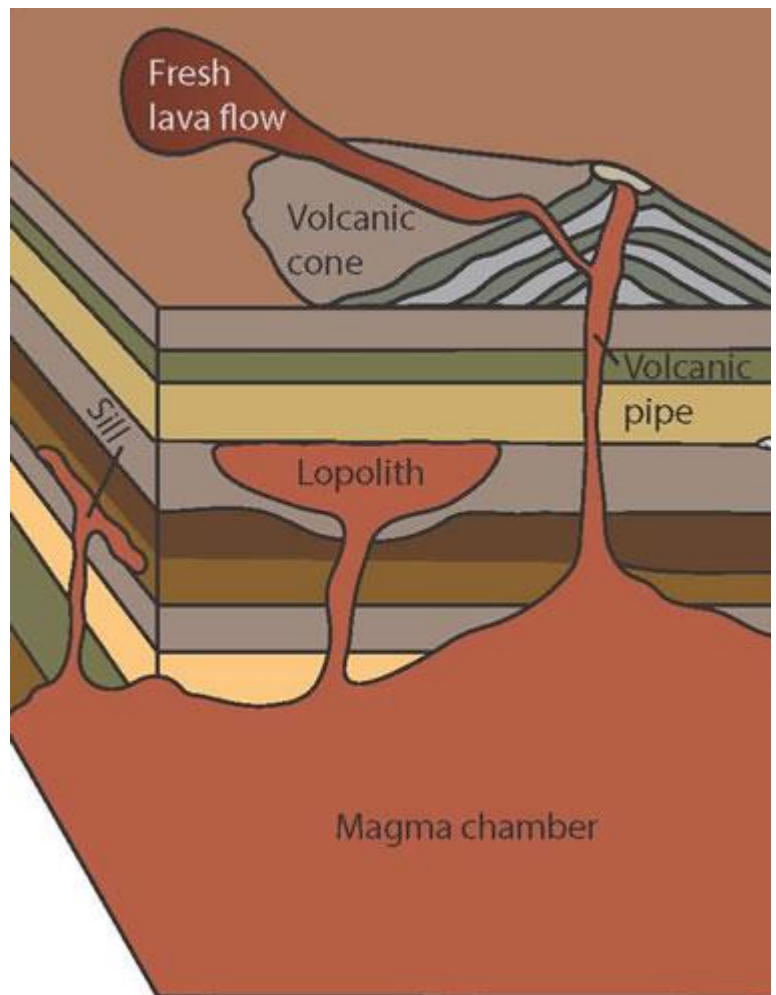
Magma Chamber

Areas where molten rock material pools underground are called magma chambers. They can be the source of both extrusive and intrusive igneous rocks.

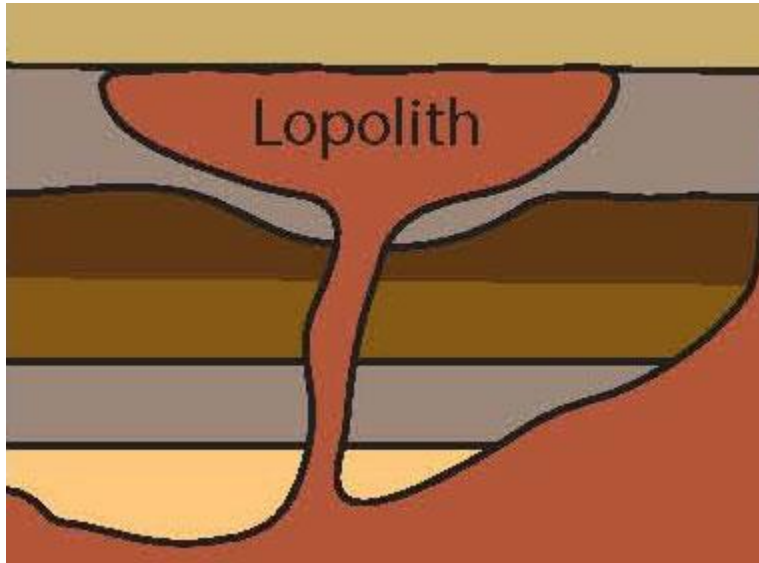
Magma Chamber

A magma chamber is a pool of molten rock material located beneath the Earth's surface. Over long periods of time, magma chambers can crystallize into large intrusive igneous rock formations called batholiths. Magma chambers can be the source of both magma and lava.

An inactive magma chamber will cool slowly over time. This slow cooling allows the magma to crystallize into a coarse-grained igneous rock. [Granite](#), [gabbro](#), and [diorite](#) are examples of rocks that can form during the crystallization of a magma chamber.



Lopolith



Lopoliths are intrusions of igneous rocks with bowl-shaped floors and either flat or bowl-shaped tops.

Lopolith

A lopolith is a large, layered igneous intrusion that is distinguished by the convex-downward bowl shape of its floor and whose top can either be flat or convex down.

Sill

The sill near the top of Colorado's Engineer Mountain displays vertical cracks that formed as this igneous rock cooled. Photograph by [Daniel Weber](#).

Sill

A sill is a flat, sheet-like igneous rock mass that forms when magma intrudes into and crystallizes between preexisting rock layers. Sills can form from magmas with a range of silica contents. These features can vary from less than one inch up to hundreds of feet thick and can extend for many miles.



The tabular mass of quartz trachyte near the summit of Engineer Mountain near Silverton, Colorado is a well-known example of a sill.

Stock



Stocks are small igneous intrusions with less than 40 square miles exposed at the Earth's surface.

Stock

A relatively small igneous intrusion that forms when magma crystallizes underground. Although uplift and/or erosion can later unearth part of a stock, this feature is defined as having less than 40 square miles (100 square kilometers) exposed at the surface.

Dike



The color contrast between the red sedimentary rocks and the dark igneous rocks highlight this famous dike above Hance Rapid in Grand Canyon National Park. Image copyright iStockphoto / tonda.

Dike

A tabular igneous intrusion that crosses through other (layered or non-layered) rocks at a steep angle. Dikes can occur alone or in sets and may be comprised of light (high-silica) or dark (low-silica) rocks, or any composition in between. One of the most-photographed examples comes from the Grand Canyon, where a dark dike slashes across

thin, red shale layers above a frothing whitewater rapid.

Laccolith



Dark host rocks overlie the light-colored, intrusive igneous spires of the Torres del Paine massif, which glaciers sculpted from a 12.6-million-year-old laccolith. Credit: Terri Cook and Lon Abbott.

Laccolith

Laccoliths are intrusive igneous rock formations distinguished by their characteristic lens shapes. These features form when the pressure of the magma intruding between preexisting layers causes the overlying rocks to dome up, creating a mushroom shape. One of the world's most spectacular examples of a laccolith is found in Chile's Torres del Paine National Park.

Batholith



Most of California's Sierra Nevada mountain range, including Yosemite National Park, is part of an enormous, 300-mile-long batholith. Image copyright iStockphoto / Andrei Stanescu.

Batholith

A relatively large igneous intrusion that forms when magma crystallizes underground and is later

partially exposed following uplift and/or erosion. By definition, batholiths have more than 40 square miles (100 square kilometers) of surface exposure. The heart of California's Sierra Nevada mountains is carved from a granitic batholith emplaced between about 120 and 85 million years ago.

About the Author: Terri Cook

Growing up in a home whose cornerstone was a meteorite inspired Terri to become an award-winning travel and science writer. A geologist by training and a member of both the Society of American Travel Writers and the National Association of Science Writers, Terri weaves accurate, engaging stories for a wide variety of clients and outlets including the U.S. Geological Survey, Eos, Scientific American, and Lonely Planet. Terri is also the author or co-author of five books, including [Hiking the Grand Canyon's Geology](#), [Geology Underfoot in Northern Arizona](#), and [Geology Underfoot Along Colorado's Front Range](#). She is a 2019 Association of Health Care Journalists Fellow, a 2016 EGU Science Journalism Fellow, and the 2019-2020 Science Communication Fellow for the Geological Society of America.

COMMUNITY SUPPORTERS

	<p style="text-align: center;">South Hill RV Sales</p> <p style="text-align: center;">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.</p> <p style="text-align: center;">12414 Meridian East, Puyallup 98373 253-435-7751 or 866-435-7751 www.southhillrv.com</p>
	<p style="text-align: center;">Rice Museum of Rocks & Minerals</p> <p style="text-align: center;">To engage, inspire, and educate generations on the splendor and complexity of our Earth.</p> <p style="text-align: center;">26385 NW Groveland Dr., Hillsboro, OR 97124 503-647-2418 Info@ricenorthwestmuseum.org www.ricenorthwestmuseum.org</p>
<p style="text-align: center;">H & I Lapidary</p>	<p style="text-align: center;">Amber, Jewelry, Beads, Findings, Gemstones, Slabs, Rough Material, Fossils, and Aussie items.</p> <p style="text-align: center;">Mike and LaVon Siperek (253) 531-7294 4203 E 99th Street, Tacoma, WA 98446 Yankees_Diesel@comcast.net</p>

Rocks for Sale

Long-time Collector is Selling His Collection.

Something for Everyone

Landscape Material as well as Quality Product for Hobbyist

DATES:

Friday, Sept 17 & Saturday, Sept 18 from 10:00am – 5:00pm;
Sunday, Sept 19th from 10:00am – 3:00pm

ADDRESS & CONTACT INFORMATION:

11012 Interlaaken Dr. SW, Lakewood, WA
Call: (253) 312-1770 for more information

FROM THE BENCH

There are many great ideas for collecting and organizing burs, sanding disks, rubber wheels, mandrils, and drill bits.

Some of my top favorites are:

- magnetic strips with adhesive backing that you can attach to your jewelers bench
 - Styrofoam in a plastic take out or Tupperware container
 - A rotating bur and tool caddy
 - Tackle boxes labeled by type and grit
 - Wooden blocks with holds drilled to support the shafts
- Desk organizers that you can get at the office supply store/section
 - The containers bur sets come in.

SUNSHINE REPORT

With everything going on, we have not had a chance to meet as a group and 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 ynotopals@outlook.com (253) 863-9238 or Jillian Higgins at J.Y.Higgins@gmail.com (253) 355-3146

MINERAL OF THE MONTH



Do you recognize this gorgeous crystal? If you do, and if you have a piece(s), I would love to see them. This is one of my favorite minerals, Diopside.

Like most beautiful green/blue minerals, diopside is a copper based cyclosilicate mineral. It is a little on the soft side, only having a Mohl of 5, but can be anywhere from transparent to translucent depending on the purity of the mineral it is composed from. All diopside has a brilliant luster due to the crystal structure.

Diopside forms in a trigonal structure that doesn't form in long crystal structures but in gathered clusters that can be long collectively, but not individually.

It is named after the Greek words "dio" and "optos" meaning to see or thought. It can be found all over the world, but the best examples are found in Russia, China, Chili, Botswana, Namibia, and Arizona.



2021 SHOW & TELL THEMES and PROGRAM NIGHT EVENTS

MEETING	DATE	SHOW & TELL THEME	PROGRAM NIGHT EVENT
January - 1st Meeting	January 8, 2021	Tiger's Eye or any field trip finds	
January - 2nd Meeting	January 22, 2021	Lace or any field trip finds	No Meeting
February - 1st Meeting	February 12, 2021	Heart shaped or any field trip finds	
February - 2nd Meeting	February 26, 2021	Red, Pink, & Purple or any field trip finds	No Meeting
March - 1st Meeting	March 12, 2021	"Sham" rocks or any field trip finds	
March - 2nd Meeting	March 26, 2021	Green or any field trip finds	Carl Carlson
April - 1st Meeting	April 9, 2021	April Fools Gold or any field trip finds	
April - 2nd Meeting	April 23, 2021	No Show & Tell	No Meeting
May - 1st Meeting	May 14, 2021	Flower rocks or any field trip finds	
May - 2nd Meeting	May 28, 2021	No Show & Tell	Auction/Potluck
June - 1st Meeting	June 11, 2021	Fancy Slabs & Fossils + any field trip finds	
June - 2nd Meeting	June 25, 2021	No Show & Tell	Tailgate Party @ Grange Parking Lot
July - 1st Meeting	July 9, 2021	Red, White, & Blue or any field trip finds	
July - 2nd Meeting	July 23, 2021	No Show & Tell	Jerry's Rock Shop
August - 1st Meeting	August 13, 2021	Carnelians + any field trip finds	
August - 2nd Meeting	Saturday August 28, 2021	No Show & Tell	Picnic & Tailgate Party at club house on Saturday
September - 1st Meeting	September 10, 2021	Crystals + any field trip finds	
September - 2nd Meeting	September 24, 2021	No Show & Tell	Jerry's Rock Shop
October - 1st Meeting	October 8, 2021	Wood + any field trip finds	
October - 2nd Meeting	October 22, 2021	No Show & Tell	Auction/Potluck
November - 1st Meeting	November 12, 2021	Thundereggs & Geodes + any field trip finds	
November - 2nd Meeting	November 26, 2021	No Show & Tell	BINGO Night
December - 1st Meeting	Saturday December 11, 2021	No Show & Tell	Holiday Banquet/Officer Installation on Saturday
December - 2nd Meeting	No Meeting	No Show & Tell	

2021 Elected Officers - Carry Over Until Election

Title	Name	Phone	Email
President:	Tony Johnson	(253)863-9238	ynotopals@outlook.net
Vice President:	Jim Christian	(253)720-9502	Jimchristian_205@hotmail.com
Secretary:	Teresa Rodrick	(253)531-4062	gtrodi@comcast.net
Treasurer:	Jillian Higgins	(253)355-3146	J.Y.Higgins@gmail.com
Association Director:	Bill Clark	(360)893-6919	clarkwa@comcast.net
1 Year Director:	Glen Ripper	(253)508-7545	glen311944@yahoo.com
2 Year Director:	Patti Dailey-Shives	(253)678-0029	pattidailey28@gmail.com
1 Year Trustee:	Glenn Rodrick	(253)531-4062	gtrodi@comcast.net
2 Year Trustee:	Dennis Batchelor	(360)870-8741	hobbyhorse51@gmail.com

2021 Committee Chairs

Title	Name	Phone	Email
Club house Coordinator	Tony Johnson	(253)863-9238	ynotopals@outlook.net
Club Show Coordinator	Jim Christian	(253)720-9502	Jimchristian_205@hotmail.com
Field Trips Coordinator	Dennis Batchelor	(360)870-8741	hobbyhorse51@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	Tony Johnson	(253)863-9238	ynotopals@outlook.net
Historian	Nicole Payne	(253)208-9802	pudnikki@yahoo.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: mineralcouncil@zoho.com

HAPPY BIRTHDAY

September 2021

Zoe Taylor – 1st
 Pam Jewell – 3rd
 Tina Deavy – 5th
 Peter Barnstein – 7th
 Sharon Sasseen – 7th
 Diane Small – 7th
 Greg Franklin – 8th
 Kaelan Tackett – 9th
 Robert Cotton – 10th
 Brenden Gonzalez – 10th
 David Baughman III – 11th
 Cordelia Atkinson – 12th
 Sheri Dussault – 12th
 Eric Richmond – 13th
 Doris West – 13th
 Presley Jones – 15th
 Santiago Saucedo III – 16th
 Jacob Hochstrasser – 18th
 Brenda Falvey – 18th
 Linda Batchelor – 20th
 Nathan Taylor – 20th
 Jenna Woodriff – 21st
 Andrew Bohling – 22nd
 Jonathan Held – 22nd
 Shawna Ozzvic – 22nd
 Jeana Swetz – 22nd
 Azalea Atkinson – 23rd
 Marilyn Clampitt – 23rd
 Adam Levine – 24th
 Cassie Garcia – 25th
 Sarah Seabreeze – 25th
 Carol Stephenson – 28th
 Dawn Baughman – 30th

IT'S ONLY TERMINOLOGY

I G T E W C I B U C S E I C E P S
 N I F A C E T A B U L A R D I P H
 C O L O R C H A N G E P T I E L E
 L F B I E H A R D N E S S C I E E
 U N O I T A N I M R E T I H W O N
 S O I T S B O L O S W F T R M C I
 I H E A U I C H D I I T E O E H A
 O C D K L T P F N C P H B I C R N
 N O C L S O N N G V E J D S S O B
 E B L W M E I R F Z L P U M E I W
 R A A O I N A E L T T I R B R S L
 U C R A G V C I N I L C O N O M A
 T H I P I N K O D X A S J A U P T
 C K T T N O I T C A R F E R L I S
 A L Y R A D I P A L M E R I F F Y
 R I Z B S I T N E M E C A L P E R
 F H I Y G O L O M E G A V A E L C

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| 1. BRITTLE | 11. FIRE | 21. MONOCLINIC |
| 2. CABOCHON | 12. FLAW | 22. PLEOCHROISM |
| 3. CHROMOPHORE | 13. FLUORESCENCE | 23. REFRACTION |
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ROCK-A-TEER

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Gem & Mineral Club

P.O. Box 134

Puyallup, WA 98371