

Place:
Arden Community Hall
636 Hall Rd
Arden, WA



Third Tuesday of the Month
Time:
April – September
7:00 PM
October – March & August
6:00 PM

The Panorama Prospector

March 2019

PANORAMA GEM AND MINERAL CLUB

Minutes of the February 19, 2019 Meeting By Sheila Stratton

The meeting was opened at 6:00 p.m. by President Rick McDougald. He called on officers to give reports.

Vice President Bob Bristow talked the magazines he brought to share with club members. He also talked about his article in the newsletter about cleaning crystals and the use of oxalic acid and the heating of it in an old coffee maker. Also, it can be purchased on Amazon.

Secretary Sheila Stratton reminded members that if they did not receive their new phone book or exchange name badge holders from pin to clip-on to see her during break. Also, there is a sign-up on back table for greeters at the front desk at show. Treasurer Frank Stratton gave financial report. He also shared a new information sheet that was prepared for potential new members.

Rick then brought up that there will be copies of old Prospector Newsletters to pass out at the show. Sharon Borgford shared about the treasure hunt activity that she has prepared for the children that attend the show. She went over the booklet for what the kids need to look for.

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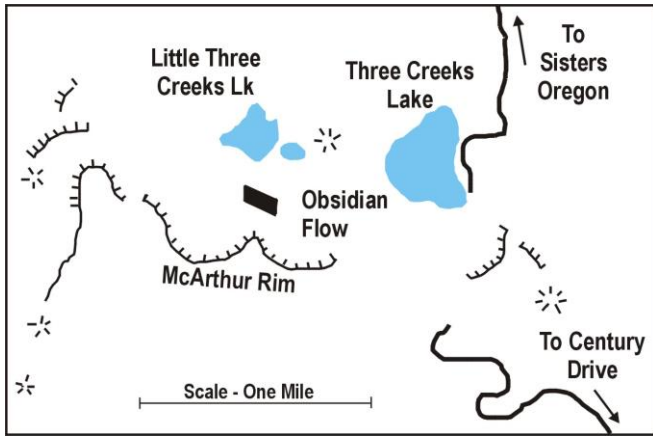
Some Longtime Geology Mysteries

By Bob Bristow

There are a number of geology formation processes that either have no current explanation or the current explanation does not explain all of the facts. Some of the genesis explanations have been taught by geology professors for so long that to question them is considered heresy. However, having spent my life doing research and overturning long-held theories, I am not bothered in the least to question any and all explanations by eminent geologists. In fact, I kind of enjoy it! So here are some of my favorites.

Obsidian Genesis

Almost any mineralogy book will tell you that obsidian is simply rhyolite lava that has cooled so fast that crystals could not form. When I was in high school, I spent part of the summer prior to my sophomore year camped at Three Creeks Lake near Sisters, Oregon. While climbing McArthur Rim above the lake one day, I saw flashes of light about a mile away from a hump below the rim and above Little Three Creeks Lake. Upon climbing over to that point, I discovered the flashes to be coming from large pieces of obsidian. The source was a solid outcropping of obsidian at least ten feet thick. To say a ten-foot thick layer of lava froze instantly boggles my mind. In fact, I flat out say that the current explanation has to be bunk.



If not by quick cooling, how does obsidian form? I don't know. However, Donald Alt, in his "Roadside Geology of Oregon" proposed that rhyolite forms glass when the lava is perfectly dry. I haven't seen this suggestion in any of his other books so he may have been beat up by geologists satisfied with the classical explanation. Wouldn't it be interesting to run some laboratory tests with man-made rhyolite in which the water content could be varied?

Growth of Large Crystals

One of the fundamentals of crystallography is thought to be that the size of a crystal is a relative measure of how long it took to form. For example, a large quartz crystal may have taken hundreds or even thousands of years to form in hot mineralized water. This may be true in some case, but not all. In the laboratory, large quartz crystals can be made to form in two or three weeks. If it can be done in the laboratory, why can't it be done in nature? This was brought home to me by an experience growing calcite crystals. I didn't plan on it, but they grew anyway. I was actually trying to leach a chunk of calcite to expose some garnet crystals it contained. Normally, I would use hydrochloric acid to do the leaching. However, I had some oxalic acid left over from cleaning crystals so I decided to use that. I brought it up to near boiling and left it overnight. The next morning I unplugged the heater and left it to cool. When I lifted the calcite rock out of the container the following morning, I knew immediately that something strange had happened. The rock was covered by 1/8-inch long needles.

These were beautiful hexagonal calcite crystals that took only one day to grow. (The crystals grew because the hot solvent had become saturated with calcite ions. When the solvent cooled, it could no longer hold all of the calcite and had to deposit it somewhere.) The bottom line is that I believe that some environmental factor in addition to time must determine crystal size. What that factor could be is a mystery.

Pegmatites

Geology books say pegmatites form when the final granite melt is squeezed into the surrounding rocks where it cools so slowly that the crystals grow huge. There are certainly plenty of cases where this could be true. However, to be acceptable, a theory must explain all occurrences. There are at least as many cases where the cooling rate has been rapid as there are cases for the slow cooling proposal. Most of us have seen narrow veins (under two inches) that are filled with large pegmatite crystals. (Just south of the Hwy 395 bridge over the Little Spokane River is an example of numerous four-inch pegmatite veins.) The country rock around the veins could have been hot and kept the temperature up in the veins, but there is no evidence of heat having altered the rock except very near the vein boundary. This indicates that cooling must have been relatively rapid. If thin veins cooled rapidly and still formed large crystals, why propose that other pegmatite bodies had to cool very slowly. In addition, the center of the granite melt must have taken as long as the pegmatite liquid to cool down. Why doesn't the granite center have large grains like the pegmatite? This subject of crystal growth leads into the next mystery area.

Ring Craters of Odessa

Marge and Ted Mueller have written a good book on the Columbia Plateau basalt flows and the great floods that produced the scablands. In this book, they describe the 100 or so "ring craters" north of Odessa. Luci and I spent an afternoon examining several and found them fascinating. Some are simply shallow craters. The interesting ones have partial rings of basalt around the outside. The rings can be up to 15

to 20 feet high and I noted one crater with three rings. The space between the rings was even lower than the bottom of the crater center. The best crater we saw is called "Amphitheater Crater." The Muellers have an explanation for the crater's formation but they indicate that they really can't believe it and included it as the only explanation available. The theory they list involves the breaking up of an upper crust over molten lava and hardening with that upper crust sagging down into the soft lava below. The great floods then formed eddies in the low spot plucking out most of the basalt and leaving the rings. Like some of the theories discussed above, this might fly except it doesn't account for all of the evidence.

Southeast of Amphitheater Crater is Cinnamon Roll. This is like the ring craters except that it sticks up in the air about 50 feet and is composed of several bulges that correspond to the rings in the other craters. It looks like this mound may have started to form like the other craters but was halted part way through the process. If this is true, the craters were first pushed up into several concentric cylinders and then sucked down leaving parts of the hardened edges of the cylinders as the rings. What could have caused this? I haven't a clue and it looks like no one else has either. However, it makes for exciting speculation and is a great mystery.

Thundereggs

I have a folder of theories on thunderegg formation. One says they formed in voids in rhyolite like common geodes. Another writer is convinced they are fossilized crinoid heads. A third author has written a book on the subject. After rejecting all existing theories, he explains how silica (quartz) in rhyolite could form balls like it does in some man-made applications. The balls would then form into thundereggs. This is the best research I have seen. However, it, too, has some serious flaws.

We know the following about thundereggs and any successful theory must account for all items:

1. Eggs have a spherical shape

2. Rhyolite in the egg is often different from the country rock rhyolite.
3. Some eggs are hollow.
4. There is sometimes a small sphere at the center.
5. Large shrinkage of the rhyolite core occurred before silica filled the interior.
6. Some eggs have flow line where silica entered from cracks in the shell.
7. Eggs form in both volcanic ash and solid lava.
8. Opal, calcite, flint, and other minerals sometimes substitute for silica.
9. Sometimes the country rock is composed of the same odd form of rhyolite as the eggshell.

Finding a theory of formation that satisfies all these observations is a tall task. However, since thundereggs are there, there must have been a way for them to form!

Notes From The Show Chairman

By Johnie Pitman

I would like to thank everyone for their hard work at the show. Because of all of your efforts and having everything delivered in the trailer, the setup and tear down went very smoothly. The show attendance wasn't great, maybe the weather had something to do with that. According to the ticket count at the door, on Friday 238 adults signed tickets and Saturday 350 for a total of 588. Not everyone signs a ticket and the children aren't counted either, so total attendance is around 1200-1400. Financial numbers for the show can't be finalized until after all the bills are received which is after the end of March. We will need to find a place to store the trailer for the summer.

The Grand Prize was won by Bonnie Christian, she was very surprised and thankful. Sherryl Sinn, Ginger and I delivered it to her on Sunday after the show.

The scholarship applications have been delivered to the three schools and will be picked up around the first of May.



Setting Up For The Show – Thank You To Everyone For Your Help.



The Wheel of Fortune Was Fun For All Thanks To These Great Volunteers.



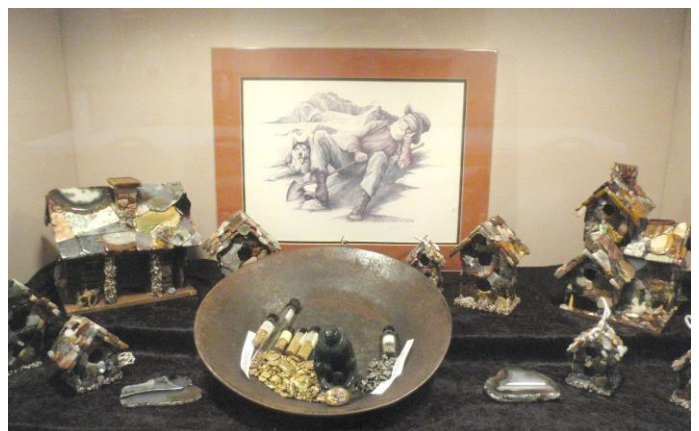
A Small Sample Of Venders At The Show.



Some Club Members Even Got Time To Check Out The Venders Great Items.



Front Entrance Volenters Who's Helped Give Show Comers A Great First Impression.



And What's A Rock and Gem Show Without Some Outstanding Displays.

Meeting Minutes

Continued From Page 1

She also needs people to meet at the front of the building to help greet the school buses as they arrive to pass out the booklets. This will be mostly on Friday. She also has packets to give the teachers with information from DNR and things they can do educationally in the classroom. She asked for people to help in delivering these packets.

Rick took up the challenge to make a new game for the show. He came up with and built a very interesting game with balls falling through a maze and at the end, the participant receives a prize. He demonstrated the game for the club and is calling it "Hidden Treasures."

Johnie talked about the AFMS Newsletter Endowment fund. The club usually supports this fundraiser each year. They sell tickets that are drawn for a prize. Johnie stated that the club has won prizes in previous years. The club has purchased in the past two sets of tickets for \$40.00. A motion was made by Becky to purchase the tickets. It was seconded by Scott and all in favor. Motion passed.

An applause was held for Betty Peters for having made approximately 1,000 bags this year and she has another 500 bags cut out with strings cut and ready to sew. She said that she would share these cut out bags for anyone that would like to help sew them.

It was also brought up by Johnie about the advertising for the show. He asked for volunteers to put flyers up around the area in Colville, Kettle Falls, and Chewelah. There were several people that volunteered. Rick showed the club the new posters that were designed and printed by Joe Barreca. He said there were 80 full sheets and 75 quarter size sheets. They were available for members to pick up for advertising the show.

There was further discussion held about the show regarding demonstrators and needing help unloading the trailer Thursday morning at 8:00 a.m. They also need to take pictures of how the trailer is loaded so that it can be replicated when reloading after show.

At this time, refreshments were served; silent auction was held; and also drawing for door prize.

Barb Cozza brought in an amazing quartz crystal with phantoms to share with the club. It was very beautiful and appreciated that Barb brought it to share.

Johnie shared two beautiful rocks of citrine and amethyst of which one will be used as a grand prize at the show.

Dave Paquette showed a movie that he made called Montana Smoky Quartz Crystal Dig. He showed where he hiked up to an area in Montana where there is smoky quartz available for those who do not mind digging. It was hard work but with great rewards. He dug up some absolutely beautiful large smoky quartz crystals. He shared his methods of where to dig, tools that helped, and the set-up at the dig. It was really enjoyed by everyone. Thank you, Dave!

"Identify The Rock or Mineral"



See if you can identify this month's rock or mineral. The answer will be in next month's newsletter. I am starting this off with an easy one. It could also be considered a fossil (not petrified wood).

Membership Dues:

\$20.00 per household per year is due to the club Treasurer Frank Stratton on the third Tuesday of November for regular members. Dues can also be sent to: Panorama Gem and Mineral Club c/o Johnie Pitman, 701 B Williams Lake Rd, Colville, WA 991114.

Webpage: <http://panoramagem.com/>

Contact: Rick McDougald, President, pres-pgmc@hotmail.com

We, **The Panorama Gem and Mineral Club**, are a multi-faceted group of mineral-minded people. Our proud members include some real gems, a few fossils, and even some diamonds in the rough. A few have lost some of their marbles, but they know where to get more! A few need to polish their coordination because they are always tumbling! And some are miners who use the “silver pick” as their tool of choice! It should be crystal clear, that we all enjoy this unique conglomeration and above all else we strive to **HAVE FUN**. And we never throw stones (away).

Thank you to Shana McDee for the wonderful photos of the Show. Again – Thank You to all the volunteers without who the Panorama Gem and Mineral Club’s Annual Show could not have happened.

If you have any particular interest you would like to see articles on feel free to contact me at jimrocks@recycledhistory.com or let me know at our next meeting on **19 March 2019**

Refreshment Schedule for 2019

Last names that begin with the letters posted bring refreshments for that month

January – N, O, P
 February – Q, R, S, T
 March – W, A, B, C
 April – D, E, F, G
 May – H, I, J
 June – K, L, M
 July – N, O, P
 August – Club Picnic
 September – Q, R, S, T
 October – W, A, B, C
 November - D, E, F, G
 December – Christmas Party

Panorama Gem and Mineral Club: Organizational Chart

Officers

President:	Rick McDougald	Pres-pgmc@hotmail.com	
Vice-President:	Bob Bristow	Bristow@theofficenet.com	509-935-4375
Secretary:	Sheila Stratton	skstratton11@gmail.com	509-702-8506
Treasurer:	Frank Stratton	frstratton@outlook.com	509-207-8503
Trustee 1:	Sherryl Sinn	sherrylsinn@gmail.com	509-684-6093
Trustee 2:	Dennis Gibbens	dddgibbens@yahoo.com	509-684-3532
Trustee 3:	Jim Peters	JimNbetty17@gmail.com	509-937-2238

Committee Chairs

Program Coordinator:			
Hospitality:	Sherryl Sinn	sherrylsinn@gmail.com	509-684-6093
Club Shop:	Gene Fisher	295 Gold Creek Loop Rd, Colville, WA 99114	509-684-8546
Historian:			
Newsletter:	Jim Retzer	Jimrocks@recycledhistory.com	509-738-2503
Show Chair	Johnie Pitman	jgpitman@wildblue.net	509-684-8887